



# Operating manual

for the NIR analyser

**Apo-Ident 2.1**

based on version 3.0



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## 1. Starting the program

Start the program „NextStep 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 1.5.1** explain how to create a configuration profile.

## 3. Selection of the substance

Under **Substance**, enter Cannabis flower THC/CBD Quantification. The monograph name, the Latin name, synonyms stored in the database, and the classifier, in this case “cannabis flower”, 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.

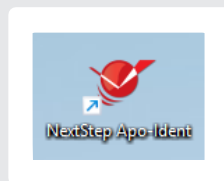
## 4. Quantification of THC and CBD in cannabis flowers

### Start measurement

First place your **sample container with the cannabis flower** (if possible, place the stem upwards to get a large contact surface in the sample container) and the **adapter ring** on the measurement point. Start the measurement process by clicking on the cannabis button next to **Measurement** or by pressing the measurement button (lights up green) directly on the top of the device.

The „**Documentation (methods and results)**“ window will now appear. Please read the text „**The Quantifier module enables the determination of the THC and CBD content by means of NIR spectroscopy using quantitative methods based on a mathematical-statistical (prediction) model. It is not an identification of THC and CBD in the sense of thinlayer chromatography**“ carefully.

In the following text field, enter the steps you have carried out in advance and the result of the identity check. Once you have entered the documentation and the associated identity check, the „Documentation: Completed“ box can be checked. By clicking on OK, the window closes and the measurement is started.



PHARMACY Operator


SUBSTANCE Search Cannabis

Test for ☐ Cannabisblüten THC/CBD-Quantifikation

Latin ☒ Cannabisblüten, CBD-dominanter Typ

Synonyms ☒ Cannabisblüten, THC-dominanter Typ

Classifier ☒ Cannabisblüten, THC/CBD-Zwischentyp

MEASUREMENT  Place the selected substance on the device.

**Documentation (methods and results)**

The Quantifier module enables the determination of the THC and CBD content by using quantitative methods based on a mathematical-statistical (prediction) model. It is not an identification of THC and CBD in the sense of thinlayer chromatography.

Documentation: ☒ Completed

### Referencing

After the first measurement, you will be asked to place the supplied reference standards onto the measurement point. Follow the instructions in the software and first place the black reference and then the white reference on the measuring point. Start the reference measurements by clicking on the black or white button next to **Measurement** or by pressing the measurement button (lights up green) directly on the top of the device.

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

### 5. Result

After a few seconds, the device shows you the THC and CBD content and the type of your measured cannabis flower.

### 6. Report details

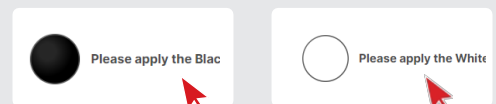
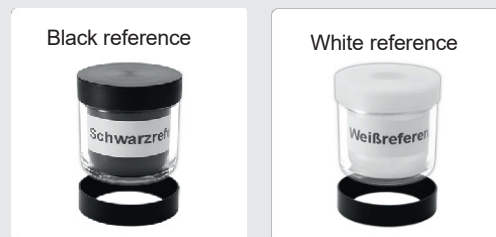
After successful measurement, fill in all mandatory fields (marked with a red frame) next to the **Sample** as well as **Pharmacy > Operator**. If required, a comment can be filled in under **Result**, as well as reopening the documentation or the suggestion for macro and microscopic testing.

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.



RESULT	Name: Cannabisblüten THC/CBD-Quantifikation (no defined type)
	THC 2.6% ± 5.8% (2σ) CBD 4.7% ± 2.2% (2σ)
Comment	<input type="text"/>
	<input type="button" value="Documentation"/> documented

SAMPLE	PPH	<input type="text"/>	Variety	<input type="text"/>
	Producer	<input type="text"/>	Expiry Date	<input type="text"/>
	Batch	<input type="text"/>		
	Quantity	<input type="text"/>	Content	<input type="text"/> % THC <input type="text"/> % CBD
	Supplier	<input type="text"/>		

REPORT	<input type="button" value="Save"/>	<input type="button" value="PDF"/>	<input type="button" value="Print"/>	<input type="button" value="Print Label"/>
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### 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 no objects or liquids get inside 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 NextStep\_\*.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.
- Now install the Quantifier module by double-clicking on the QuantifierModul\_\*.exe file. Read and accept the licence conditions. Follow the setup 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.

### 1.3 Connecting the analyser

Apo-Ident 2.1 requires a power connection and computer/laptop (for system requirements see **section 6.1**) 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 Apoldent 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.

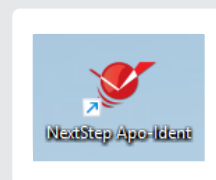
### 1.4 Starting the program

Start the program „NextStep 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

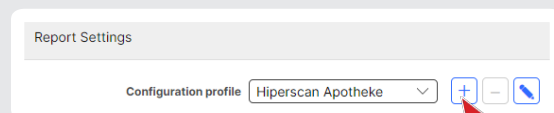
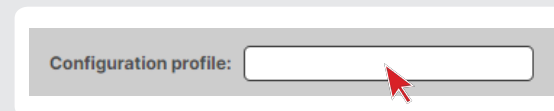
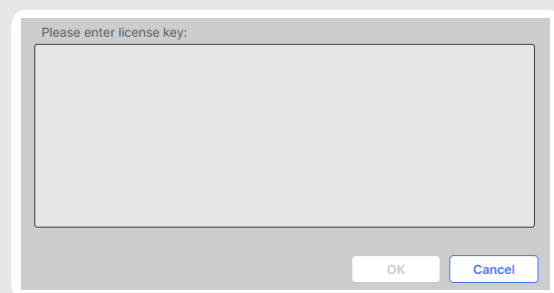
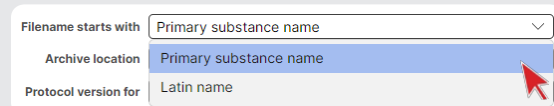
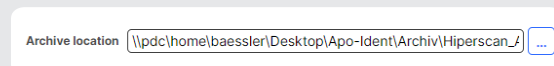
If you have misplaced your licence key or need support, please contact our customer service on telephone +49 351 212 496 33 or via e-mail to [kundenservice@apo-ident.de](mailto:kundenservice@apo-ident.de).

**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/ApoIdent/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.

### Show difference of back projection > Section 4.3

**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.

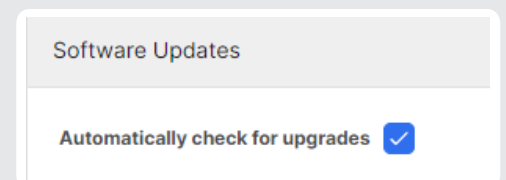
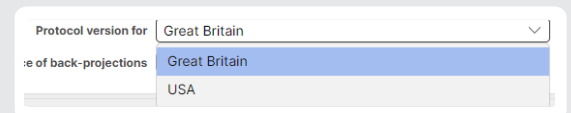
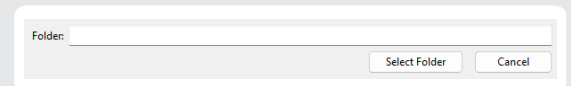
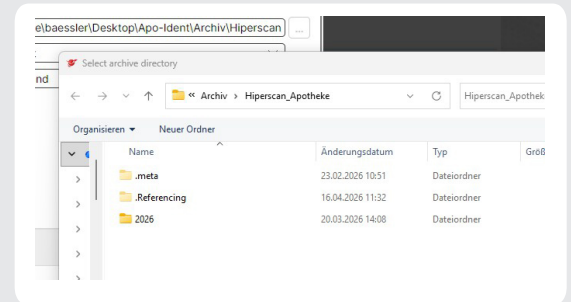
## 1.5.2 Software Update

To check whether new software updates are available for Apo-Ident, click on **Help > Check for Updates**.

Apo-Ident automatically searches the Internet for new software updates. This function is activated by default.

To deactivate this function, under **Settings > Software update**, remove the tick next to **<Automatic search for new software>**.

**Note:** A prerequisite for the automatic search for software updates is the use of a Windows PC that is connected to the Internet. It is also necessary that the system settings of your PC allow background downloads.





## 1.5.3 Label printer settings

### Brother label printers

**Windows 11:** First install the driver. You will find this on the USB stick supplied under *Useful information/Brotherdriver/Win11*. Follow the installation instructions.

Alternatively, you can find the latest drivers online at the [Brother Solution Center](#).

### 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

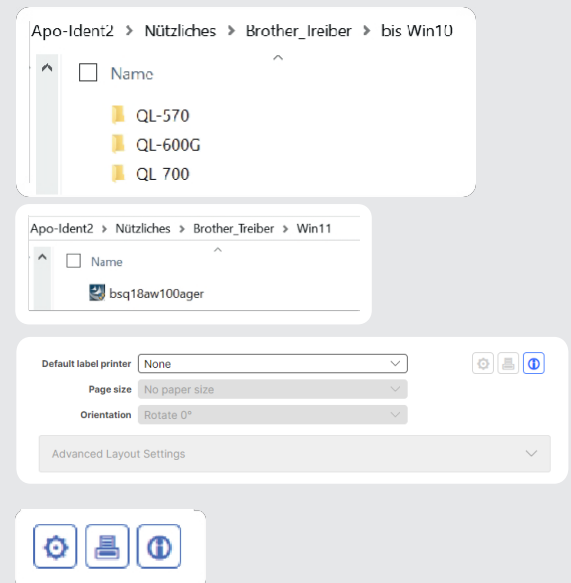
Now click on the left **tool icon** „Printer settings“. Change the following settings in the dialogue window that opens:

- 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 “Test printing”.

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



### Settings for single labels DK-11201

Choose the following settings:

- Paper 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** „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 “Test printing”.

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



### Installation of the driver software for DYMO LabelWriter

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.

### Settings for single labels 99012

Select the following settings under **<Settings>**  
**<Label printer 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 mm
- Label height / mm: 88.4 mm
- X-offset / mm: 0 mm
- Y-offset / mm: 0 mm
- Scaling factor: 2.20

Now click on the left tool icon **<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.

**Note:** You can check your settings by starting a test print.

To do this, click on the middle icon **<Test printing>**.

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 cannabis flower in the search field. The monograph name, the Latin name and the classifier, in this case „cannabis flower“, will be displayed .

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

### Start measurement

Place your **sample container with the cannabis flower** and the **adapter ring** on the measurement point. Start the measurement process by clicking on the cannabis button next to **Measurement** or by pressing the measurement button (lights up green) directly on the top of the device.

**Excursus „Correct filling of the sample containers (Cannabis Flower)“:** Place the cannabis flower to be tested in the sample container with the stem facing upwards so that the flower covers most of the bottom of the sample container. The more surface area is covered, the more accurate the measurement results will be.

The „**Documentation (methods and results)**“ window will appear.

„The Quantifier module enables the determination of the THC and CBD content by means of NIR spectroscopy using quantitative methods based on a mathematical-statistical (prediction) model. This is not an identification of THC and CBD in the sense of thin-layer chromatography“.

In the following text field, enter the tests you have carried out in advance and the respective result. Once you have entered the documentation, you can click on the „Documentation: completed“ box. Click OK to close the window and start the measurement.

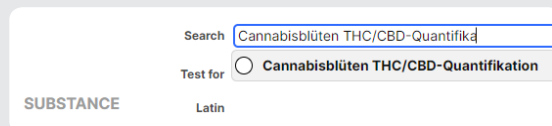
### Referencing

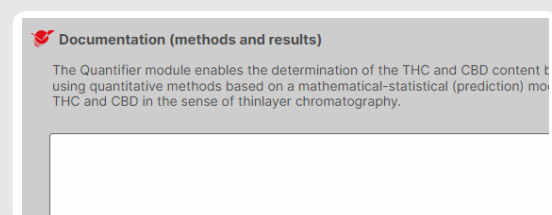
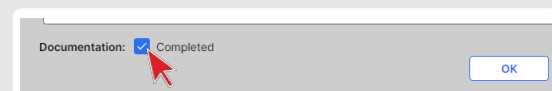
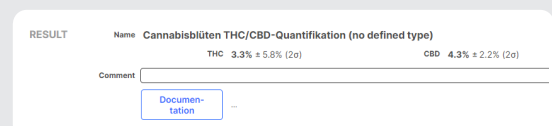
After the first measurement, you will be prompted to set up and measure the reference standards. Follow the software instructions and set up the black reference first, then the white reference on the measuring point. Start the reference measurements by clicking on the black or white button next to **Measurement** or by pressing the measurement button (lights up green) directly on the top of the device.

**Note:** Please always use the black adapter ring. The measurement of the references will be requested again by the software after approx. 60 minutes.

### Output of the result

After a few seconds, the THC and CBD content of the cannabis flower are displayed. In addition, it is shown whether it is a THC-dominant type, a CBD-dominant type, a THC/CBD-intermediate type or whether it is an undefined result, if the measurement result cannot be categorised into a product group.



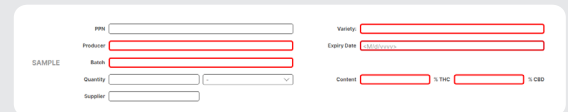
### Measurement specifications

After the measurement, complete all mandatory fields (outlined in red) under **Sample** and under **Pharmacy > Operator**. If required, you can fill in the fields **PPN**, **Quantity**, **Supplier** and **comment**.

### Creating the test 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.



The screenshot shows a form with the following fields:

- PPN: [text input]
- Sample: [text input]
- Quantity: [text input] [dropdown menu]
- Supplier: [text input]
- Pharmacy: [text input]
- Operator: [text input]
- Empty Date: [text input]
- Comment: [text input]
- % THG: [text input]
- % ODE: [text input]



The screenshot shows a row of buttons:

- REPORT
- Save (with download icon)
- PDF (with document icon)
- Print (with printer icon)
- Print Label (with label icon)

### 3. Cleaning/use of sample containers, transfectance insert and sample insert

#### Sample containers

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

**Before measuring, particularly check that the bottom of the sample container 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 container and the measuring transfectance insert are also guaranteed.

#### 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.

### 4.1 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 **Expiry Date** 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 operator, supplier or other information.

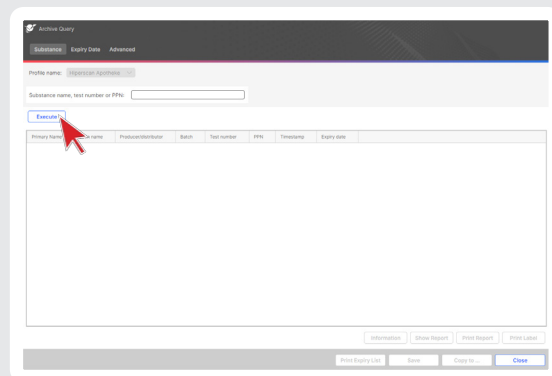
#### Exporting the query results in CSV format

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.

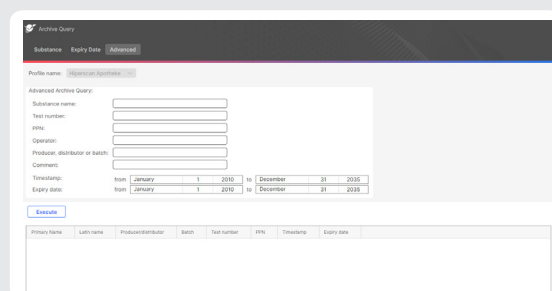
#### Copy files to individual storage locations

(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.



The screenshot shows the 'Archive Query' window with the 'Substance' tab selected. The 'Profile name' is set to 'Substance: Apomorphine'. The 'Substance name, test number or PPN' field is empty. The 'Execute' button is highlighted with a red arrow. Below the search fields is a table with columns: Primary name, Label name, Product/distributor, Batch, Test number, PPN, Timezone, and Expiry date. The table is currently empty.



The screenshot shows the 'Archive Query' window with the 'Expiry Date' tab selected. The 'Advanced Archive Query' section is visible, containing fields for Substance name, Test number, PPN, Operator, Product/distributor or batch, and Comment. The 'Timezone' and 'Expiry date' fields are set to 'from January 1 2010 to December 31 2010'. The 'Execute' button is highlighted. Below the search fields is a table with columns: Primary name, Label name, Product/distributor, Batch, Test number, PPN, Timezone, and Expiry date. The table is currently empty.

### 4.2 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**.

### 4.3 Cannabis-Button

#### 4.3.1 Operating instructions

Under **<Help>** you will find macroscopic and microscopic determination for safe cannabis identification.

### 4.4 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 back-up (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.

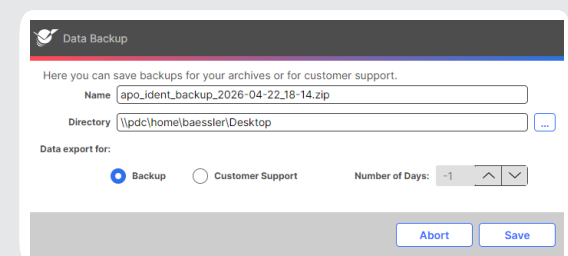
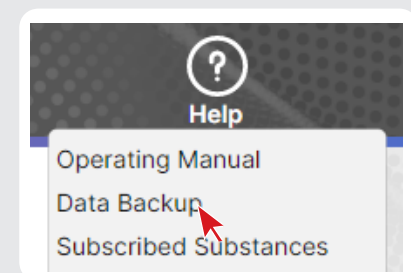
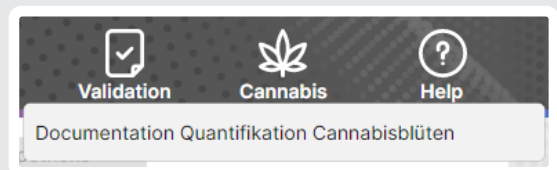
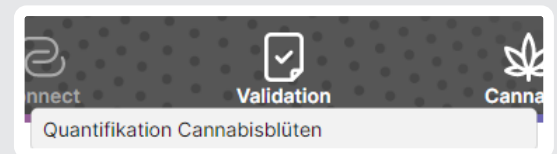
When you export the data for customer service, your spectra are compressed and saved in a ZIP file. You can set the number of measurement days for which you would like to combine and send or save as follows:

- -1 = all days
- 0 = only LogFiles
- 1 = 1 day
- 2 = 2 day
- 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](mailto:kundenservice@apo-ident.de).

### 4.5 Info

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





## 5.1 Technical data Apo-Ident 2

Analysis method	Near infrared spectroscopy
Spectral range	1000 - 1900 nm
Spectral resolution	10 nm
Stray light	< 0,2 %
Measuring time	< 15 s per scan
Detector	InGaAs single detector, uncooled
Wavelength accuracy	± 1 nm (in the entire temperature range)
Wavelength reproducibility	± 0.3 nm (in the entire temperature range)
Photometric reproducibility	± 0.15 % (average of 500 scans at 25 °C)
Photometric linearity (max/RMS)	< 2 % / < 1,5 %
Automatic recalibration/device check	Integrated wavelength and white standard
Light source	Tungsten-halogen burner
Probe/optical input	Diffuse reflection, measuring spot with 23 mm diameter (powder, scattering solids, with transfective stamp liquids and pastes)
Dimensions	185 x 192 x 220 mm
weight	2.95 kg
Interfaces	1 x USB type B slave
optional: Interfaces aiLINK	<ul style="list-style-type: none"> <li>• 2 x USB 2.0 type A host</li> <li>• 2 x USB 3.0 type A host</li> <li>• Wifi 2.4GHz IEEE 802.11ac</li> <li>• 1 x Gigabit Ethernet</li> <li>• 1 x HDMI2.0 Type A up to 4k/30Hz</li> </ul>
Operating temperature	15 - 35 °C
Storage temperature range	-20 to 60 °C (non-condensing)
Operating voltage Apo-Ident 2	12 VDC - 3.35 A - 45 W
Operating voltage external power supply	100 - 240 VAC/50-60 Hz/60 W
System	NextStep software for recording and visualising spectra
Software requirements	<ul style="list-style-type: none"> <li>• PC with Windows 11 operating system</li> <li>• Debian-based Linux</li> <li>• min. 4 GB RAM</li> <li>• min. 1.6 GHz Pentium processor</li> <li>• 1.5 GB local storage space</li> </ul>



The device complies with the following EC directives

- EMC Directive 2014/30/EU
- Low Voltage Directive 2014/35/EU
- RoHS Directive 2011/65/EU

### 5.2 Disposal



*According to the European WEEE Directive, electrical and electronic devices may not be disposed of with household waste. Their components must be recycled or disposed of separately, as toxic and hazardous components can cause lasting damage to health and the environment if disposed of incorrectly.*

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.

If you have any questions, please do not hesitate to contact us.



Customer service  
Apo-Ident

Phone: +49 351 212 496 33  
Fax +49 351 212 496 99

kundenservice@apo-ident.de  
www.apo-ident.de

HiperScan wishes you a lot of fun with Apo-Ident!

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