



Operating manual

for the NIR analysers

Apo-Ident 1 and Apo-Ident 2

based on version 2.9



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1. Starting the program

Start the program „QuickStep Apo-Ident“ by double-clicking on the desktop icon. The Apo-Ident user interface opens.

Note: If the internal unit temperature is too low, a warm-up program is started automatically. When the temperature of at least 20°C is reached, the system is ready to start.

2. Selection of the pharmacy

Choose your stored pharmacy under **Configuration profile**, if you have more than one configuration profile.

Note: Our detailed instructions on **Section 1.5** explain how to create a configuration profile.

3. Selection of the substance

Under **Substance**, enter the name of the substance to be tested in the search field, e.g. Fructose. The monograph name, the Latin name, synonyms stored in the database, and the classifier, in this case “APIs & excipients, solid”, are now displayed.

Note: The software shows suggestions to you as you enter the first few letters. You can choose the correct substance from the suggested options.

Help: If the NIR analysis can provide an unambiguous result for the selected substance, the search field will turn green. All information on colour coding can be found on **Section 2**.

4. Measuring by substance category

4.1. APIs & excipients (solid) and narcotic substances (solid)

Start measurement

First place your **sample cup containing the substance** (filling height 4 mm) and the **adapter ring** on the measurement point. Start the measurement process by clicking on the blue button next to **Measurement** or by pressing the measurement button (lights up green) directly on top of the device.

Note: Some substances can also be identified with smaller quantities. The appropriate procedure can be found in our detailed operating instructions on **Section 2.1.1**.

Referencing


After the first substance measurement, you will be asked to place the reference standards onto the measurement point. Follow the instructions of the software and first place the black reference, followed by the white reference on the measurement point. Start the reference measurements by clicking on the black or white button next to **Measurement**.

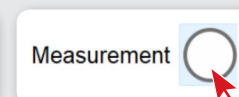
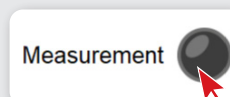
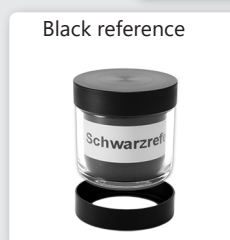
Note: Please always use the black adapter ring. The measurement of the references is requested again by the software after approx. 60 min.



Substance	Search	Fructose
	Test for	Fructose
	Latin	Fructosum
	Synonyms	n/a
	Classifier	APIs & excipients, solid

Substance	Search	fru
	Test for	<input checked="" type="radio"/> Fructose <input type="radio"/> Fructosum
	Latin	<input checked="" type="radio"/> Fructose <input type="radio"/> Fructosum

Measurement	 Place the selected substance on the device.
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4.2. APIs & excipients (semisolid/liquid)

Transflectance reference measurement

Start with the transflectance reference measurement. Place the clean **transflectance insert** with the feet pointing downwards in a clean, **empty sample cup**. Using the adapter ring, place the cup, with the transflectance insert, onto the Apo-Ident device's measurement point. Start the **transflectance reference measurement** by clicking on the grey button or by pressing the button directly on the device.

Important: Both the transflectance reference measurement as well as the measurement of the liquid/ointment or emulsion must be carried out with the same measurement transflectance insert and sample cup. Otherwise, identification may not be possible.

Note: After successful transflectance reference measurement, a time frame of 5 min. is provided for starting the substance measurement. If the measurement is not carried out during this period, the transflectance insert reference measurement must be repeated.

Referencing

After the transflectance reference measurement, you will be asked to place the supplied reference standards onto the measurement point.

Please follow the instructions on referencing under 4.1. of the Quick start guide.

Start measurement

Place your **sample cup with the substance** and the **transflectance insert** as well as the **adapter ring** on the measurement point. Start the measurement process by clicking on the blue button next to **Measurement** or by pressing the measurement button (lights up green) directly on top of the device.

Note: Make sure that you press the measurement transflectance insert with the feet downwards onto the bottom of the sample cup so that no air bubbles are visible.

5. Result

After a few seconds, the unit shows you whether the substance has been identified.

Note: If the result is negative, please read the further information on non-identification. Check or repeat your measurement procedure accordingly.

6. Report details

After successful measurement, fill in all mandatory fields (marked with a red frame) next to the **Sample** as well as **User**. Under **Result**, you may fill in **Comment** and **Additional tests**, if required.

Please note that only after filling out all mandatory fields can you create the report.

7. Creating the report

Now you can save the measurement result, view the test report as a PDF file, or print it out.

Note: No matter which function you select, the measurement result will be saved in any case. In addition, you may also print your test label on your label printer.

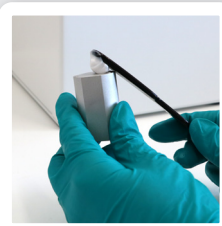
transflectance insert




Measurement



Place the transflectance insert feet facing down in an empty sample container and use them for the next measurement too



Result	Name	Fructose
	NIR Result	Match Rating 99.9% (Limits 98% to 100%)
	Comment	
	Additional tests	(empty)

Sample	PPN	Expiry date
Producer		
Batch		Period of grace
Quantity		Correc. factor
Distributor		Delivery date

Protocol



1. First steps

1.1. Safety instructions

Please read the safety instructions carefully.

- Use only the power supply unit or power cord supplied.
- If the power connector cord or the power supply unit is defective or damaged, contact the manufacturer immediately. Operation with a defective power cord or power supply unit may be life-threatening.
- Environmental influences such as high temperatures and high humidity must be avoided, as well as dust, dirt and corrosive gases.
- The installation site should be well ventilated and not exposed to direct sunlight. Install the device on a non-combustible, horizontal surface that does not transmit vibrations.
- Make sure that there is no ingress of objects or liquids into the device. If this happens, immediately unplug the device and contact the manufacturer.
- Do not open the device. There are no user-serviceable parts inside the device.
- Do not operate the device in explosive or flammable atmosphere.
- Apo-Ident is often used for determining hazardous substances. This type of work should be undertaken only by qualified personnel. If you are not absolutely sure, contact your supervisor or a competent expert.

1.2. Software installation

- Connect the provided USB flash drive to your PC.
- Drag the "Apo-Ident" folder to your desktop and open the „Current Software“ folder in it. Start the installation by double-clicking on QuickStep_*.exe. Read and accept the licence conditions. Follow the set-up wizard.
- Next, double-click on the IdentModul_*.exe file. Read and accept the licence conditions. Follow the set-up wizard.
- Thereafter, if the installation is correct, you will get an update certificate displayed. Save the certificate in the folder "Apo-Ident/ Update certificates" with specification of the version or the date.

Important: *If you would like to use the Apo-Ident 2 as a standalone device, it is not necessary to install the software. The current version is already installed on the computer integrated device.*

1.3. Connecting the analyser

1.3.1. Connecting Apo-Ident 1

Apo-Ident 1 requires a power connection and computer/laptop (for system requirements see section 5.1) with Apo-Ident software installed.

Follow these steps:

- Insert the power cord into the IEC socket on the back side of the device and connect it to an earthed socket of the 230V mains supply (The analyser also works on any other common mains supply with earthed plug with 100 V to 240 V~ and 50/60 Hz).
- Connect Apo-Ident to a USB port on the PC/laptop using the USB cable supplied. On Apo-Ident 1, the USB port (type B) is located on the back side of the device.
- Switch on the analyser. The main switch is also located on the back side.
- The signal lamp in the control button on the top of the device lights up in red colour. Apo-Ident is now ready for use.



1.3.2. Connecting Apo-Ident 2

Apo-Ident 2 requires a power connection and computer/laptop (for system requirements see section 5.2) with Apo-Ident software installed. Connect the power supply unit supplied (100 V to 240 V~ and 50/60 Hz) to a mains socket using an IEC and then plug the small round plug of the desktop power supply unit into the socket marked 12V IN on the back side of the device.

Connection via USB cord

Use the USB cable supplied to establish connection with a USB port on your PC/laptop to the USB type B port on the back side of the Apo-Ident device. Switch on the device with the toggle switch on the back side of the device. The signal lamp in the control button on top of the device lights up in red colour. Apo-Ident is now ready for use.



1.4. Starting the program

Start the program "QuickStep Apo-Ident" by double-clicking on the desktop icon. The Apo-Ident user interface opens.

Note: If the internal unit temperature is too low, a warm-up program is started automatically. When the temperature of at least 20°C is reached, the system is ready for operation.

1.5. Apo-Ident settings

When the program is started for the first time, the settings open automatically. By default, a demo profile is saved, which is used for presentations. **However, you cannot create valid test reports with the demo profile!**

1.5.1. Report settings

Settings > Report Settings > To create your own profile, click on the Configuration profile button on the right side of the "+" sign.

Enter the name of your pharmacy as the profile name and confirm with **<OK>**.

Another window will open asking you to enter your licence key.

***Note:** If you use Apo-Ident in more than one pharmacy, you need a separate licence key for each pharmacy and you have to create a separate configuration profile for each pharmacy.*

For new customers, the licence key is inserted by our sales staff at the time of delivery.

Thereafter, you will find it on the desktop as a PDF under 'Licence documents' in the 'Apo-Ident' folder or on the USB flash drive supplied.

You will need your licence key again in the following cases:

- Re-installation
- Change of computer

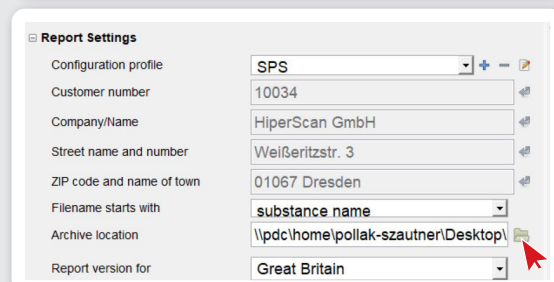
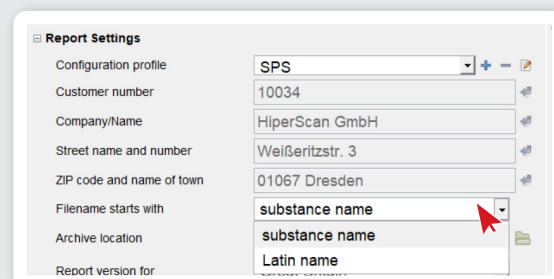
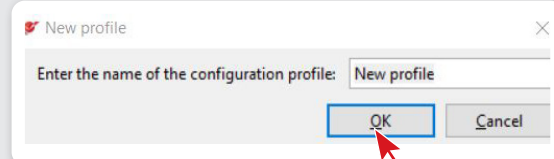
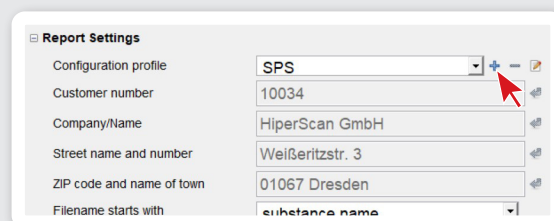
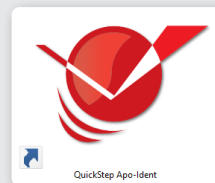
If you have misplaced your licence key or need support, please contact our customer service on telephone 0351 212 496 33 or via e-mail to kundenservice@apo-ident.de.

Filename starts with > Here you can select whether the "Primary substance name" (English) or, if available, the "Latin substance name" should be used in the file name of the test report.

Archive location > If a profile is created, the software automatically saves the archive (test reports) on the desktop under *Desktop/Apo-Ident/Archiv/Profile_Name1*

If a second profile is created, the software also saves the second archive under *Desktop/Apo-Ident/Archiv/Profil_Name2*

This ensures that several profiles are not saved in one and the same archive and that no errors occur while retrieving the archive.



Note: During the initial installation by our sales staff, the folder structure "Apo-Ident" is created for you, which integrates the archive. If you would like to change the destination for saving files, first move the entire "Apo-Ident" folder from your desktop to the new storage location. This may be a local drive or a network drive on your PC. You can change the archive directory by clicking on the folder symbol under "Profile storage location" in Settings, Report settings. In the "Select archive directory" window that opens, select the appropriate drive on the left and the desired folder on the right where you want to move the "Apo-Ident" folder. Closing the settings window will transfer your changes. In the menu bar, you can use the "Archive" button to check whether the new path has been accepted.

Report version for > The language or form of the test report for the selected profile is preset. You cannot change this.

Show difference of back projection > **Section 3.2.**

Complementary test as mandatory field > **Section 2.3.**

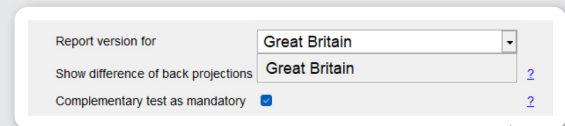
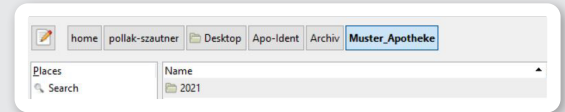
Note: If after measuring and saving the report, you notice that the report version needs to be changed, the measuring has to be repeated after changing the necessary settings.

1.5.2. WLAN-/LAN-settings

Please leave these settings as they have been pre-configured. The configuration instructions for WLAN/LAN is provided in **Section 1.3.2.**

1.5.3. Settings for the Ident module

Please leave these settings as they have been pre-configured (identification: "Local Ident Module").



1.5.4 Label printer settings

1.5.4.1. Brother label printers

Installing the drivers

First install the drivers. You will find these on the USB flash drive supplied along with the device under *Useful items/Brother drivers*. Select your model and start the application D_SETUP.exe. Follow the installation instructions. Alternatively, you can find the latest drivers online at the [Brother Solution Centre](https://support.brother.com).

Setting up in the Apo-Ident software

If you have installed the drivers successfully, you can now choose your printer from the **Standard label printer** list (Brother QL-700 or older models) under **Label Printer Settings**.

Continuous Paper Settings DK-22205

Choose the following settings:

- Page size: 62mm
- Orientation: Rotated by 0°

Advanced Layout Settings:

- Label width / mm: 62.0
- Label height / mm: 35.0
- X-offset / mm: 0.0
- Y-offset / mm: 0.0
- Scaling factor: 1.00

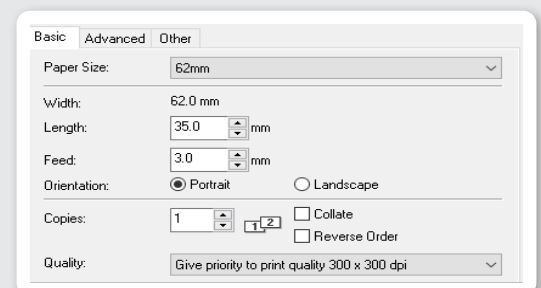
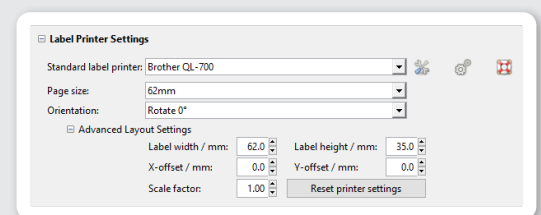
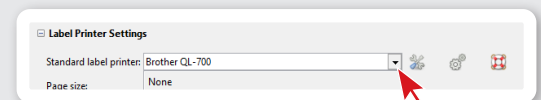
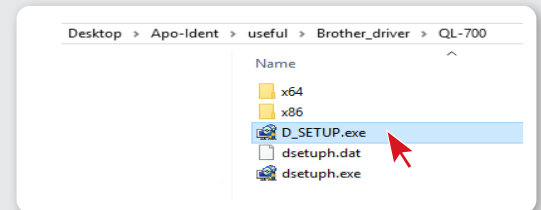
Now click on the left tool icon "Open printer settings". Change the following settings in the dialogue window that opens:

- Paper Size: 62mm
- Length: 35.0
- Belt feed: 3.0
- Alignment: Portrait format
- Quality: Prioritise print quality 300 x 300 dpi

Click first on **<Apply>** and then confirm with **<OK>**. You are now back in the settings of the Apo-Ident software.

Note: You can check your settings by starting a test print. To do this, click on the middle icon "Print test label".

If your test print was successful, click **<Close>**. Your settings are accepted and saved.



Settings for single labels DK-11201

Choose the following settings:

- Page Size: 29 mm x 90 mm
- Orientation: Rotated by 90°

Advanced Layout Settings:

- Label width / mm: 29.0
- Label height / mm: 89.9
- X-offset / mm: 0.0
- Y-offset / mm: 0.0
- Scaling factor: 1.00

Now click on the left **tool icon** "Open printer settings". In the dialogue window that opens, modify the following settings:

- Paper size: 29 mm x 90 mm
- Alignment: Portrait format
- Quality: Prioritise print quality 300 x 300 dpi

Click first on **<Apply>** and then confirm with **<OK>**. You are now back in the settings of the Apo-Ident software.

Note: You can check your settings by starting a test print. To do this, click on the middle icon "Print test label".

If your test print was successful, click **<Close>**. Your settings are accepted and saved.

1.5.4.2. DYMO LabelWriter 450 or 550

Installing the driver

First install the driver. You will find these online at the [DYMO Support Center](#). After installing the printer driver, connect the printer to your PC.

Setting up in the Apo-Ident software

If you have installed the drivers successfully, you can now choose your printer from the default label printer list under **<Label Printer Settings>**.

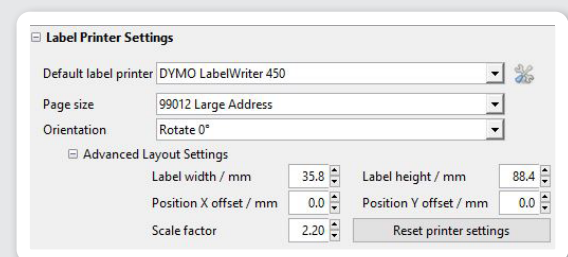
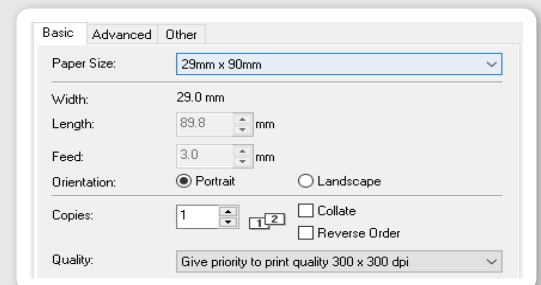
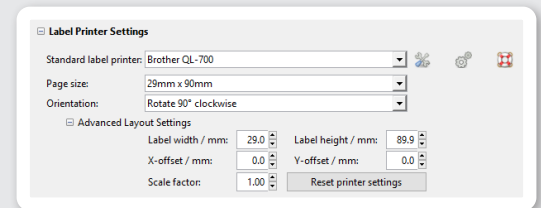
Settings for single labels 99012

Choose the following settings:

- Default label printer: DYMO LabelWriter 450 or DYMO LabelWriter 550
- Page Size: 99012 Large Address
- Orientation: Rotate 0°

Advanced Layout Settings:

- Label width / mm: 35.8
- Label height / mm: 88.4



- X-offset / mm: 0.0
- Y-offset / mm: 0.0
- Scaling factor: 2.20

Now click on the left tool icon **<Open printer settings>**. Change the following settings in the dialogue window that opens:

- Orientation: Landscape
- Page Order: Front to back

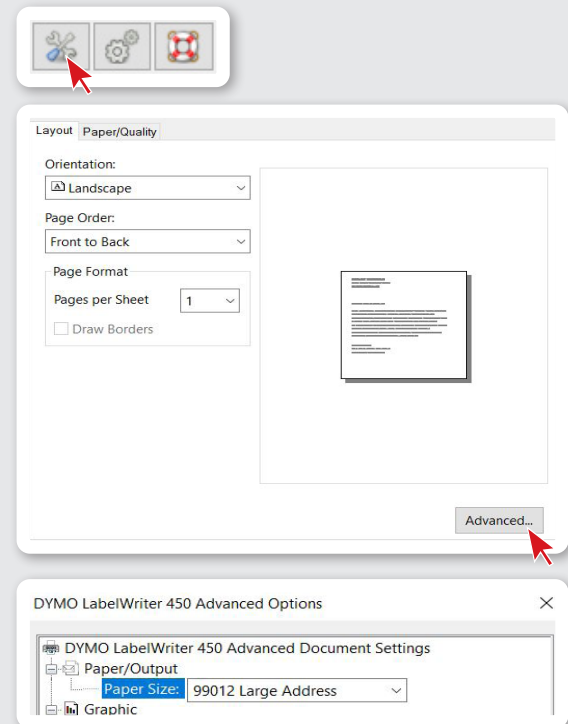
Click **<Advanced>** to make the following setting:

- Paper/Output: 99012 Large Address

Click first on **<OK>** and then confirm with **<OK>**. You are now back in the settings of the Apo-Ident software.

You can check your settings by starting a test print. To do this, click on the middle icon **<Print test label>**. If your test print was successful, click **<Close>**. Your settings are accepted and saved.

Note: These instructions only apply to the label printer DYMO LabelWriter 450/550 with labels 99012. With other DYMO models (e.g. Turbo, Twin Turbo, etc.) the label settings may differ.



2. Measurement

Under **Substance**, enter the raw material to be tested in the search field. The search field recognises both English and Latin substance names.

Note: The software shows suggestions to you as you enter the first few letters. You can choose the correct substance from the suggested options.

Green dot: The substance is unambiguously identifiable if there is a green dot in front of the name. After entering the substance, the search field turns green. → **Section 2.1. / 2.2.**

Yellow dot: For substances with a yellow dot in front of the name, only an ambiguous test result can be obtained, i.e. the identity is limited to a few options. After entering the substance, the search field turns yellow. → **Section 2.3.**

Red dot: The substance cannot be identified by Apo-Ident. However, these substances are predefined in order to document the results of other tests in the test report. After entering the substance, the search field turns red. → **Section 2.4.**

Grey dot: In substance administration, you can create substances yourself to create a test report for user-defined substances and document the results of other tests. These substances cannot be identified by Apo-Ident. After entering the substance, the search field turns grey. → **Section 2.5.**

Note: The cross behind the search field deletes all your entries.

2.1. APIs & excipients (solid) and narcotic substances (solids) clearly identifiable using Apo-Ident

Start measurement

First place your **sample cup containing the substance** and the **adapter ring** on the measurement point. Start the measurement process by clicking on the blue button next to **Measurement** or by pressing the measurement button (lights up in green colour) directly on top of the device.

Excursus "Correct filling of the sample cups (solid substance)":

Fill about 4 mm of the substance to be tested into the sample cup. Make sure that the base of the sample cup is covered evenly. The transfectance insert is not used for solid substances.

Note: Some substances can also be identified using smaller quantities. See **Section 2.1.1.** for instructions.

Substance

Search

fru

Test for

Latin

Synonyms

● Fructose

● Fructosum

Substance

Search

cool

Test for

Latin

Synonyms

● Cooling cream DAB

● Cooling ointment DAB 6

Substance

Search

acidum p

Test for

Latin

Synonyms

● Acidum phosphoricum 25 %

● Acidum phosphoricum con

Substance

Search

exampl

Test for

Latin

Synonyms

Classifier

● Example

✕

validation

Measurement

Place the selected substance on the device

Referencing

After the first substance measurement, you will be asked to set up and measure the reference standards. Follow the instructions of the software and first place the black reference, followed by the white reference on the measurement point. Start the reference measurements by clicking on the black or white button next to **Measurement**.

Note: Please always use the black adapter ring. The measurement of the references is requested again by the software after approx. 60 min.

Output of the result

After a few seconds, the device shows you whether the substance has been identified.

Note: If the result is negative, please display detailed information on non-identification. Check or repeat your measurement process accordingly.

Measurement specifications

After successful measurement, fill in all mandatory fields (marked with a red frame) next to the **Sample** item as well as the **User**. The fields **PPN**, **Quantity**, **Distributor**, **Period of grace**, **Weighing correction factor**, **Delivery Date** and **Additional tests** can be filled in if required.

Note: If you fill in the **Period of grace** field, the software calculates it from the day of the check and indicates it as "Expiry date" on both the test report and the test label. If the **Expiry date** is earlier than the **Period of grace**, the expiry date is automatically printed on the test report or test label.

Creating the protocol

Now you can save the measurement result, view the test report as a PDF file, or print it out.

Note: No matter which functions you select, the measurement result will be saved in any case. In addition, you may also print your test label on your label printer.


2.1.1. Measurement with the sample insert for small amounts of substance

Some substances in the APIs & excipients (solid) and Narcotic substances (solids) categories can also be identified using smaller quantities. To do this, you need the **sample insert** and the associated **white reference for the sample insert**.


Information on the substances that can be measured with the sample insert can be found on **Section 3.7**.


Enter the substance due to be tested with the sample insert in the search field. The check box **Use sample insert** appears on the right-hand side of **Measurement**. Click on the box if you are using the sample insert.

Black reference



White reference



Measurement 

Measurement 

Result

✓

Name

Fructose

NR Result

Match

Rating

99.9% (Limits 98% to 100%)

Comment

(empty)

Additional tests

Sample

PPN

Producer

Batch

Quantity

Distributor

Expiry date

Period of grace

Correc. factor

Delivery date

Protocol

Save

PDF

Print

Label Printer

Measurement



Place the sample insert container with your selected substance on the device.

Use sample insert

First place your **sample cup with sample insert** and the **substance** with the **adapter ring** on the measurement point. Start the measurement process by clicking on the blue-black button next to **Measurement** or by pressing the measurement button (lights up in green colour) directly on top of the device.

Excursus "Correct filling of the sample cups with the sample insert": The sample should be filled into the sample insert up to a height of approx. 4 mm.

Referencing

After the first substance measurement, you will be asked to set up and measure the references. Please use the black reference and the **white reference for sample insert**, otherwise non-identification will occur.

Note: The measurement of the references is requested again after approx. 60 min. by the software automatically.

After a few seconds, the device shows you whether the substance was identified. Then proceed as usual.



Black reference



White reference for sample insert



2.2. APIs & excipients (semisolid/liquid) clearly identifiable using Apo-Ident

Transflectance reference measurement

Start with the transflectance reference measurement. Place the clean **transflectance insert** with the feet pointing downwards in a clean, **empty sample cup**. Together with the **adapter ring**, now place the cup with the transflectance insert on the measurement point of the Apo-Ident. Start the **transflectance reference measurement** by clicking on the grey button or by pressing the button directly on the device.

Important: Both the transflectance reference measurement as well as the measurement of the liquid/semisolid substance must be carried out with the same transflectance insert and sample cup. Otherwise, non-identifications may occur.

Note: After successful transflectance reference measurement, a time frame of 5 min. is provided for starting the substance measurement. If the measurement is not carried out within this period, the transflectance insert reference measurement must be repeated.

Referencing

After the transflectance reference measurement, you will be asked to set up and measure the reference standards. Please follow the instructions on referencing under 4.2. of the Quick start guide.

transflectance insert



Measurement



Place the transflectance insert feet facing down in an empty sample container and use them for the next measurement too

Start measurement

Place your **sample cup with the substance** and the measurement transfectance insert as well as the **adapter ring** on the measurement point. Start the measurement process by clicking on the blue button next to **Measurement** or by pressing the measurement button (lights up green) directly on top of the device.

Excursus "Correct filling of the sample cups (semisolid substance)": After the transfectance reference measurement has been completed, remove the transfectance insert from the sample cup and hold it the feet pointing upwards. Using a spatula, take an approximately hazelnut-sized amount of the previously homogenised substance and scrape it on one of the straight edges of the transfectance insert.

Put the empty sample cup over it and spread the substance over the entire surface. Finally, press the transfectance insert into the substance until all three feet visibly touch the bottom of the cup. Make sure that there are no air bubbles under the transfectance insert.

Excursus "Correct filling of the sample cups (liquid substance)": After the transfectance reference measurement has been completed, remove the transfectance insert from the sample cup. Pour a small amount of homogenised liquid into the cup so that the bottom is completely covered. Place the transfectance insert in the sample cup with the feet pointing downwards. A part of the substance should visibly rise up between the sample cup and transfectance insert. Lift the cup up quite high and check that there are no air bubbles under the measurement transfectance insert.

Result

After a few seconds, the device shows you whether the substance has been identified.

Note: If the result is negative, please display detailed information on non-identification. Check or repeat your measurement process accordingly.

Measurement specifications

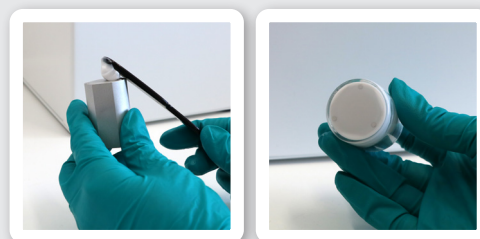
After successful measurement, fill in all mandatory fields (marked with a red frame) next to the **Sample** item as well as the **User**. The fields **PPN**, **Quantity**, **Distributor**, **Period of grace**, **Weighing correction factor**, **Delivery Date** and **Additional tests** can be filled in if required.


Note: If you fill in the **Period of grace** field, the software calculates it from the day of the check and indicates it as "**Expiry date**" on both the test report and the test label. If the **Expiry date** is earlier than the **Period of grace**, the expiry date is automatically printed on the test report or test label.

Creating the report

Now you can save the measurement result, view the test report as a PDF file, or print it out.

Note: No matter which functions you select, the measurement result will be saved in any case. In addition, you may also print your test label on your label printer.




Result	Name	Sodium citrate	Match	Valuation	100.0% (Limits 98% to 100%)
	NIR Result				
	Comment				
	Additional tests				(empty)

Sample	PPN	Producer	Batch	Quantity	Distributor	Expiry date	Period of grace	Correc. factor	Delivery date

Protocol	Save	PDF	Print	Label Printer	Test number

2.3. Special features of substances with inconclusive test results

Important: For unique identification, an **complementary test is necessary**. The pharmacist is responsible for assessing which additional tests need to be carried out to ensure adequate certainty.

To the right of the selected substance, click on the warning sign  for more information.

Click on **<Display as PDF>** if you want to print this information.

Start measurement

Proceed as usual with your measurement (Section 2.1. or 2.2.)

After successful measurement, fill in all mandatory fields (marked with a red frame) next to the Sample item as well as the **User**. The fields **PPN**, **Quantity**, **Distributor**, **Period of grace**, **Weighing correction factor**, **Delivery Date** and **Additional tests** can be filled in if required.

Carry out an additional test and document it. The documentation of the additional test can also be done in the software, see below.

Excursus "Settings for complementary tests": Complementary test for substances that cannot be unambiguously identified is pre-configured as mandatory. You can change this setting at any time. To do this, under **<Settings>**, choose the option **<Report Settings>** and remove the tick from **"Complementary test as mandatory"**.

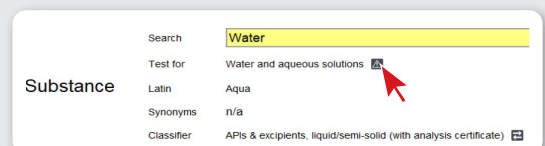
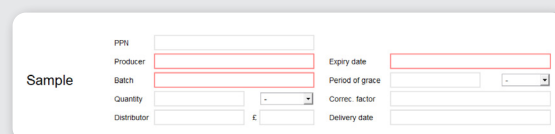
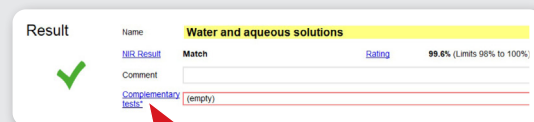
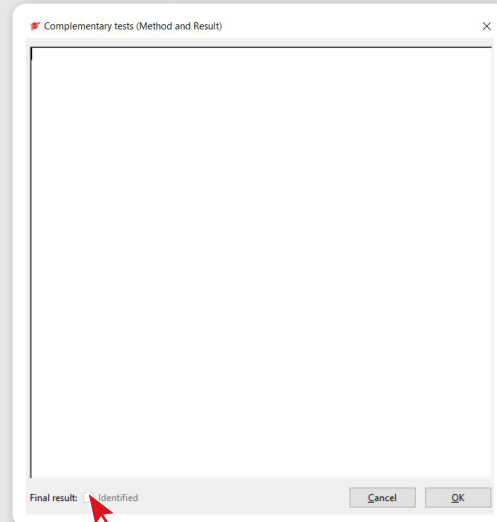
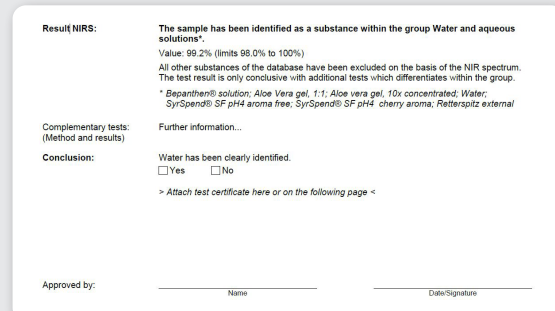
Using the software to document additional tests

The additional test and the test result can be entered in the software via **Complementary tests**.

If the result of the additional test is available at the time of the measurement, you can do this by clicking on the check box **<Identified>** in the footer of the dialogue field. With **<OK>** your entries are accepted. The text input and the final result then appear directly on the test report.

Handwritten entry of the result on the printed report

If the additional test is performed later on, methods and the final test result will be manually noted on the printed test report afterwards. Do **not** tick **<Identified>** checkbox in this case.

2.4. Special features of substances that cannot be tested with Apo-Ident

Not identifiable: Substances that cannot be identified by Apo-Ident, e.g. because they do not have adequate signature in the NIR, are marked immediately after (partial) entry of the name (there is a red dot in front of the name, and after the entry the search field turns red, and a notice window appears).

A different test method is required to identify this substance. Nevertheless, a report without measurement can be created via the Apo-Ident software. To do this, click **<OK>** and complete the mandatory information on the substance.

Entering the identity test using the software

The method of identity test and the test result can be entered in the software via [Identity test](#).

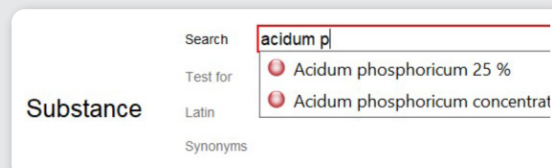
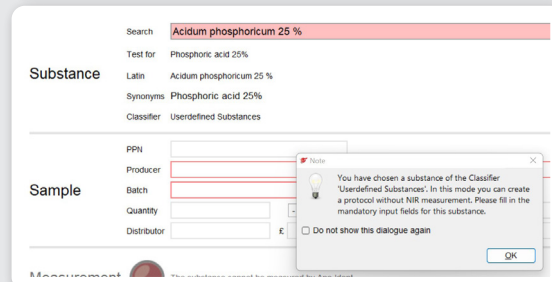
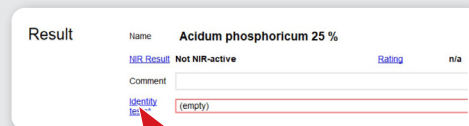
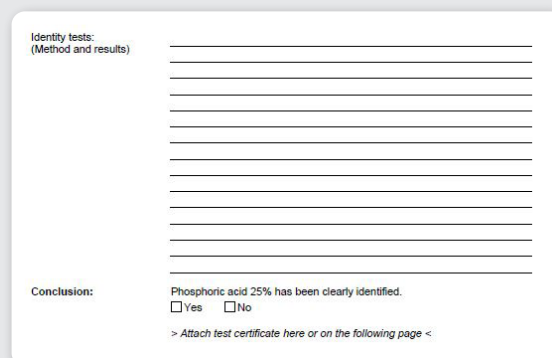
If the result of the identity test is already available at the time that the report is created, it can be documented by clicking on the check box **<Identified>** at the bottom of the dialogue field. Click **<Close>** to accept your inputs.

The text input and the final result then appear directly on the report (**Section 2.3.**)

Handwritten entry of the result on the printed report

If the Identity test is performed later on, the method and final test result has to be manually noted on the printed test report afterwards. Do **not** tick **<Identified>** checkbox in this case.

Excursus "Settings for Identity test": The identity test for non-identifiable substances is set as mandatory. You can change this setting at any time. To do this, under **<Settings>** select the option **<Report settings>** and remove the tick from **"Complementary test as mandatory"**.

2.5. Substance management

You may use the substance administration to manage additional substances or to create new ones, which, in fact, cannot be tested via NIR, but for which you can create reports. Moreover, you can define which additional substances are available for selection for classical identity test.

The **<Substance>** are provided above in the menu bar.

The **Substance Extension Editor** window opens. The substance administration **must** be individually adjusted for each configuration profile.

Predefined additional substance

Substances not identifiable using Apo-Ident, but which are often requested, are predefined by default. With all selected substances, you can create a report without NIR measurement with the Apo-Ident software (Section 2.4.).

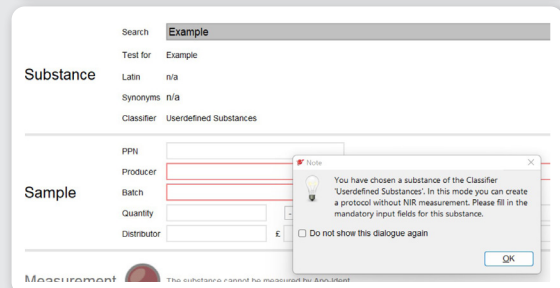
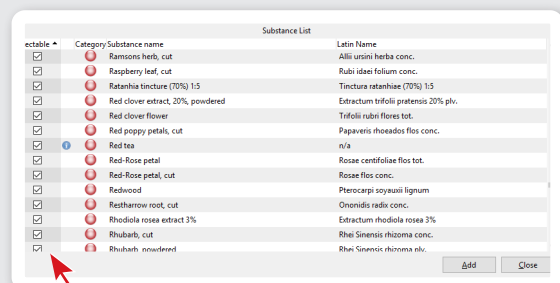
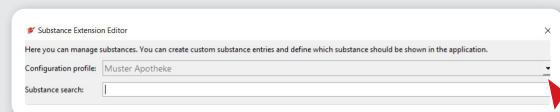
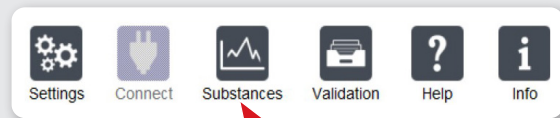
If a substance is not required in order to create the report, it can be deselected by removing the selected tick mark. As soon as the substance is required again, the tick mark can be set again.

The blue information circle next to the tick marks displays alternative English and alternative Latin substance names.

Self-defined additional substance

Under **<Add>**, you may create new substances for which you would like to create test reports. The substance name must be specified; the Latin name is optional. After clicking again on **<Add>**, the newly created substance appears with a grey dot in the substance list. **<Close>** the window.

Now, you can also create a report without measurement for the self-defined substance (proceed as given in Section 2.4.)



2.6. Cleaning/use of sample cups, transfectance insert and sample insert

Sample cups

- Pre-clean sample cups with a paper towel after the measurement
- After measuring ointment and emulsion bases, pre-cleaning of the sample cups with 70% isopropyl alcohol is recommended
- Cleaning with rinsing agent, warm water and a soft cloth
- Next, rinse the sample cups with purified water and rub them dry with a lint-free cloth
- Before using the sample cups, sterilise them with 70% isopropyl alcohol and dry them with a disposable cloth

Before measuring, particularly check that the bottom of the cup is clean and not greasy. No water marks should be visible.

If you decide to use the sample in the compounding, please check whether the microbiological purity of the sample cup and the measuring transfectance insert are also guaranteed.

Transfectance insert

- Scratches between the transfectance insert feet or strong discolouration can influence the identification. Please handle the transfectance insert with care.
- Never clean the transfectance insert with pot scrapers, spatulas or other tools
- No cleaning in the dishwasher!
- Roughly wipe the transfectance insert with a paper towel after measurement
- Cleaning with rinsing agent, warm water and a soft cloth
- Next, rinse the transfectance insert with purified water and rub it dry with a lint-free cloth
- Before using the transfectance insert, sterilise it with 70% isopropyl alcohol and wipe it dry with a disposable cloth

Sample insert for measuring small quantities of substance

- After the measurement, remove any powder residues from the sample insert by gently tapping the sample cup
- Cleaning with rinsing agent, warm water and a soft cloth
- Then rinse the sample insert clear with purified water and rub it dry with a lint-free cloth
- Before using the sample insert, clean it with 70% isopropyl alcohol and let it dry

Measurement point / sample window

Please ensure that the measurement point (sample window) of the Apo-Ident is kept clean.

For cleaning, we recommend a cloth soaked in 70% isopropyl alcohol.

3. Additional functions

3.1. Percentage of agreement + setpoint

The agreement of the sample spectrum with the saved reference spectrum is displayed as a percentage. Behind this, the permissible range of the assessment (setpoint) is shown. If the sample spectrum is beyond the permissible range, the substance is shown as **"No match"** and indicated as unidentified.

By clicking on **NIR Result** you can have the measured spectrum displayed.

3.2. Display of the difference line between reference and sample spectrum

If required, you can display the difference between the sample spectrum and the reference spectrum in the graph of the test report (only possible with a positive spectrum). Please note that the right-hand scale is used for the difference line in order to make the differences clearly visible.

To do this, under **<Settings>** select the option **<Report Settings>** and set a tick mark for **"Show difference of back projections"**.

3.3. Search function (query) by substance, expiry date or other criteria

This function allows you to re-display and re-print reports or labels.

To do this, click on **<Query>** in the menu bar. The Archive Query opens.

If necessary, set the configuration profile for the search query above. Under the **Substance** tab, enter the name of the substance (or the test number or PPN) whose test reports you would like to search for. Click on **<Execute>**. All test reports containing the specified search text are displayed.

To search for the expiration date, click on the **Use-by Date/ Shelf Life** tab and enter the relevant dates.

After executing the query, you can select the substance in question in the results window and display information about the measurement or the report.

Under the **Advanced** tab, you can also search for the user, supplier or a batch number.

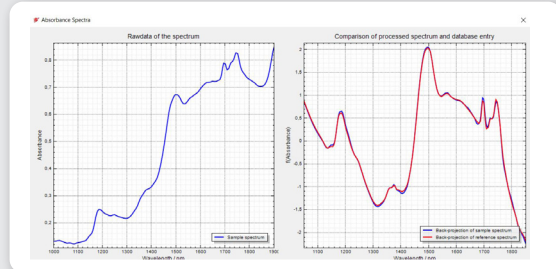
In the **timestamp** query, you may, for example, select all measurements for query starting from 01/01/2010.

Result

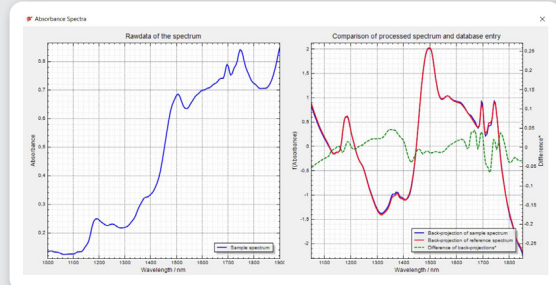
Name: **Fructose**

NIR Result Match Rating **99.9%** (Limits 96% to 100%)

Comment: [Additional](#) (remove)



Graphic without differential display



Graphic with differential display

Archive Query

Substance Use-by Date/Shelf Life Advanced

Search for substance with given name, test number or PPN.

Substance name, test number or PPN:

Execute

Archive Query

Substance Use-by Date/Shelf Life Advanced

Advanced Archive Query

Substance name:

Test number:

PPN:

Operator name:

Manufacturer/supplier or batch number:

Comment:

Timestamp: 01 January 2010 to 31 December 2025

Use-by date/Shelf life: January 2010 to December 2025

Execute 8 matches found.

Primary Name	Latin Name	Manufacturer/Supplier	Batch Number	Test number	PPN	Timestamp	Use-by Date/Shelf
Nanaminze, geschn.	Menthae Nana folium conc.	Ceilo	1235464	210517-154146		17/05/2021 15:41:46	January 2022
Natriumcitrat	Natrii citras	Ceilo	123456123	210517-152911		17/05/2021 15:29:11	January 2021
Natriumcitrat	Natrii citras	Ceilo	1234563	210525-162226		25/05/2021 16:22:26	January 2021
Natriumcitrat	Natrii citras	Ceilo	123456	210504-141949		04/05/2021 14:19:49	January 2023
Natriumcitrat	Natrii citras	Ceilo	12356	210422-132449		22/04/2021 13:24:49	February 2023
Phosphoric acid 25%	Acidum phosphoricum 25 %	Ceilo	1235249	210726-113501	12345	26/07/2021 11:35:01	January 2021
Tetracyclinhydrochlorid	Tetracyclini hydrochloridum	Ceilo	123456	210503-153745	123456	03/05/2021 15:37:45	January 2021
Water	Aqua	Ceilo	1234564896	210726-112933	123567	26/07/2021 11:29:33	January 2021

Information Show Report Print Report Print Label

Save Copy to ... Close

Exporting the query results in CSV format

The results of the query can be saved in CSV format by clicking on **<Save>**. Then open it in a CSV-enabled program (e.g. MS Excel) to print out the list or use it for further processing.

Copy files to individual storage locations

(e.g. on a USB flash drive)

If you would like to copy the selected files to an individual location, please click on the **<Copy to...>** button and select the desired storage location. All data matching the search criteria is copied.

3.4. Display of the validation documents

Click on **<Validation>** in the menu bar. The validation documents are divided according to substance classes. Here you display the entire document.

After entering the substance to be tested, you can also open the validation document directly via the Apo-Ident user interface. To do this, click in the **Substance** area on the far right on **Validation**.

The validation information on the database entry of tested substances is given in the test report. You can change this default setting. To do this, under **<Settings>** select the item **<Report Settings>** and remove the tick mark from **"Print validation within protocol"**.

3.5. Data backup

To send your measurement reports to the Apo-Ident customer service or to save them for the purpose of data backup, click on **<Help>** at the top of the menu bar and select **<Data backup>**. You can now choose whether you would like to perform a **<backup>** or export data for our **<Customer Service>**.

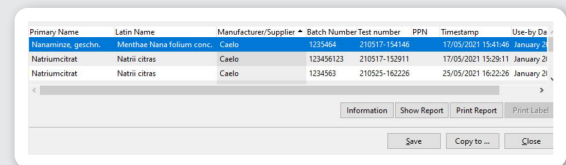
If you want to change computers, it is advisable to make a backup (export including log files, licence key, profile). The backup contains the settings, archive(s) and profile(s).

Click on **<Save>**. By default, the appropriate zip archive is saved on the desktop.

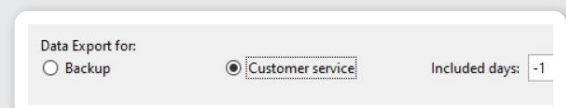
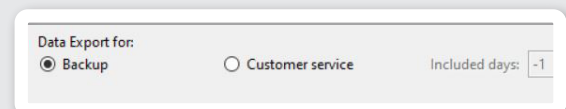
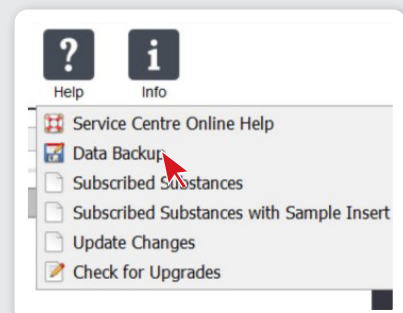
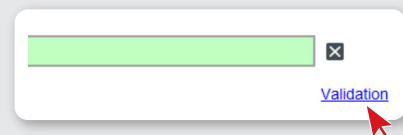
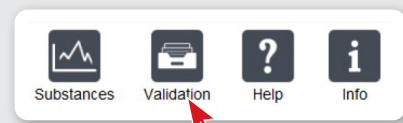
When you export the data for customer service, your spectra are compressed and saved in a ZIP file. You can set the number of measurement days for which you would like to combine and send or save as follows:

- -1 = all days
- 0 = only LogFiles
- 1 = 1 day
- 2 = 2 days
- etc.

Click on **<Save>**. By default, the appropriate zip archive is saved on the desktop. You can now send the data to us via e-mail to kundenservice@apo-ident.de.



Primary Name	Latin Name	Manufacturer/Supplier	Batch Number	Test number	PPN	Timestamp	Use-By Date
Natriumcitrat	Natrii citras	Caelo	12345678	210517-152911	17/05/2021 15:29:11	January 21	
Natriumcitrat	Natrii citras	Caelo	12345678	210525-162226	25/05/2021 16:22:26	January 21	



3.6. Identification details (ranking list)

Apo-Ident compares the measured spectrum with all samples stored in the reference database. A maximum of 20 results of the highest match can be displayed in the ranking list. To view the ranking list, please click in the result display for the measurement on **Valuation**.

The view with the identification details opens. If you select the **<Show as PDF>** button, you will receive the displayed table in PDF format and can print and file it together with the report.

At the 1st position (rank 1), the reference sample is displayed, which has the **highest compliance with the sample that has been placed**. If the criteria for identification of the substance are met, the substance will be displayed in **green** colour.

This is followed by the **red** marked next reference samples. These are not taken into account directly in the assessment in the sample spectrum. This means that samples of rank 2 or higher cannot lead to a "Match" result since another sample is closer. In case of substances that are grouped together, it must be noted that the name (classification) listed in the ranking list may differ from the substance name. The group name is then displayed (e.g. "Triglycerides").

The view is used for traceability and verification of the identification result by the user.

The list shows the test parameters of the measured sample spectrum obtained with respect to the nearest 20 reference samples. An explanation of individual terms is provided on page 24.

3.7. Help

Under the menu option **<Help>** the software provides various Help options for handling the Apo-Ident confidently.

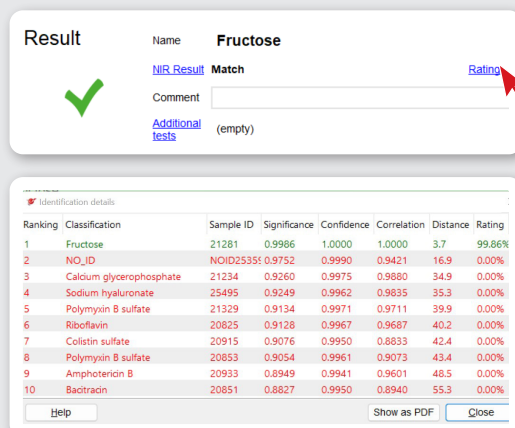
User Manual > This provides detailed operating instructions for the Apo-Ident analysers.

Service Centre Online Help > You are linked to the Apo-Ident Service Centre page. Internet access is absolutely necessary for this. Here you will find current manuals, substance lists and the latest software. Moreover, you can download information material and order forms as well as validation documentation and the open source code.

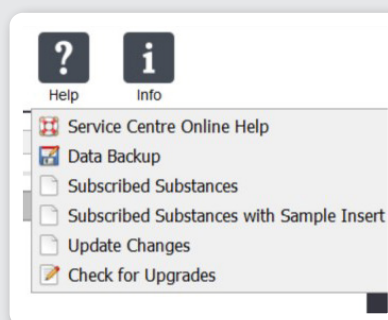
Data backup > Section 3.5.

Subscribed substances > This provides an overview of the substances that can be measured with Apo-Ident.

Subscribed substances with sample insert > If you have a device whose serial number begins with a "W", you will find an overview of substances that can also be measured with the sample insert for small substance quantities here. If you have a device whose serial number starts with an "E", the link **Subscribed substances with sample insert** will not be displayed. Your Apo-Ident is equipped with the latest spectrometer that can identify all solid substances with sample insert. The serial number of your instrument is displayed in the footer of the software.



Ranking	Classification	Sample ID	Significance	Confidence	Correlation	Distance	Rating
1	Fructose	21281	0.9986	1.0000	1.0000	3.7	99.66%
2	NO_ID	NOID2535	0.9752	0.9990	0.9421	16.9	0.00%
3	Calcium glycerophosphate	21234	0.9260	0.9975	0.9880	34.9	0.00%
4	Sodium hyaluronate	25495	0.9249	0.9962	0.9835	35.3	0.00%
5	Polymyxin B sulfate	21329	0.9134	0.9971	0.9711	39.9	0.00%
6	Riboflavin	20825	0.9128	0.9967	0.9687	40.2	0.00%
7	Colistin sulfate	20915	0.9076	0.9950	0.8833	42.4	0.00%
8	Polymyxin B sulfate	20853	0.9054	0.9961	0.9073	43.4	0.00%
9	Amphotericin B	20933	0.8949	0.9941	0.9601	48.5	0.00%
10	Bacitracin	20851	0.8827	0.9950	0.8940	55.3	0.00%



Apo-Ident 2 | W1912309 | USB

Update changes > The latest update changes will be shown.

Check for upgrades > Shows whether new software versions are available.

3.8. Info

Here you can obtain information on the installed version, set up a Teamviewer session under **<Service-Centre>**, or view the **<Certificate>** for the currently installed software.

4. Explanation of terms

Term	Explanation	Estimation
Rank	Determined rank for matching the measurement to be assessed with the reference samples saved in the database.	
Classification	Substances or groups of substances that can be clearly distinguished by Apo-Ident. A group of substances represents several substances that are not uniquely separable by Apo-Ident but are available for measurement (e.g. "triglycerides").	These classifications are marked in yellow (ambiguous result).
Sample ID	Identification number assigned by HiperScan GmbH to the reference samples from which the spectra of the Apo-Ident reference database was built. Detailed information on all reference samples are provided in the validation documentation.	
Significance	Measure for the distance of the measurement result related to the mean values of the reference measurements of a sample or classification.	The higher the value (maximum 1), the closer is the measured sample spectra to the saved reference values.
Confidence	Outlier assessment	The higher the value (maximum 1), the better the measured sample spectrum fits into the distribution of the saved reference values.
Correlation	Statistical measure for the similarity of the back projection of the mean value of the saved reference spectra to the back projection of the measured sample spectrum.	The higher the value (maximum 1), the greater is the match of the back projections.
Distance	Measure of distance between the mean value of the saved spectra of a reference sample and the measured spectra in the main component space (Mahalanobis distance).	The smaller the value, the closer is the sample spectrum to the saved reference values.
Assessment	Indicates the overall assessment (in terms of the above-mentioned criteria) of the measured spectrum as they are displayed on the screen and the report.	The higher the value (maximum 100%) the closer is the sample to the saved reference values. The minimum value defined for an identification) is 98 %.
Specificity	The specificity of a classification is the true-negative rate. It denotes the proportion of spectra correctly classified as non-identity during validation.	
Detection rate	This is the true positive rate. It denotes the proportion of the spectra classified as zero identity during validation.	

5. Technical specifications and disposal

5.1. Technical specifications of Apo-Ident 1

Analysis method	Near infra-red spectroscopy
Spectral range	1,000 - 1,900 nm
Spectral resolution	10 nm
Diffuse light	< 0.2 %
Measurement time	< 15 s per scan
Detector	InGaAs single detector, not cooled
Wavelength accuracy	± 1 nm (over the entire temperature range)
Wavelength reproducibility	± 0.3 nm (over the entire temperature range)
Photometric reproducibility	± 0.15 % (average of 500 scans at 25 °C)
Photometric linearity	(max/RMS) < 2 % / 1.5 %
Automatic recalibration/unit test	Integrated wavelengths and white standard
Light source	Tungsten-halogen burner
Probe/optical input	Diffuse reflection, measuring spot with 23 mm diameter (powders, scattering solids, with transfectance insert for liquids and pastes)
Dimensions	232 x 210 x 282 mm
Weight	5.2 kg
Interfaces	USB Typ B Slave
Operating temperature	15 - 35 °C
Storage temperature range	-20 bis 60 °C (non-condensing)
Operating voltage	100-240 VAC/50-60 Hz/60 W
Software	QuickStep software for recording and visualising spectra
System requirements	<ul style="list-style-type: none"> • PC with Windows 10 and 11 • min. 4 GB RAM • min. 1.6 GHz Pentium • 0.5 GB storage space



The device complies with the following EC directives

- EMV Directive 2014/30/EU
- Low-voltage Directive 2014/35/EU
- RoHS-Directive 2011/65/EU

5.2. Technical specifications of Apo-Ident 2

Analysis method	Near infra-red spectroscopy
Spectral range	1,000 - 1,900 nm
Spectral resolution	10 nm
Diffuse light	< 0.2 %
Measurement time	< 15 sec. per scan
Detector	InGaAs single detector, not cooled
Wavelength accuracy	± 1 nm (over the entire temperature range)
Wavelength reproducibility	± 0.3 nm (over the entire temperature range)
Photometric reproducibility	± 0.15 % (average of 500 scans at 25 °C)
Photometric linearity	(max/RMS) < 2 % / < 1.5 %
Automatic recalibration/unit test	Integrated wavelengths and white standard
Light source	Tungsten-halogen burner
Probe/optical input	Diffuse reflection, measuring spot with 23 mm diameter (powders, scattering solids, with transfectance insert for liquids and pastes)
Dimensions	185 x 192 x 220 mm
Weight	2.95 kg
Interfaces	1 x USB Typ B Slave
Interfaces of aiLINK	<ul style="list-style-type: none"> • 2 x USB 2.0 type A host • 2 x USB 3.0 type A host • Wifi 2.4GHz / IEEE 802.11ac • 1 x Gigabit Ethernet • 1 x HDMI2.0 Typ A bis 4k/30Hz
Operating temperature	15 - 35 °C
Storage temperature range	-20 to 60 °C (non-condensing)
Operating voltage for Apo-Ident 2	12 VDC - 3.35 A - 45 W
Operating voltage, external power supply unit	100 - 240 VAC/50-60 Hz/60 W
Software	QuickStep Apo-Ident software for recording and visualising spectra
System requirements	<ul style="list-style-type: none"> • PC with Windows 10 and 11 • min. 4 GB RAM • min. 1.6 GHz Pentium • 0.5 GB storage space




The device complies with the following EC directives

- EMV Directive 2014/30/EU
- Low-voltage Directive 2014/35/EU
- RoHS-Directive 2011/65/EU

5.3. Disposal



According to the European WEEE Directive, electrical and electronic equipment should not be disposed of with household waste. Their components must be recycled or disposed of separately, because toxic and hazardous components may cause sustained damage to health and the environment if disposed of improperly.

 In accordance with the Electrical and Electronic Equipment Act (ElektroG), you are obliged to dispose of electrical and electronic equipment properly at the end of their service life. If in your company you have not implemented any procedure for this, HiperScan GmbH will take the device back as the manufacturer.

Please do not hesitate to contact us if you have any questions.



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HiperScan hopes you enjoy using
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