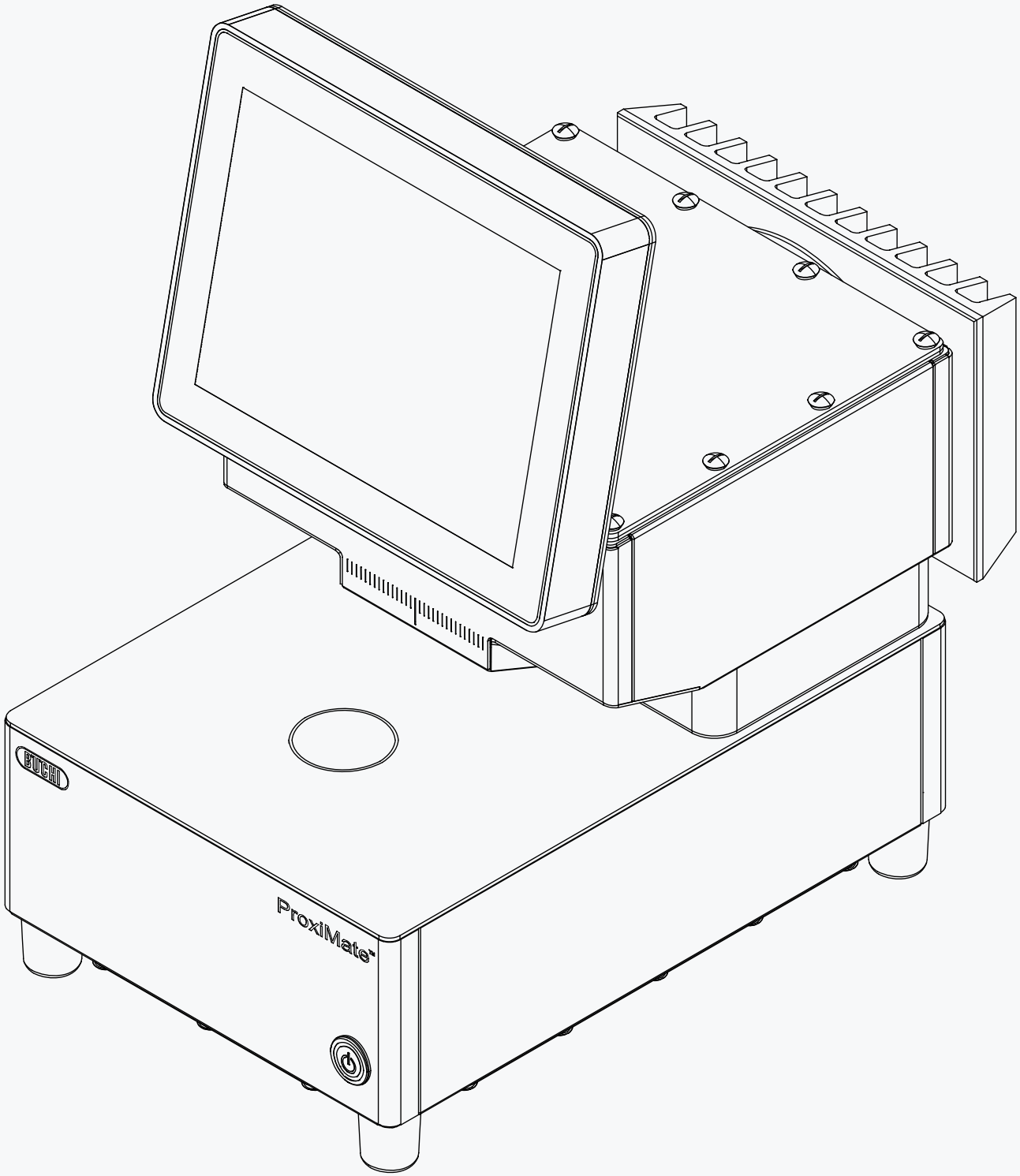

Operation Manual

ProxiMate™

BÜCHI

Imprint

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Version J

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1 About this document

This operation manual is applicable for all variants of the instrument.
Read this operation manual before operating the instrument and follow the instructions to ensure safe and trouble-free operation.
Keep this operation manual for later use and pass it on to any subsequent user or owner.
BÜCHI Labortechnik AG accepts no liability for damage, faults and malfunctions resulting from not following this operation manual.
If you have any questions after reading this operation manual:

▶ Contact BÜCHI Labortechnik AG Customer Service.

https://www.buchi.com/contact

1.1 Warning notices in this document

Warning notices warn you of dangers that can occur when handling the instrument. There are four danger levels, each identifiable by the signal word used.

Signal word	Meaning
DANGER	Indicates a danger with a high level of risk which could result in death or serious injury if not prevented.
WARNING	Indicates a danger with a medium level of risk which could result in death or serious injury if not prevented.
CAUTION	Indicates a danger with a low level of risk which could result in minor or medium-severity injury if not prevented.
NOTICE	Indicates a danger that could result in damage to property.

1.2 Symbols

The following symbols are displayed in this operation manual or on the device:

1.2.1 Warning symbols

Symbol	Meaning
	General warning
	Breakable items
	Hot surface
	Dangerous electrical voltage
	Instrument damage

1.2.2 Mark-ups and symbols

NOTE

This symbol draws attention to useful and important information.

☑ This character draws attention to a requirement that must be met before the instructions below are carried out.

▶ This character indicates an instruction that must be carried out by the user.

⇨ This character indicates the result of a correctly carried out instruction.

Mark-up	Explanation
Window	Software Windows are marked-up like this.
Tab	Tabs are marked-up like this.
Dialog	Dialogs are marked-up like this.
[Button]	Buttons are marked-up like this.
[Field names]	Field names are marked-up like this.
[Menu / Menu item]	Menus or menu items are marked-up like this.
Status	Status is marked-up like this.
Signal	Signals are marked-up like this.

1.3 Trademarks

Product names and registered or unregistered trademarks that are used in this document are used only for identification and remain the property of the owner in each case.

2 Safety

2.1 Proper use

The instrument is designed and built for laboratories and production environments (at-line). It serves to determine the concentration of selected constituents contained within a substance.
The instrument can be used for the following tasks:

- Determination of quantifiable product properties.

2.2 Use other than intended

Use of any kind other than that described in Chapter 2.1 “Proper use”, page 9 and any application that does not comply with the technical specifications (see Chapter 3.7 “Technical data”, page 18) constitutes use other than that intended.
In particular, the following applications are not permissible:

- Use of the instrument in rooms which require Ex-protected instruments.
- Use of samples, which can explode or inflame (example: explosives, etc.) due to shock, friction, heat or spark formation.
- Use of samples that are dangerous or harmful for the person operating the instrument.

The manufacturer assumes no liability for inaccurate measurements resulting from:

- Software or hardware malfunctions
- Incorrect usage or user error
- Unauthorized access by third parties

These types of misuse are not covered by warranty or liability.

2.3 Staff qualification

Unqualified persons are unable to identify risks and are therefore exposed to greater dangers.
The instrument must be operated by suitably qualified laboratory staff.
These operating instructions are aimed at the following target groups:

Users

The users are persons that meet the following criteria:

- They have been instructed in the use of the instrument.
- They are familiar with the contents of these operating instructions and the applicable safety regulations and apply them.
- They are able on the basis of their training or professional experience to assess the risks associated with the use of the instrument.

Operator

The operator (generally the laboratory manager) is responsible for the following aspects:

- The instrument must be correctly installed, commissioned, operated and serviced.
- Only suitably qualified staff must be assigned the task of performing the operations described in these operating instructions.
- The staff must comply with the local applicable requirements and regulations for safe and hazard-conscious working practices.
- Safety-related incidents that occur while using the instrument should be reported to the manufacturer (quality@buchi.com).

BUCHI service technicians

Service technicians authorized by BUCHI have attended special training courses and are authorized by BÜCHI Labortechnik AG to carry out special servicing and repair measures.

2.4 Residual risks

The instrument has been developed and manufactured using the latest technological advances. Nevertheless, risks to persons, property or the environment can arise if the instrument is used incorrectly.
Appropriate warnings in this manual serve to alert the user to these residual dangers.

2.4.1 Glass and acrylic breakage

Broken glass and acrylic can cause severe cuts.
Broken glass or acrylic can enter production.

- ▶ Handle the Petri Dishes and other glass and acrylic components carefully and do not drop them.
- ▶ Always visually inspect glass and acrylic components for damage every time they are to be used.
- ▶ Do not continue to use glass and acrylic components that are damaged.
- ▶ Always wear protective gloves when disposing of broken glass and acrylic.

2.4.2 Faults during operation

If a device is damaged, sharp edges or exposed electrical wires can cause injuries.

- ▶ Regularly check device for visible damage.
- ▶ If faults occur, switch off the device immediately and inform the operator.
- ▶ Do not continue to use devices that are damaged.

2.4.3 Instrument damage due to an incorrectly installed IP module

An incorrectly installed IP module can cause material and moisture to enter the instrument.

- ▶ Do not open the IP module.
- ▶ Make sure that the USB sockets are covered when not in use.

2.4.4 Malware infection due to connections with other devices or network

Connections with other devices or a network can cause a malware infection to the instrument.

- ▶ Install antivirus software and firewall before connecting to other devices or network.

2.4.5 Data loss

In the event of a power failure, e.g. due to lightning or interruption of power supply, measurement data may be lost.

- ▶ Carry out regular data backup.

2.4.6 Damage to the internal memory due to incorrect shutting down of the instrument

Incorrect shutting down of the instrument can cause damage to the internal memory.

- ▶ Shut down the instrument as described. See Operation

2.5 Personal protective equipment

Depending on the application, hazards due to heat and/or corrosive chemicals may arise.

- Always wear appropriate personal protective equipment such as safety goggles, protective clothing and gloves.
- Make sure that the personal protective equipment meets the requirements of the safety data sheets for all chemicals used.

2.6 Modifications

Unauthorized modifications can affect safety and lead to accidents.

- Use only genuine BUCHI accessories, spare parts and consumables.
- Carry out technical changes only with prior written approval from BUCHI.
- Only allow changes to be made by BUCHI service technicians.

BUCHI accepts no liability for damage, faults and malfunctions resulting from unauthorized modifications.

3 Product description

3.1 Description of function

ProxiMate™ is a NIR spectrometer that can be used to determine the concentration of different parameters in food and feed samples in a nondestructive way.
ProxiMate™ is supplied in different versions. Dependent on the version specified ProxiMate™ is either an NIR or combined NIR and visible spectrometer.
The instrument generates a beam of NIR and visible light which is focused onto the sample under investigation. Light reflected from the sample is collected and spatially separated by a diffraction element. The diffracted light is directed onto a diode array detector. Signals from the detector are processed and a reflectance spectrum is constructed. This spectrum undergoes further processing to calculate the constituents required.

Data processing

The NIR light interacts with the sample material in different ways, leaving a characteristic fingerprint on the spectrum. Spectra from both liquids and solids can be measured with ProxiMate™. The spectra of solid samples are collected directly, liquid samples require the use of a transflectance adapter.

Application

The Application defines all of the parameters related to measurement of a particular sample type.
This includes:

- the properties to be measured
- the calibrations used
- the standard operating procedure

It is possible to Import or Export a file that contains all Application data to allow the same Application to be used on a second ProxiMate™ (dependent on calibration license requirements).

3.2 Sample presentation options

The choice of sample presentation of ProxiMate™ is optimised for the type of sample under analysis and for the working environment where the instrument is used.
ProxiMate™ can be configured with a choice of sample presentation options: up view and down view configurations.

NOTE

You can capitalise on the advantages of the up view and down view options in a single instrument.

3.2.1 Up view option

The up view option directs and collects light from the underside of the sample. The NIR light passes through the base of a glass petri dish before interacting with the sample under evaluation. Up view measurement has the advantage that a more consistent surface is presented to the ProxiMate™ ensuring accurate measurement output. Glass petri dishes are recommended to enable best performance. Additionally, when used in conjunction with a transflectance adapter, it is also possible to measure liquids using the up view option.

NOTE

Choose the up view option for the most consistent measurement performance or for measurements of liquids.

3.2.2 Down view option

With down view option light is focussed onto and collected from the top surface of the sample. In areas where glass is prohibited (such as some food production areas), the down view mode offers the advantage that NIR light does not interact with the sample container. As plastics have their own NIR spectra, changes in type of dish can influence the measurement output leading to perceived measurement shifts. Use of the down view mode prevents this from occurring. Additionally ProxiMate™ down view also allows the use of large volume sample dishes. These are particularly useful with samples that are inhomogeneous, as the measurement is averaged over a much larger sample area.

NOTE

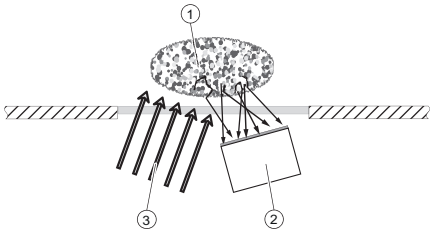
Choose the down view option for areas where glass is prohibited or where larger sample volumes are required.

3.3 Measurement modes

3.3.1 Diffuse reflection mode

Non-translucent materials can be analyzed via diffuse reflection.

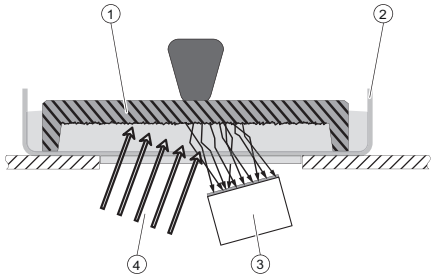
NIR light penetration is limited by the sample material. It interacts with the sample, is refracted and diffusely reflected into the sensor. The reflected rays contain the spectral information of the sample.



① Sample
② Sensor
③ Light

3.3.2 Transflectance mode

Translucent and opaque liquids can be analyzed via transflectance mode. The light penetrates the liquid, is diffusely reflected by the reference plate and passes through the sample a second time. The transflected rays contain the spectral information of the sample.



① Transflectance cover
② Sample cup
③ Sensor
④ Light

3.4 Configuration

3.4.1 Front view

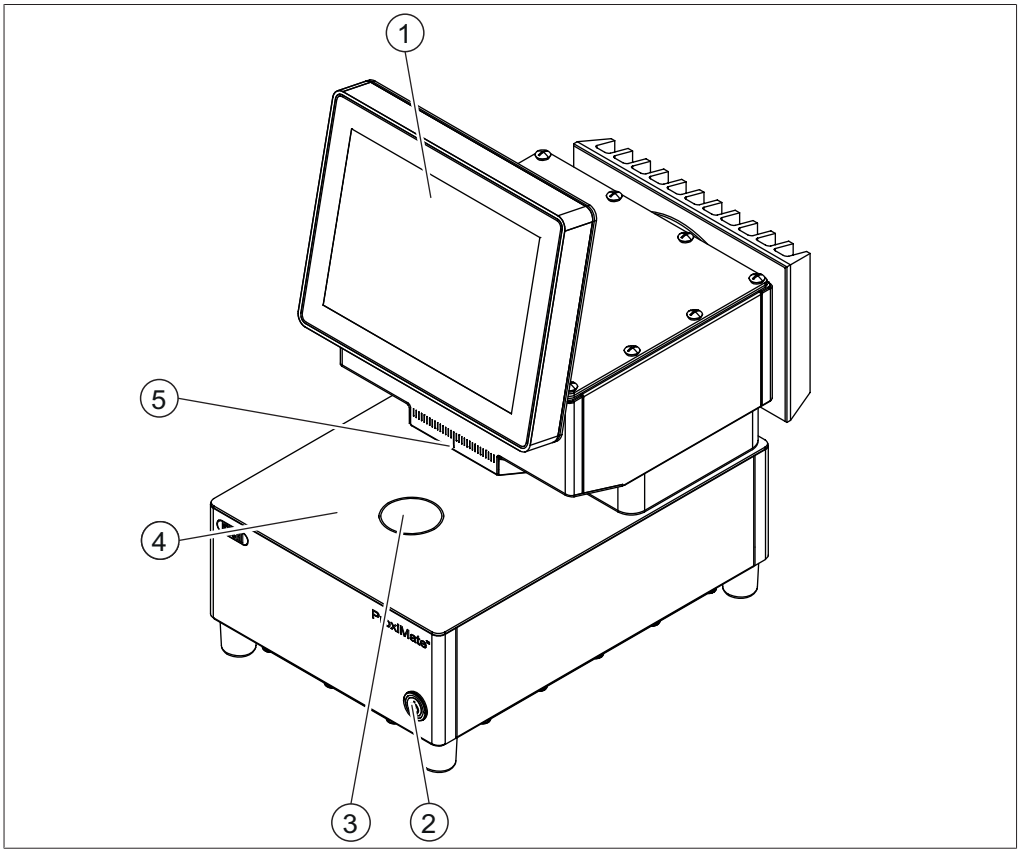


Fig. 1: Front view

1 Control panel
2 On/Off master switch
3 Up view window
4 Sample presentation area
5 Down view window

NOTE

The instrument is designed for stationary installation and therefore not equipped with a mains plug.

The On/Off master switch does not interrupt the electric power supply.

▶ See Chapter 5.4 “Establishing electrical connections”, page 22

Status On/Off master switch

Status	Description
No light	The instrument is not switched on.
Steady light	The instrument is on
Flashing light	The instrument shuts down

3.4.2 Rear view

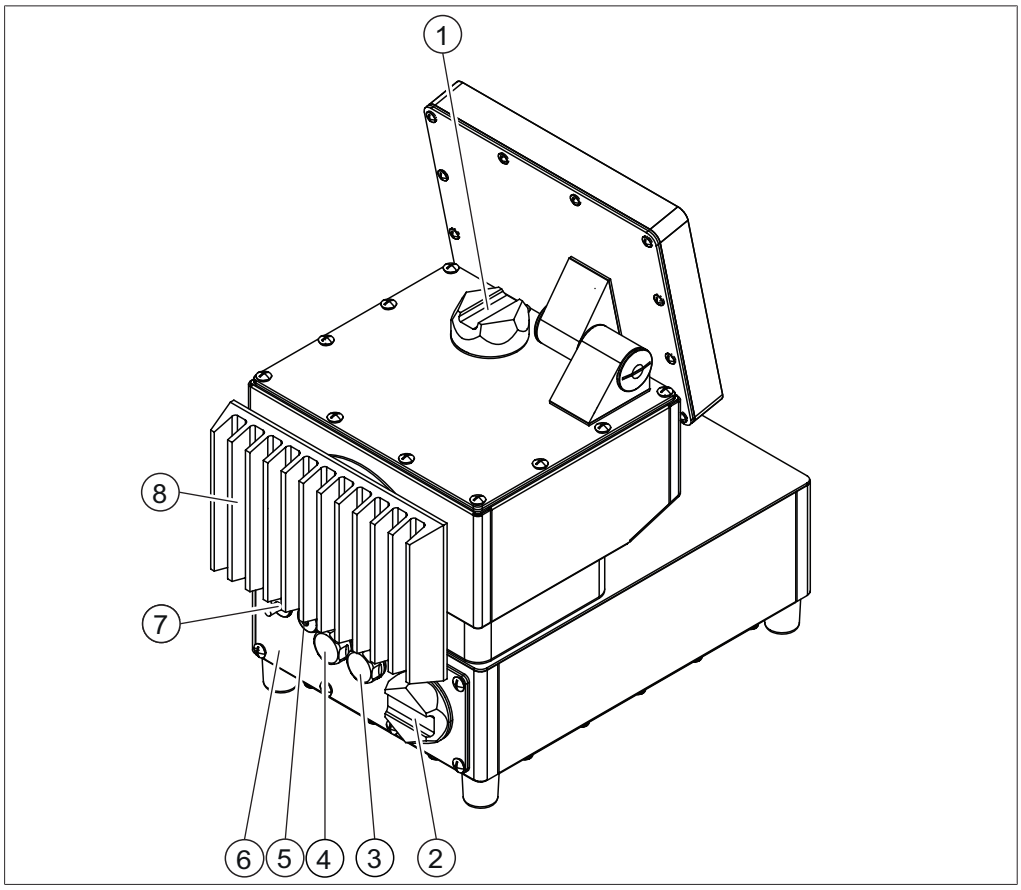


Fig. 2: Rear view (with Advanced IP module)

1	Cover lid down view lamp	2	Cover lid desiccant cartridge
3	USB socket	4	USB socket
5	Cable gland for network connection	6	Advanced IP module The instrument connections are located behind the Advanced IP module. See Chapter 3.4.3 “Connections (IP module removed)”, page 16
7	Cable gland for mains lead	8	Cooler

3.4.3 Connections (IP module removed)

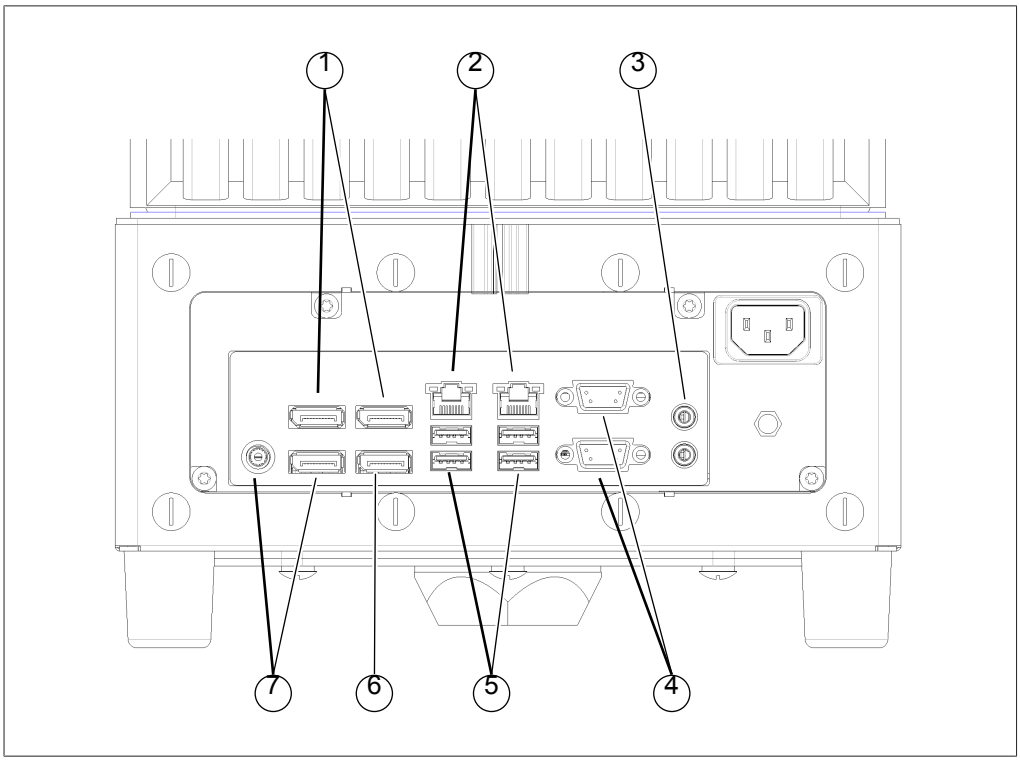


Fig. 3: Connections on the rear side

1	Not available	2	Network
3	Audio	4	Disabled
5	USB ports	6	Display port
7	Do not use		

3.4.4 Location of the type plate

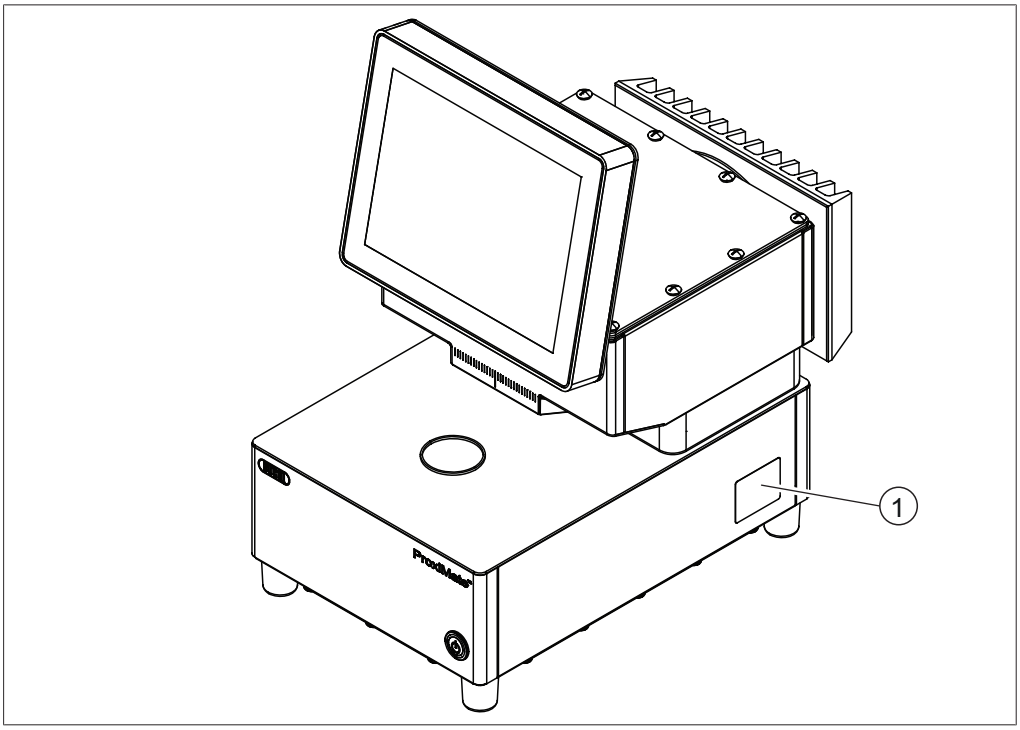


Fig. 4: Location of the type plate

1 Type plate

3.5 Scope of delivery

NOTE

The scope of delivery depends on the configuration of the purchase order.

Accessories are delivered as per the purchase order, order confirmation, and delivery note.

3.6 Type plate

The type plate identifies the instrument. The type plate is located at the side of the instrument. See Chapter 3.4.4 “Location of the type plate”, page 17

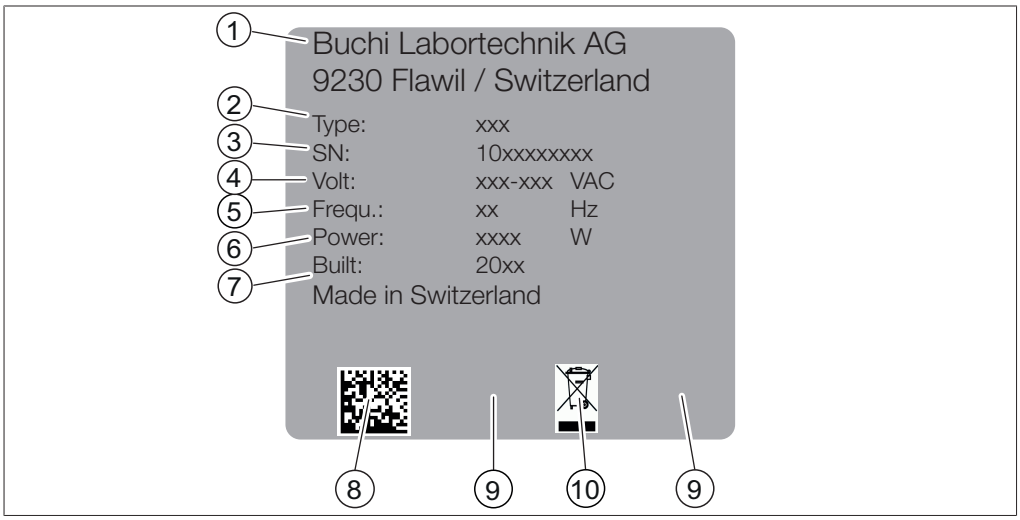


Fig. 5: Type Plate

1	Company name and address	2	Instrument name
3	Serial number	4	Input voltage range
5	Frequency	6	Power consumption maximum
7	Year of manufacture	8	Product code
9	Approvals	10	Symbol for "Do not dispose of as household waste"

3.7 Technical data

3.7.1 ProxiMate™

Specification	ProxiMate™
Dimensions (W x D x H)	260 x 435 x 500 mm
Weight	23 kg
Power consumption	60 W
Frequency	50 / 60 Hz
Connection voltage	100 - 240 VAC ± 10 %
Max. power for all USB-Ports	5 W
IP Code	IP69
Overvoltage category	II
Pollution degree	2
Appliance classes	I
Detector NIR	Thermoelectrically cooled InGaAs
Detector VIS	Si
Wavelength range NIR	900 - 1700 nm
Resolution NIR	7.0 nm
NIR Data Resolution	3.1 nm
Wavelength range VIS	400 - 900 nm
Resolution VIS	Better than 15 nm

Specification	ProxiMate™
VIS Data Resolution	2 nm
Up view illumination spot size	8 mm
Down view illumination spot size	30 mm
Approval	CE / CSA
Lamp type	Tungsten-halogen
Average life (lamp)	7000 h
Display	10.4 in

3.7.2 Ambient conditions

For indoor use only.

Max. altitude above sea level	2000 m
Ambient temperature	5 - 40 °C (25 °C)
Maximum relative humidity	80% for temperatures up to 31 °C decreasing linearly to 50 % relative humidity at 40 °C
Storage temperature	max. 45 °C

3.7.3 Materials

Component	Material of construction
Housing	Steel 1.4301
Seals housing	EPDM 50
Housing	Aluminum with coating
Seals housing	EPDM 70
Glass up view	Sapphire Al2O3
Glass down view	Borofloat
Seals glasses	EPDM A 75
Cooler	Aluminum with coating EPOFLON 526/4562
Sealing frame cooler	HD-PE
Seals cooler	EPDM
Display	Glass
Frame display	Steel 1.4301
Seal Display	1K MS-Polymer Körapop 225
Seals wire module	FKM
Housing USB/Wi-Fi	Steel 1.4301
Cover USB/Wi-Fi	PE-HD
Seals USB/Wi-Fi	Silicon

4 Transport and storage

4.1 Transport

NOTICE

Risk of breakage due to incorrect transportation

- ▶ Make sure that the instrument is fully dismantled.
- ▶ Pack all instrument components properly to prevent breakage. Use the original packaging whenever possible.
- ▶ Avoid sharp movements during transit.

- ▶ After transporting, check the instrument and all glass components for damage.
- ▶ Damage that has occurred in transit should be reported to the carrier.
- ▶ Keep packaging for future transportation.

4.2 Storage

- ▶ Make sure that the ambient conditions are complied with (see Chapter 3.7 “Technical data”, page 18).
- ▶ Wherever possible, store the device in its original packaging.
- ▶ After storage, check the device for damage and replace if necessary.

4.3 Lifting the instrument

⚠ WARNING

Danger due to incorrect transportation

The possible consequences are crushing injuries, cuts and breakages.

- ▶ The instrument should be transported by two persons at the same time.
- ▶ Lift the instrument at the points indicated.

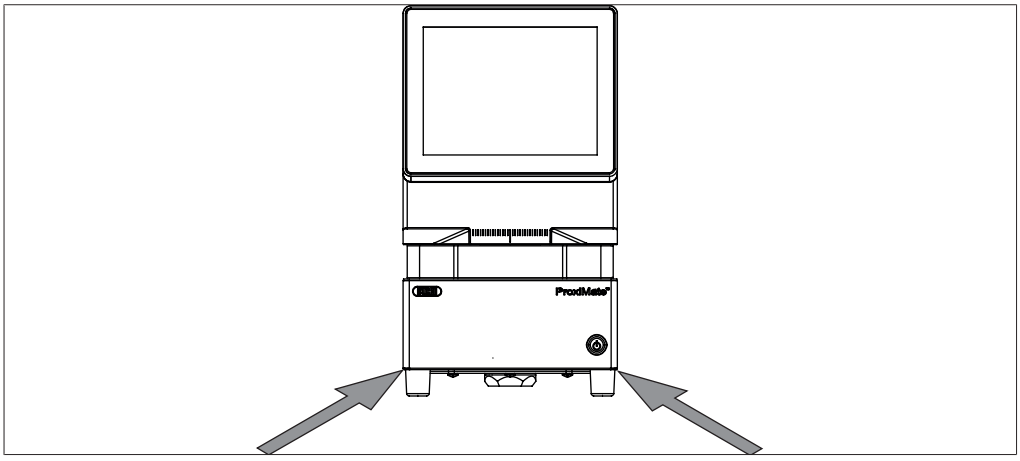


Fig. 6: Lifting the instrument

- ▶ Lift the instrument – this requires two persons lifting at the points indicated on the bottom of the instrument.

5 Installation

5.1 Before installation

NOTICE

Instrument damage due to switching it on too early.

Switching on the instrument too early after transportation can cause damage.

▶ Climatize the instrument after transportation.

5.2 Installation site

The installation site must meet the following requirements:

- Firm, level and vibration-free surface.
- Minimum space requirement: 260 mm x 435 mm x 500 mm (W x D x H).
- Take into account the maximum product dimensions and weight.
- Do not expose the instrument to any external thermal loads, such as direct solar radiation.

NOTE

Make sure that the power supply can be disconnected at any time in an emergency.

5.3 Securing against earthquakes

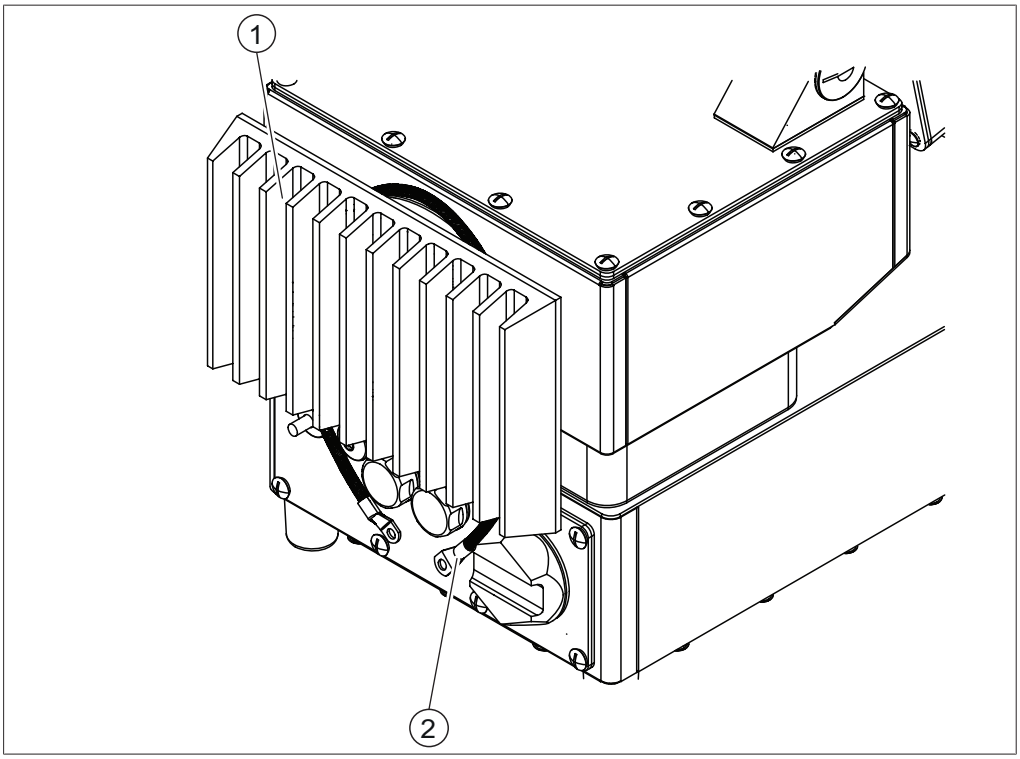


Fig. 7: Securing against earthquakes

1 Cooler 2 Cord

▶ Loop a cord around the cooler and attach it to a fixed point.

5.4 Establishing electrical connections

⚠ WARNING

Death or serious burns by electric current.

- ▶ Have the installation carried out by an electrician or a person with similar expert knowledge.
- ▶ After installation, check electrical safety.

The instrument is design for stationary installation.

Precondition:

☑ The electrical installation is as specified in the technical data. See Chapter 3.7 “Technical data”, page 18

☑ The installation site is as specified in the technical date. See Chapter 3.7 “Technical data”, page 18

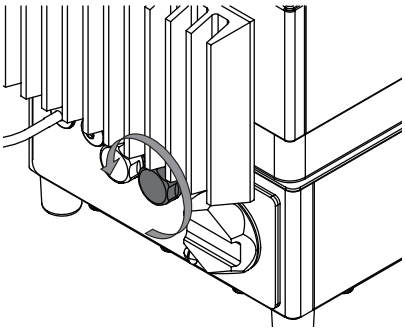
- ▶ Have the installation carried out by an electrician or a person with similar expert knowledge.
- ▶ Carry out the installation according to the instructions. See *Guide for electrical installation*

5.5 Installing a USB device

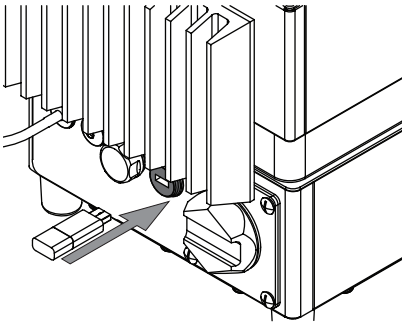
NOTE

Make sure that the USB socket is covered either with the cover lid or the protection cover.

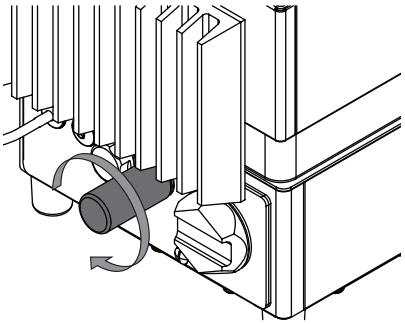
▶ Open one of the cover lids for the USB socket.



▶ Plug USB device in the USB socket.



▶ Attach the protection cover.



5.6 Software settings

5.6.1 Request a license for software or an application

The following data is necessary for the license request:

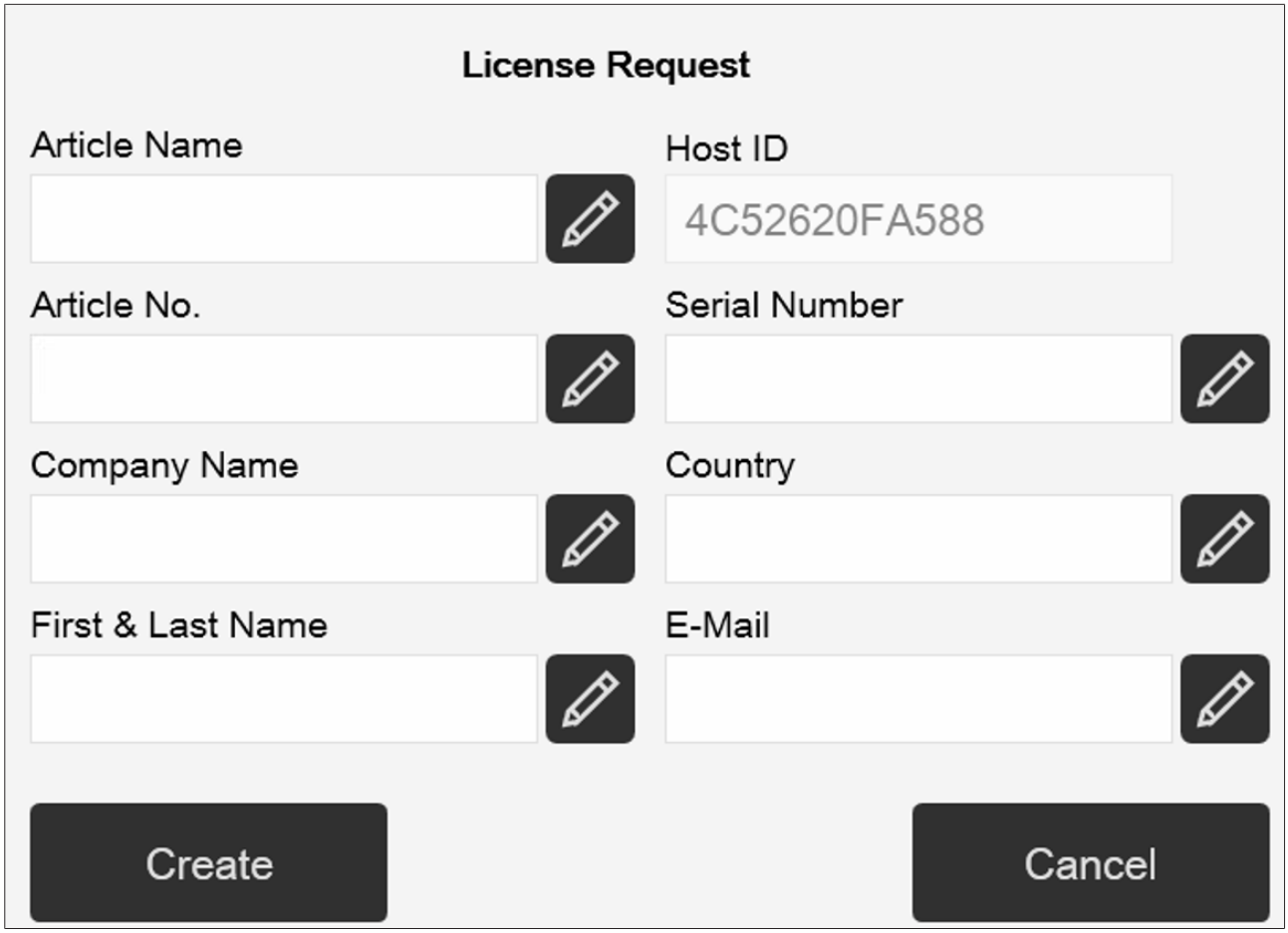
- Article Name
- Article Number (item number of the software or the application)
- Serial Number (software license serial number / sticker on the cover page of the quick guide or serial number of the instrument)
- Company Name
- First Name
- Last Name
- Serial Number
- Country
- E-Mail address

Navigation path		
➔		➔ *[License Request]*

Precondition:
☑ The software is in administrator mode.

▶ Tap the *[License Request]* button.

⇨ The display shows a dialog box with the license request menu.



- ▶ Tap the *[Edit]* button.
- ⇨ The display shows a dialog with an alphanumeric input box.
- ▶ Fill in the required information.
- ▶ Tap *[Create]* to save the license request file.
- ⇨ The display shows a dialog box with a confirmation and the location of the license request file.
- ▶ Confirm with *[OK]*.
- ▶ Open the location and save the license request file to a USB stick or something similar.
- ▶ Send the license request file and a short explanation to registration@buchi.com.
- ⇨ You will receive a license file in return.

5.6.2 Import a license

Navigation path

➔  ➔ *[Licence Import]*

Precondition:
☑ The software is in administrator mode.
☑ A valid (correct serial number and date) license file is available.

- ▶ Tap the *[License Import]* button.
- ⇨ The display shows a dialog box with folder locations.
- ▶ Navigate to the location of the license file that needs to be imported.

▶ Select the license file and confirm with *[OK]*.

⇨ The display shows a dialog box with a confirmation that the license file was successfully imported.

▶ Confirm with *[OK]*.

⇨ Available licenses can be found in the *information* section.

Before importing the corresponding applications, the NIRWise software needs to be restarted.

5.6.3 Calibrating a Baseline Correction Vector (BCV)

Navigation path

➔  ➔ *[Calibrate BCV]*

Precondition:

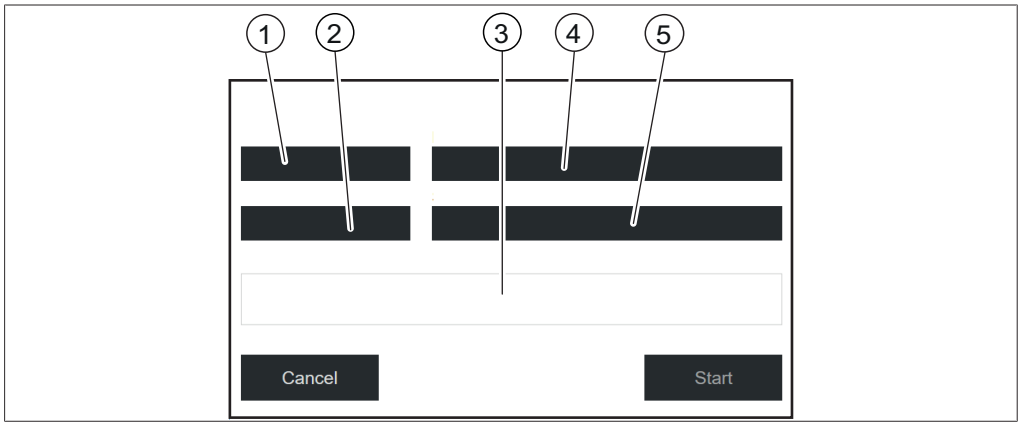
☑ The software is in administrator mode.

☑ A sample presentation is defined.

☑ The instrument is stabilized with at least 2 hours continuous running.

▶ Navigate to the action *[Calibrate BCV]* via the navigation path.

⇨ The software shows a dialog box.



1 Measurement view
2 External Reference
3 Progress (view)
4 Measurement mode
5 Sample presentation ID

Define calibration settings for solid samples

▶ Tap on *[Measurement View]*

⇨ The display shows the Measurement View menu.

▶ Select *[Up]* or *[Down]* depending on the view you would like to calibrate.

▶ Confirm with *[OK]*.

▶ Tap on *[Measurement Mode]*.

⇨ The display shows the Measurement Mode menu.

▶ Select *[Diffuse Reflection]*.

▶ Confirm with *[OK]*.

▶ Tap on *[External Reference]*.

⇨ The display shows the External Reference menu.

▶ Select the number corresponding to the sticker on the external white reference.

▶ Confirm with *[OK]*.

▶ Tap on *[Sample Presentation]*.

⇨ The display shows the Sample Presentation menu.

▶ Select *[Default]*.

▶ Confirm with *[OK]*.

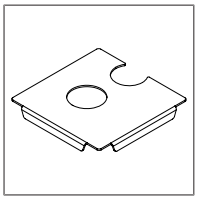


Fig. 8: Positioning plate with two openings for up and down view

Measurement of the external white reference in up view mode

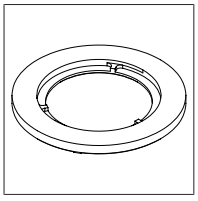


Fig. 9: Thin spacer ring for up view

Precondition:

☑ The settings have been correctly defined.

☑ The white reference is clean and undamaged.

▶ Place the positioning plate on the instrument.

▶ Place the thin spacer ring for the up view mode in the round cut-out of the positioning plate above the up view window.

▶ Open the white reference by unscrewing the lid.

▶ Place the white reference facing down on the thin spacer ring.

▶ Tap the button *[Start]*.

▶ Follow the instructions on the display during the calibration.

▶ Confirm the instructions by tapping *[OK]*.

⇨ The system will prompt you to rotate the external white reference 4 times.

▶ Rotate the external reference by turning the spacer ring.

⇨ The display shows a confirmation of the successful calibration.

⇨ The lamp is pre-heated for 2 minutes after BCV calibration.

▶ Restart the NIRWise software after successful BCV calibration.

▶ In case of a dual view instrument, repeat the calibration for the down view mode.

Measurement of the external white reference in down view mode

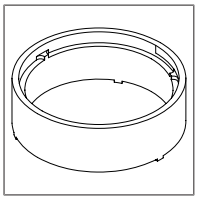


Fig. 10: Thick spacer ring for down view

Precondition:

☑ The settings have been correctly defined.

☑ The white reference is clean and undamaged.

▶ Place the positioning plate on the instrument.

- ▶ Place the thick spacer ring for the down view mode in the half-round cut-out of the positioning plate below the down view window.
- ▶ Open the white reference by unscrewing the lid.
- ▶ Place the white reference facing up on the thick spacer ring.
- ▶ Tap the button *[Start]*.
- ▶ Follow the instructions on the display during the calibration.
- ▶ Confirm the instructions by tapping *[OK]*.

⇨ The system will prompt you to rotate the external white reference 4 times.

- ▶ Rotate the external reference by turning the spacer ring.

⇨ The display shows a confirmation of the successful calibration.

⇨ The lamp is pre-heated for 2 minutes after BCV calibration.

- ▶ Restart the NIRWise software after successful BCV calibration.
- ▶ In case of a dual view instrument, repeat the calibration for the up view mode.

Define calibration settings for liquid samples

- ▶ Tap on *[Measurement View]*.

⇨ The display shows the Measurement View menu.

- ▶ Select *[Up]* for calibration for liquid measurements.
- ▶ Confirm with *[OK]*.
- ▶ Tap on *[Measurement Mode]*.

⇨ The display shows the Measuremt Mode menu.

- ▶ Select *[Transflection]*.
- ▶ Confirm with *[OK]*.
- ▶ Tap on *[External Reference]*.

⇨ The display shows the External Reference menu.

- ▶ Select *[Transflection]*.
- ▶ Confirm with *[OK]*.
- ▶ Tap on *[Sample Presentation]*.

⇨ The display shows the Sample Present. menu.

- ▶ Select the sample presentation that you have created for the application in the Application menu.
- ▶ If the list only shows *[Default]*, select *[New]* and enter a name.

⇨ A new Sample presentation ID is created. This needs to be done only once.

- ▶ Select your new Sample presentation ID. Make sure this Sample presentation ID is also used in the application settings.

Measurement of the transflectance cover in up view mode

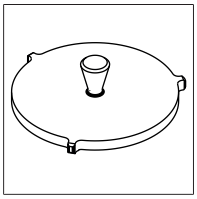


Fig. 11: Transflectance cover for the measurement of liquids in up view mode

Precondition:

☑ The settings have been correctly defined.

☑ The transflectance cover is clean and undamaged.

☑ The sample cup is clean and without scratches.

- ▶ Place an empty sample cup on the up view measurement position.
- ▶ Place the transflectance cover into the empty sample cup.
- ▶ Tap the *[Start]* button.
- ▶ Follow the instructions on the display during the calibration.
- ▶ Confirm the instructions by tapping *[OK]*.

⇨ The system will prompt you to rotate the external reference 4 times.

- ▶ Rotate the transflectance cover.

⇨ The display shows a confirmation of the successful calibration.

⇨ The lamp is pre-heated for 2 minutes after BCV calibration.

- ▶ Restart the NIRWise software after successful BCV calibration.

5.6.4 Importing standardized reference data

NOTE

The location of the destination folder is fixed. See Chapter 10.2 “File explanations and folder locations”, page 108

Navigation path

➔  ➔ *[Import External Reference Data]*

Precondition:
☑ The reference data file is saved on the instrument.

- ▶ Navigate to the action *[Import External Reference Data]* via the navigation path.

⇨ The display shows the dialog box *Import External Reference Data*.

- ▶ Tap the button next to the input box file.

⇨ The display shows a dialog box with the selectable reference data.

- ▶ Select the import file.
- ▶ Tap the button *[OK]*.

⇨ The dialog box closes.

- ▶ Tap the button *[Import]*.

⇨ The external reference is imported.

5.6.5 Changing the language of the software

Navigation path

➔  ➔ *[General]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

- ▶ Navigate to the view *General* via the navigation path.
- ▶ Tap the function *[Edit]* on the function bar.
- ▶ Tap the action *[Selected Language]*.

⇨ The control panel shows a dialog box with selectable languages.

- ▶ Select a language.
- ▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The control panel shows a dialog box.

- ▶ Tap the button *[OK]* to confirm the dialog box.

▶ Restart the software.

5.6.6 Changing the label of the order and note fields

Navigation path	
➔ 	➔ *[Measurement]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.

▶ Navigate to the view *Measurement* via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

▶ Tap the action *[Order-Custom Label]*.

⇨ The control panel shows a dialog with an alphanumeric input box.

▶ Enter a name for the label.

▶ Confirm with *[OK]*.

⇨ The dialog box closes and the new label is displayed.

▶ Tap the action *[Note-Custom Label]*.

⇨ The control panel shows a dialog with an alphanumeric input box.

▶ Enter a name for the label.

▶ Confirm with *[OK]*.

⇨ The dialog box closes and the new label is displayed.

5.6.7 Changing the measurement workflow of the instrument

There are two possibilities for the measurement workflow:
1. Every measurement is saved with the *[Confirm]* button. The meta data fields are editable before starting the measurement with the green control button.
2. A measurement is automatically saved, when the next measurement is started by pressing the green control button. The meta data is not editable before starting a new measurement.

Navigation path

➔ ⚙ ➔ *[Measurement]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.

- ▶ Navigate to the view *Measurement* via the navigation path.
- ▶ Tap the function *[Edit]* on the function bar.
- ▶ Tap the action *[Finalize with Confirm Button]*.

⇨ The control panel shows a dialog box with the selectable values (*[Yes]* for option 1, *[No]* for option 2).

- ▶ Select an option.
- ▶ Confirm with *[OK]*.

⇨ The dialog box closes.

5.6.8 Adjusting the settings for the order button

The order button can be cleared after each measurement or the value can be remembered. The value remains editable at all times.

Navigation path

➔ ⚙ ➔ *[Measurement]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.

- ▶ Navigate to the view *Measurement* via the navigation path.
- ▶ Tap the function *[Edit]* on the function bar.
- ▶ Tap the action *[Clear Order]*.

⇨ The control panel shows a dialog box with the selectable values.

- ▶ Select an option.
- ▶ Confirm with *[OK]*.

⇨ The dialog box closes.

5.6.9 Adjusting the time and date format for the history menu

Navigation path

➔ ⚙ ➔ *[Measurement]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.

- ▶ Navigate to the view *Measurement* via the navigation path.
- ▶ Tap the function *[Edit]* on the function bar.

▶ Tap the action *[Sample Timestamp Format]*.

⇨ The control panel shows a dialog box with the selectable values.

▶ Select an option.

▶ Confirm with *[OK]*.

⇨ The dialog box closes.

5.6.10 Editing the maximum number of samples to be displayed in the history menu

Navigation path	
➔ ⚙	➔ *[Measurement]*

Precondition:

☑ The software is in service mode.

▶ Navigate to the view *Measurement* via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

▶ Tap the action *[Max measurements to display]*.

⇨ The control panel shows a dialog with a numeric input box.

▶ Enter a number between 100 and 15 000.

▶ Confirm with *[OK]*.

⇨ The dialog box closes and the new label is displayed.

5.6.11 Changing the csv formatting options

Navigation path	
➔ ⚙	➔ *[Reports]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.

▶ Navigate to the view *Reports* via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

▶ Tap the action *[CSV Formatting Options]*.

▶ Tap the action *[Measurements Sort Type]*.

⇨ The control panel shows a dialog box with the selectable values.

▶ Select an option.

▶ Confirm with *[OK]*.

⇨ The dialog box closes.

▶ Tap the action *[Other Numbers Format]*.

⇨ The control panel shows a dialog box with the selectable values.

▶ Select an option.

▶ Confirm with *[OK]*.

⇨ The dialog box closes.

▶ Tap the action *[Predicted Values Format]*.

⇨ The control panel shows a dialog box with the selectable values.

▶ Select an option.

▶ Confirm with *[OK]*.

⇨ The dialog box closes.

▶ Tap the action *[Reference Values Format]*.

⇨ The control panel shows a dialog box with the selectable values.

- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Spectra Values Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Timestamps Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Wavelengths Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.

5.6.12 Changing the xml formatting options

Navigation path

➔ ⚙ ➔ *[Reports]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.

- ▶ Navigate to the view *Reports* via the navigation path.
- ▶ Tap the function *[Edit]* on the function bar.
- ▶ Tap the action *[XLM Formatting Options]*.
- ▶ Tap the action *[Measurements Sort Type]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Other Numbers Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Predicted Values Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Reference Values Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.

▶ Confirm with *[OK]*.
⇨ The dialog box closes.
▶ Tap the action *[Spectra Values Format]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.
▶ Confirm with *[OK]*.
⇨ The dialog box closes.
▶ Tap the action *[Timestamps Format]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.
▶ Confirm with *[OK]*.
⇨ The dialog box closes.
▶ Tap the action *[Wavelengths Format]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.
▶ Confirm with *[OK]*.
⇨ The dialog box closes.

5.6.13 Changing the jcamp formatting options

Navigation path

➔		➔ *[Reports]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50.
▶ Navigate to the view *Reports* via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
▶ Tap the action *[JCAMP Formatting Options]*.
▶ Tap the action *[Measurements Sort Type]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.
▶ Confirm with *[OK]*.
⇨ The dialog box closes.
▶ Tap the action *[Other Numbers Format]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.
▶ Confirm with *[OK]*.
⇨ The dialog box closes.
▶ Tap the action *[Predicted Values Format]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.
▶ Confirm with *[OK]*.
⇨ The dialog box closes.
▶ Tap the action *[Reference Values Format]*.
⇨ The control panel shows a dialog box with the selectable values.
▶ Select an option.

- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Spectra Values Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Timestamps Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the action *[Wavelengths Format]*.
- ⇨ The control panel shows a dialog box with the selectable values.
- ▶ Select an option.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.

5.6.14 Adjust number of deleted samples for log entry

Navigation path

➔ ⚙ ➔ *[Measurement]*

Precondition:
☑ The software is in service mode.

- ▶ Navigate to the view *Measurement* via the navigation path.
- ▶ Navigate *Other Thresholds*.
- ▶ Tap the function *[Edit]* on the function bar.
- ▶ Tap the action *[Min measurements to delete for log view]*.
- ⇨ The control panel shows a dialog with a numeric input box.
- ▶ Insert a number.
- ▶ Confirm with *[OK]*.
- ⇨ The dialog box closes.

6 Operation

⚠ CAUTION

Risk of injury from glass splinters

Sharp objects can damage the screen.

▶ Keep sharp objects away from the screen.

6.1 Layout of the control panel

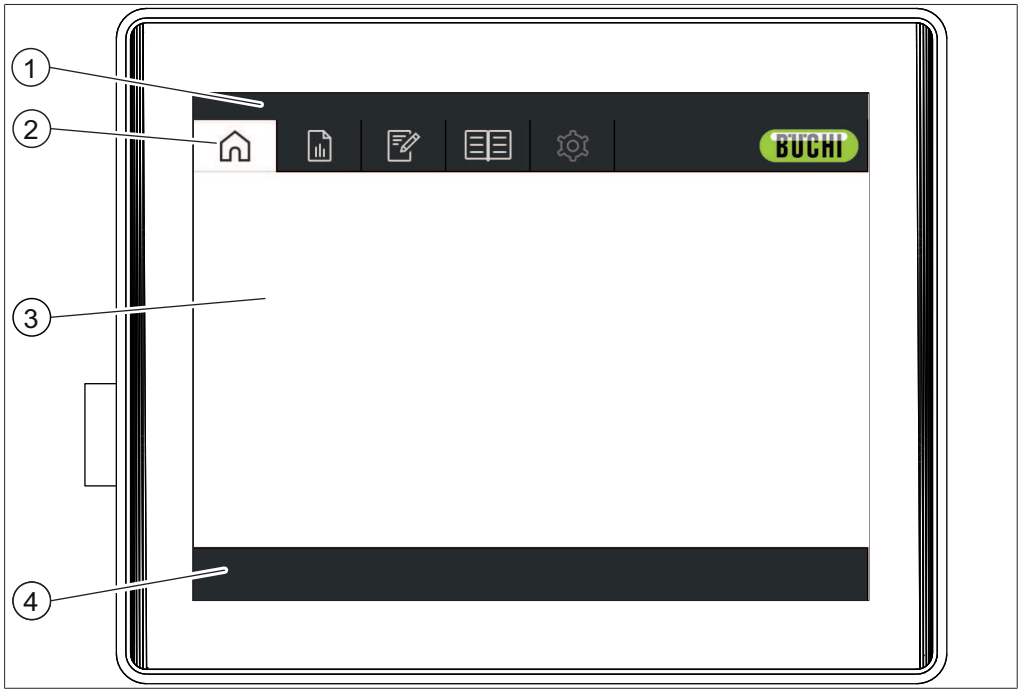
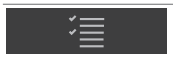
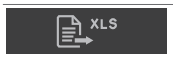


Fig. 12: Control panel

No.	Description	Function
1	Status bar	Shows the current status of the instrument. See Chapter 6.4 “Status bar”, page 49
2	Menu bar	Shows symbols representing the menus. See Chapter 6.3 “Menu bar”, page 37
3	Content area	Shows current settings, submenus or actions depending on the current operation.
4	Function bar	Shows functions that can be performed according to current operation. See Chapter 6.2 “Function bar”, page 35

6.2 Function bar

The function bar shows available functions according to the current operation. The functions on the function bar are executed by tapping the relevant function buttons.

Symbol	Description	Meaning
	*[Back]*	The display reverts to the previous view.
	*[Confirm]*	Confirm a measurement result.
	*[Switch off]*	The instrument shuts down.
	*[Select]*	Selects the marked application.
	*[Login]*	The display shows the dialog *Login*.
	*[Multiple selection]*	Activates multiple selection of measurements.
	*[Select all]*	Selects all measurements in the list. **NOTICE! only available if multiple selection is activated**
	*[Report]*	Generates on-screen report
	*[Save Excel]*	Saves the report as Excel file.
	*[Save PDF]*	Saves the report as PDF file.
	*[Print]*	Sends the report to the printer.
	*[Edit]*	Allows the selected item to be edited.
	*[New]*	Creates a new application or property.
	*[Delete]*	Deletes the selected value.
	*[Copy]*	Copies the marked application.
	*[Autocal]*	Starts the auto calibration function.
	*[Import]*	Data import.
	*[Export]*	Exports the marked data.
	*[Import / Export measurement data]*	Import or export data according to the function.
	*[Information]*	Shows information about the instrument and the installed Licenses.
	*[Full page]*	The report fits on full page.
	*[Width scrolling]*	The report fits to width scrolling.
	*[Go to windows]*	The view changes to the windows® surface.

6.3 Menu bar

The menus are represented by symbols on the menu bar. Menus are navigated via the touchscreen.
The following menus are available:

Menu symbol	Meaning	Actions
	*[Start]* menu	• Carrying out a measurement. See Chapter 6.3.1 “Start menu”, page 38
	*[History]* menu	• Shows the results of completed measurements. • Creating reports. • Adding sample reference values. • Adding samples to calibration set. • Updating calibrations using the AutoCal function. • Exporting Measurement Data. See Chapter 6.3.2 “History menu”, page 42
	*[Application]* menu	• Creating, editing or selecting an application. See Chapter 6.3.3 “Application menu”, page 47
	*[Tools]* menu	• Setting up configurations, maintenance and system tests. • Viewing instrument log and other instrument counters. • Licence requests and import functions. • Setting up remote sessions. • Changing Login credentials. See Chapter 6.3.4 “Tools menu”, page 48
	*[Configuration]* menu	• Editing instrument settings. Available in administrator mode only.

6.3.1 Start menu

Fig. 13: Start menu

1	View selected application	2	Order See Chapter “Insert order”, page 40
3	Sample ID Autoincrement Prefix, see Chapter “Insert Sample ID Autoincrement Prefix”, page 39	4	Sample ID See Chapter “Insert sample ID”, page 39
5	Control button	6	Shows the properties of the selected application
7	Shows the Standard Operation Procedure for the selected application	8	Note See Chapter “Insert note”, page 40
9	Barcode See Chapter “Insert barcode”, page 40		

Control button

The *[control]* button can show the following symbols:

Symbol	Meaning
	• The measurement is finished. • The tested sample is in the specifications. • By tapping the symbol the instrument carries out a measurement.  Target value is the expected parameter for the product. The target value is defined in the Application.

Symbol	Meaning
	• No application available. • Measurement not possible.
	• The measurement is finished. • The predicted value is outside the tolerance.  Tolerance is a difference from the target value. Tolerances are defined in the Application.
	• The measurement is finished. • A calibration model is missing. • Mahalanobis outlier • The predicted value is outside calibration range. • The predicted value is outside of the set limit.  Limit is an absolute value. Limits are defined in the Application.
	• The measurement is in progress. • Cancel measurement.

Insert sample ID

The Sample ID is a label to identify the sample under analysis.

Navigation path

➔ 

▶ Tap the button  next to *[Sample ID]*.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter a sample number, name or code.

▶ Tap the button *[OK]*.

⇨ The sample ID is saved.

⇨ The dialog box closes.

Insert Sample ID Autoincrement Prefix

The Sample ID Autoincrement Prefix generates automatic sample ID increments based on the entered prefix. The prefix will be remembered as long as the application is not changed. If the application is changed, the Sample ID Autoincrement Prefix will be reset.

Navigation path

➔ 

- ▶ Tap the button next to *[Sample ID Autoincrement Prefix]*.
- ▶ Enter a Sample ID Autoincrement Prefix.
- ▶ Tap the button *[OK]*.
- ⇨ The dialog box closes.
- ▶ Tap the *[Control]* button.
- ⇨ The sample ID field is automatically populated by the Sample ID Autoincrement Prefix followed by #001
- ⇨ The instrument is carrying out the measurement.
- ⇨ The status bar shows the status *[Measuring]*.
- ⇨ The measurement finishes and the predicted values are displayed.
- ▶ Tap the *[Control]* button.
- ⇨ The sample ID field is automatically populated by the Sample ID Autoincrement Prefix followed by #002
- ⇨ The instrument is carrying out the measurement.
- ⇨ The status bar shows the status *[Measuring]*.
- ⇨ The measurement finishes and the predicted values are displayed.

Insert barcode

The bar code is a label to identify the sample under analysis.
A barcode reader can be connected. When the barcode reader is configured the user can use this label to identify the sample under analysis.
As an alternative insert a barcode manually

Navigation path

➔ 

- ▶ Tap the button next to the *[Barcode]*.
- ⇨ The display shows a dialog with an alphanumeric input box.
- ▶ Enter the Barcode for the sample.
- ▶ Tap the button *[OK]*.
- ⇨ The barcode is saved.
- ⇨ The dialog box closes.

Insert note

The Note is a label to identify the sample under analysis. With default settings the Note is not a mandatory field.

Navigation path

➔ 

- ▶ Tap the button next to the *[Note]*.
- ⇨ The display shows a dialog with an alphanumeric input box.
- ▶ Enter a value.
- ▶ Tap the button *[OK]*.
- ⇨ The note is saved.
- ⇨ The dialog box closes.

Insert order

The Order is a label to identify the sample under analysis. With default settings the Order is not a mandatory field.

Navigation path

➔ 

▶ Tap the button next to the *[Order]*.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter a value.

▶ Tap the button *[OK]*.

⇨ The order is saved.

⇨ The dialog box closes.

6.3.2 History menu

The *[History]* menu lists past measurement data.

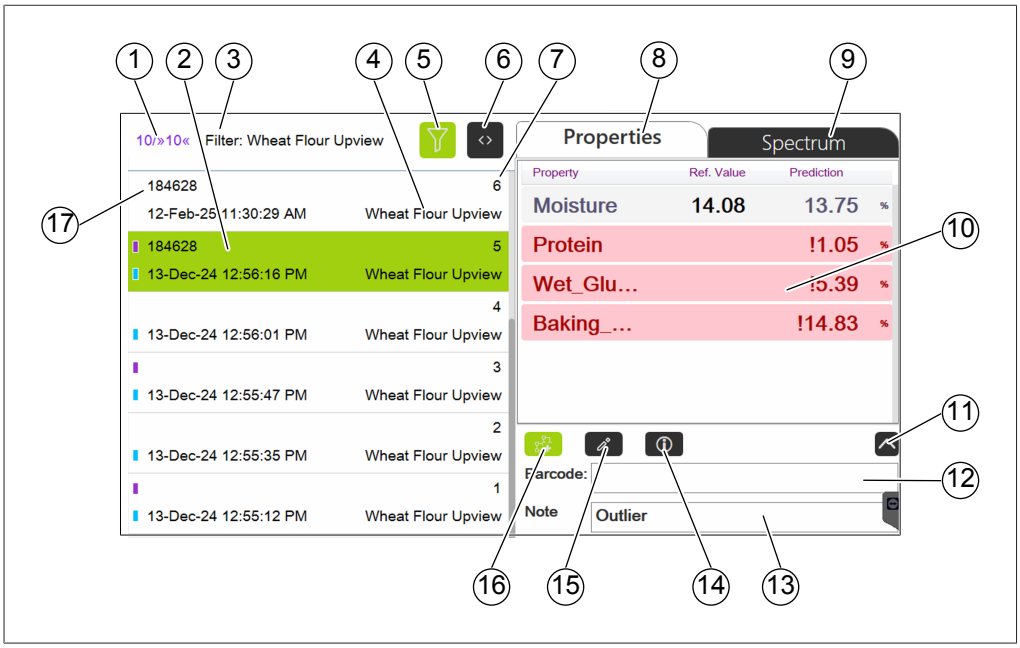


Fig. 14: Data menu

1	Displayed Samples/Total Samples (for applied filter)	2	Timestamp
3	Applied filter	4	Application name
5	Filter button	6	Extended view button
7	Sample ID	8	Sample properties
9	Displays spectra	10	Displays properties, predicted values, reference values
11	Enlarge note area	12	Barcode
13	Note	14	Measurement details button
15	Edit metadata button	16	Add to calibration dataset button
17	Order number		

Blue bar: Sample added to calibration data set
Purple bar: Sample has reference values indicator
See:
Chapter 6.12 “Enter reference values”, page 79
Chapter 6.13 “Run AutoCal to create or update calibrations”, page 80
Exporting measurement data
Chapter 6.15 “Create reports”, page 86

Extended view

The extended view allows the complete display of sample ID, order, and application names.

Navigation path

➔  ➔ *[History]*

▶ Navigate to the *[History]* menu via the navigation path.

▶ Tap the button .

⇨ The extended view is opened.

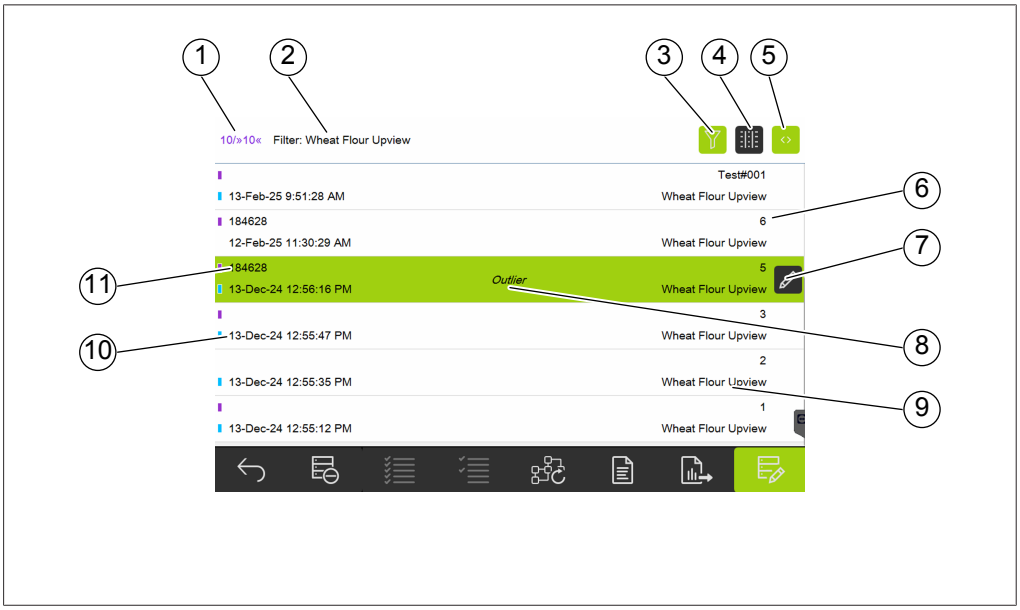


Fig. 15: Extended view

1	Displayed samples/Total samples (for applied filter)	2	Applied filter
3	Filter button	4	Show predictions button
5	Close extended view button	6	Sample ID
7	Edit metadata button when **Edit** is active	8	Note
9	Application name	10	Time stamp
11	Order		

Show the predictions in the extended view

Navigation path

➔  ➔ *[History]*

▶ Navigate to the *[History]* menu via the navigation path.

▶ Tap the button .

⇨ The extended view is opened.

▶ Tap the button .

⇨ The extended view displays the first predicted values of each sample.

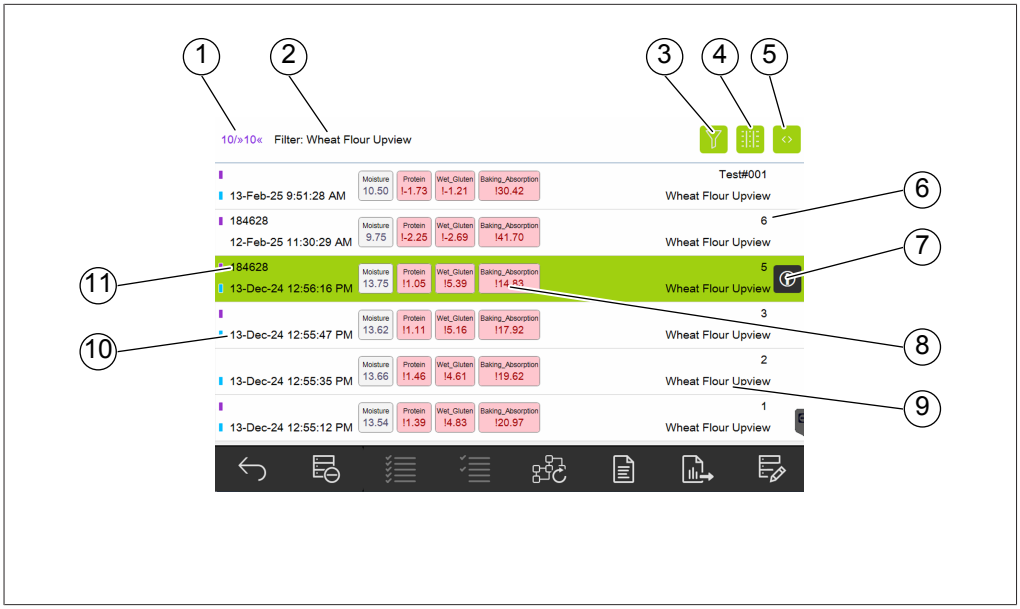


Fig. 16: Extended view

1	Displayed samples/Total samples (for applied filter)	2	Applied filter
3	Filter button	4	Show predictions button
5	Close extended view button	6	Sample ID
7	Measurement details button, when **Edit** not active	8	Note
9	Application name	10	Time stamp
11	Order		

Select filter

Filters allow the user to narrow the selection of sample to those that fulfill specific criteria.

Navigation path

➔ [ ] ➔ *[History]*

- ▶ Navigate to the *[History]* menu via the navigation path.
- ▶ Tap button filter.

⇨ The display shows a dialog box with the selectable filters.

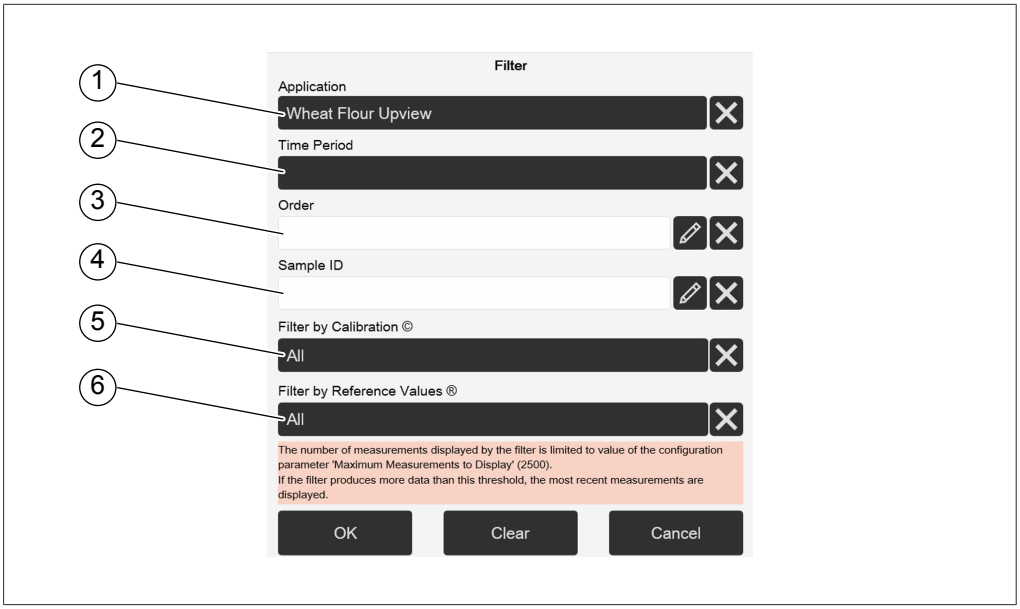


Fig. 17: Dialog box filter

1	Application	2	Time period (also custom)
3	Order	4	Sample ID
5	Added to calibration data set Yes/No	6	Reference values Yes/No

- ▶ Select the filter settings according to the requirements.
- ▶ Tap the button *[OK]*.
- ⇨ The dialog box closes.
- ⇨ The display shows the filtered measurements.

Deselect filter

Navigation path

➔  ➔ *[History]*

- ▶ Navigate to the *[History]* menu via the navigation path.
- ▶ Tap the button filter.
- ⇨ The display shows a dialog box with the selectable filters.
- ▶ Tap the button *[X]* of a specific filter or the button *[Clear]* to remove all filters.
- ▶ Tap the button *[OK]*.
- ⇨ The dialog box closes.
- ⇨ The display shows all available measurements.

Display measurement details

Navigation path

➔  ➔ *[History]*

- ▶ Navigate to the *[History]* menu via the navigation path.
- ▶ Select a sample.
- ▶ Tap the button ⓘ.
- ⇨ The control panel shows a box with the details for the predicted values including reference values and residuals, if available.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

Using the scroll function

Navigation path
➔  ➔ *[History]*

▶ Navigate to the *[History]* menu via the navigation path.

▶ Scroll to a different location in the sample list.

▶ Long tap one of the samples.

⇨ The control panel shows a dialog box with the selectable values.

▶ Select an option.

⇨ The *[History]* menu moves to the chosen location.

6.3.3 Application menu

In the *[Application]* menu applications can be created, edited and selected.

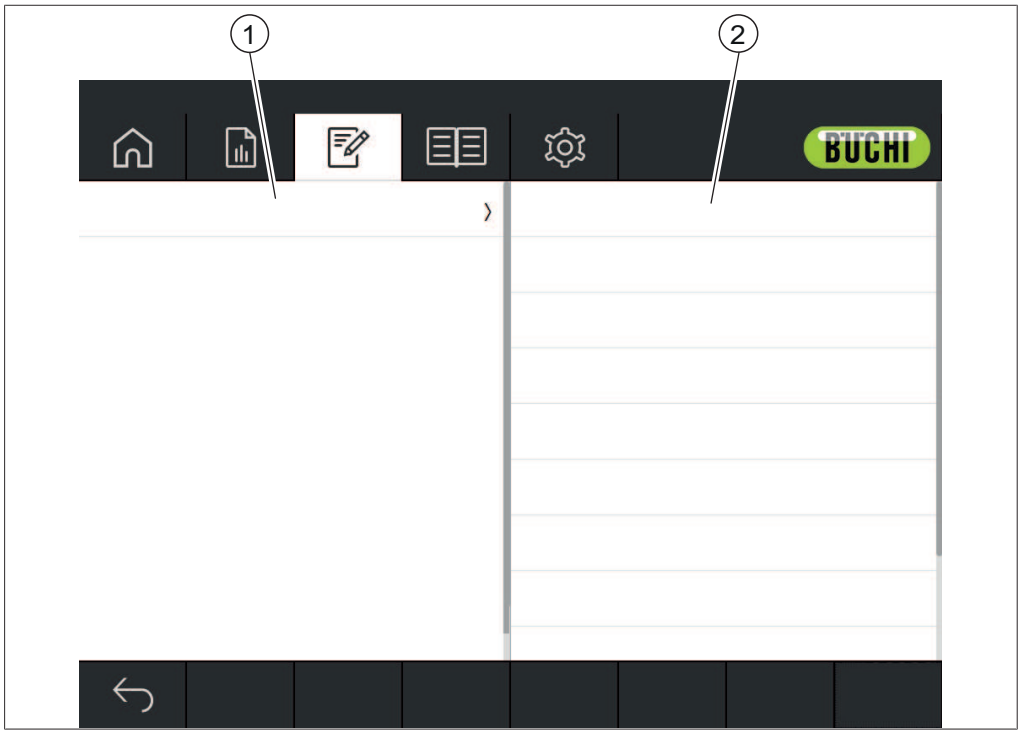


Fig. 18: Application menu

1 Shows a list of available applications or properties

2 Shows a list of available settings.

See:
Chapter 6.6 “Editing an application”, page 51
Chapter 6.7 “Deleting an application”, page 57
Chapter 6.8 “Editing a property”, page 58
Chapter 6.9 “Deleting a property”, page 75
Chapter 6.14.2 “Importing application data”, page 85
Chapter 6.14.3 “Exporting application data”, page 85

6.3.4 Tools menu

The tools menu offers different tools for maintenance and application settings.

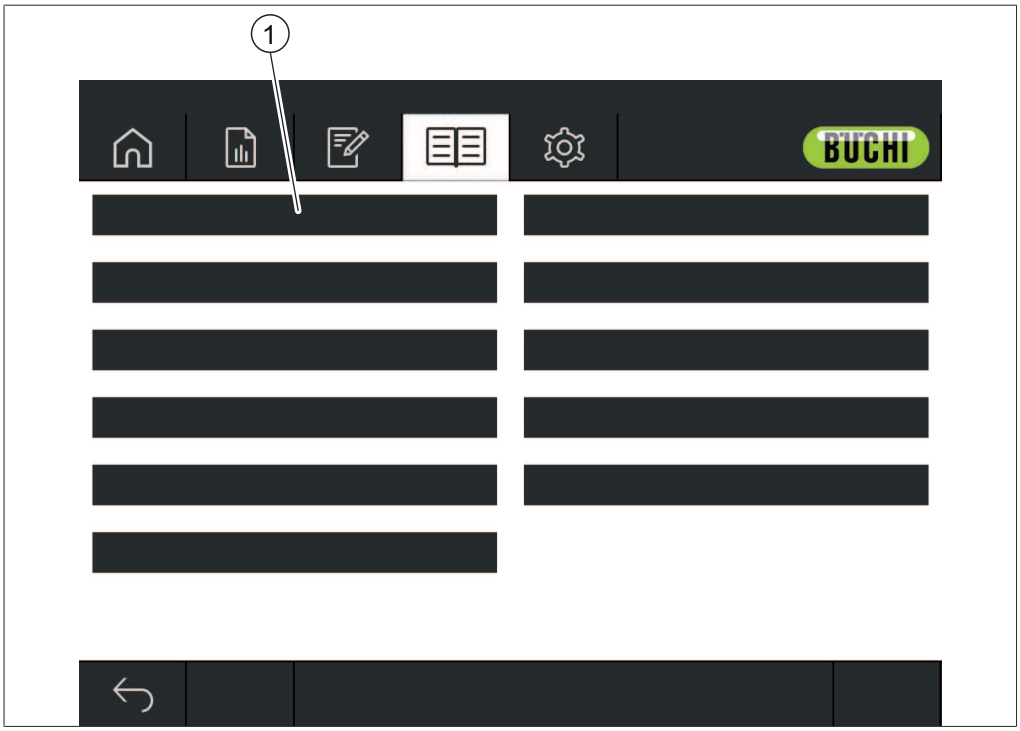


Fig. 19: Tools menu

1 Tools

The following tools are available:

Action	Option	Explanation
[NIRWise Log]	View	Shows a dialog with a list of messages that occurred during operation. (all users)
[Backup NIRWise Data]	Procedure	Carrying out a data backup. (administrator only) See Chapter 7.6 “Carrying out a data backup”, page 101
[Extended System Tests]	Procedure	Carrying out different system tests. (administrator only) See Chapter 7.5.2 “Carrying out a Comprehensive System Test”, page 101 See Chapter 7.5.3 “Carrying out an Advanced System Test”, page 101
[Test BCV]	Procedure	Carrying out a Baseline Correction Test. (administrator only) See Chapter 7.5.1 “Carrying out a Baseline Correction Vector test”, page 100

Action	Option	Explanation
[Confirm Lamp Replacement]	Reset	See Chapter 7.2.3 “Confirm Lamp Replacement”, page 97 (administrator only)
[License Request]	Procedure	See Apply for a licence (administrator only)
[Remote host]	Open program	The Software *TeamViewer* opens for remote support. (administrator only)
[Restore Backup]		▶ Contact BUCHI Customer Service.
[Cleaning Mode]		Not applicable for ProxiMate Essential
[Operational Counters]	View / Procedure	The data is displayed depends on the system configuration: Total Operation time / NIR Operation Time / Lamp UP View / Reference Up View / System Temperature / Rotation Time / VIS Operation Time / Lamp Down View / References Down View / System Humidity (administrator only)
[Extended System Test History]	View	Shows a dialog with a further information about the tests carried out. (administrator only)
[Calibrate BCV]	Procedure	See Calibrating a Baseline Correction Vector (BCV) (administrator only)
[Import External Reference Data]	Procedure	See Chapter 5.6.4 “Importing standardized reference data”, page 28
[Licence Import]	Procedure	See Import Licence (administrator only)
[Copy Data Files]		▶ Contact BUCHI Customer Service.
[Factory Settings]		▶ Contact BUCHI Customer Service.

6.4 Status bar

The status bar shows the status of the instrument.
The following statuses are possible:

Indications on the status bar

View	Status
Stabilizing Spectrometer	Shows the remaining time.
Ready to Measure	The instrument is ready to measure.
Tempering to	The instrument is warming up. The Status bar shows the target and current instrument temperature.

View	Status
Configuring…	The instrument is starting up.
	The instrument is loading an application.
Measuring...	The instrument is carrying out a measurement.
Adjusting Exposure Time…	Instrument initialization
Calibrating BCV…	The instrument calibrates the Baseline Correction Vector.
Initializing…	Instrument initialization
Measuring Dark Reference…	The instrument measures the internal dark reference.
Error	An error occurred. See Chapter 8 “Help with faults”, page 105
Extended System Tests	The action Extended System Test is activated. Instrument waits for action.
Preconditioning…	Instrument initialization
Standard System Test Running…	The instrument carries out a Standard System Test.
System Testing…	Instrument running internal tests
Ready for Configuration	• No application selected. • No Baseline Correction for Sample Presentation of current application defined.
Measuring White Reference...	Instrument initialization
Lamp Pre-Heating	The instrument is heating the lamp. The Status bar shows the remaining time.

Symbols on the status bar

Symbol	Status
	The current user is logged on as administrator The software is in administrator mode.
	The current user is logged on as operator. The software is in operator mode.
	A warning has occurred check the *[NIRWise log]*. See Chapter 6.3.4 “Tools menu”, page 48

6.5 Log in administrator mode

Navigation path

➔ 

Precondition:
☑ The software is in operator mode.

▶ Navigate to the *[Tools]* menu via the navigation path.
▶ Tap the function *[Login]* in the function bar.
⇨ The display shows a dialog box with the available Users.
▶ Tap *[Administrator]*.
⇨ The display shows a dialog with an alphanumeric input box.
▶ Enter the password.

▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The software is in administrator mode.
⇨ The status bar shows the icon administrator.

6.6 Editing an application

NOTE
Applications can only be edited in Administrator mode.

6.6.1 Creating a new application

There are two ways to create an application:

- by copying an existing application
  See Chapter “Creating a new application by copying an existing application”, page 51
- by creating a new application
  See Chapter “Creating a new application”, page 51

Creating a new application

Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the function *[Add]* on the function bar.
⇨ The display shows a dialog with an alphanumeric input box.
▶ Enter a name for the application.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The new application is created.

Creating a new application by copying an existing application

Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.

▶ Tap the application you wish to copy.
⇨ The display highlights the application in green.
▶ Tap the function *[Copy]* on the function bar.
⇨ The display shows a dialog with an alphanumeric input box.
▶ Enter a name for the application.
▶ Tap the button *[OK]*.
⇨ The display shows a dialog with the properties of the copied application highlighted in green.
▶ Tap the properties you do not want to copy.
⇨ The disabled properties are highlighted in white.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The new application is created.

6.6.2 Changing the alias of an application

The alias function allows to give a previously defined application a local name.
Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the action *[Alias]*.
⇨ The display shows a dialog with an alphanumeric input box.
▶ Enter an alias for the application.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The alias is saved.

6.6.3 Changing the Measurement view of an application

Depending on instrument configuration the following measurement views are available:

View	Explanation
Up	The application uses the up view lamp. Radiation is directed and collected from the underside of the sample through the sample cup.
Down	The application uses the down view lamp. Radiation is directed onto and collected from the upper surface of the sample. The radiation does not interact with the sample cup.

Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the action *[Measurement view]*.

⇨ The display shows a dialog box with the selectable values.

▶ Select a value.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The setting is saved.

6.6.4 Changing the Measurement mode of an application

Choose the measurement mode according to the setting for the sample presentation. See Chapter 6.6.5 “Changing the Sample presentation of an application”, page 54
The following measurement modes are available:

Mode	Explanation
Diffuse reflection	The application runs the measurement in the reflection mode. Diffuse reflectance measurement mode is used to measure solid and powdered samples.
Transflection (up-view instruments only)	The application runs the measurement in the transflection mode. Transflectance mode is used to measure liquids and gels. Transflectance mode require the use of a transflection cover.

Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the action *[Measurement mode]*.

⇨ The display shows a dialog box with the selectable values.

▶ Select a value.

▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.

6.6.5 Changing the Sample presentation of an application

With Baseline Correction Vector (BCV) Different Sample Presentation modes can be defined to correct, for example, the effect of sample container on the spectral measurement.
The following presentation modes are available:

Modes	Explanation
Default	Apply the default settings for baseline correction.
New	Calibrate an individual Baseline correction. See Calibrating a Baseline Correction Vector (BCV)
Individual Baseline correction	Individual calibrated Baseline corrections.

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the action *[Sample presentation]*.
⇨ The display shows a dialog box with the selectable values.
▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.

6.6.6 Enter a description for an application

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.

▶ Tap the action *[Description]*.
⇨ The display shows a dialog with an alphanumeric input box.
▶ Enter a description for the application.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The description is saved.

6.6.7 Changing the Rotation of an application

The Application has the option to select whether the sample is rotated during measurement.
The following settings are available:

Mode	Explanation
Yes	The sample carrier rotates during the measurement.
No	The sample carrier does not rotate during the measurement.

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the action *[Rotation]*.
⇨ The display shows a dialog box with the selectable values.
▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.

6.6.8 Changing the Measurement duration of an application

The default measurement time (15 seconds) allows the sample to complete one rotation. Shorter measurement time does not allow a complete rotation of the sample.
Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the action *[Measurement duration]*.
⇨ The display shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the duration is saved.

6.6.9 Enter a Standard Operating Procedure (SOP) for an application

Each Application has an optional Standard Operating Procedure (SOP) associated with it. A Standard Operating Procedure SOP shows instructions for the user to follow during measurement.

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the action *[SOP]*.
⇨ The display shows a dialog with an alphanumeric input box.
▶ Enter the steps which the operator has to carry for the application.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The description is saved.

6.6.10 Changing the selection ability of an application

Change whether an Application can be selected by the user during operation.
The following modes are available:

Mode	Explanation
Yes	The application is selectable.
No	The application is not selectable.

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the action *[Selectable]*.
⇨ The display shows a dialog box with the selectable values.
▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.

6.7 Deleting an application

NOTE
The following procedure fully deletes the application. It is not possible to restore the application after it has been deleted.

There are two deleting options for an application:

Option on the dialog	Explanation
[Yes]	• Deletes the application and all related data. ◦ The application is not longer selectable. ◦ Deletes the measurement data. ◦ Deletes the recorded usage. ◦ Deletes all sample data recorded with the application.
[No]	• Deletes the application and keeps the related data. ◦ The application is not longer selectable. ◦ The measurement data keeps available and can be exported. ◦ The recorded usage remains. ◦ All sample data recorded with the application remains available.

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application you wish to remove.
⇨ The display highlights the application in green.
▶ Tap the function *[Remove]* on the function bar.
▶ Confirm the secure question.
⇨ The display shows a dialog with the two deleting modes.

▶ Select the deleting mode.

6.8 Editing a property

NOTE

Properties can only be edited in Administrator mode.

6.8.1 Creating a new Property

Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap one of the available properties.

⇨ The display shows the view *Property*.

▶ Tap the function *[Add]* on the function bar.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter a name for the property.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The new property is created.

6.8.2 Changing the name of a property

NOTE

It is not possible to rename a property after it was used once.

Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Name]*.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter a name for the property.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The new name is saved.

6.8.3 Changing the alias of a property

The alias function allows to give a previously defined property a local name.
Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Alias]*.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter an alias for the property.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The alias is saved.

6.8.4 Changing the Sort order of a property

The sort order defines the position in which the property will be displayed within an Application when there are multiple properties.
Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

- ▶ Tap the action *[Sort order]*.
- ⇨ The display shows a dialog box with a numeric input box.
- ▶ Enter the value in the numeric input box.
- ▶ Tap the button *[OK]*.
- ⇨ The dialog box closes.
- ⇨ The value for the Sort order is saved.

6.8.5 Changing the Prediction type of a property

The setting of the prediction type influences the further setting possibilities of the property.
The following settings are available:

Prediction type	Explanation	Available predictions settings
[Calibration model]	Uses assigned calibration model to predict parameter value from spectrum. The calibration model uses a chemometric model.	Decimal Places see Chapter 6.8.15 “Changing the Decimal places of a property”, page 70
		Unit see Chapter 6.8.16 “Changing the Unit of a property”, page 70
		Initial Wavelength Range seeChapter 6.8.6 “Changing the Initial Wavelength Range (Calibration model only)”, page 64
		Postpredicted Value see Chapter 6.8.7 “Changing the Postpredicted Value (Calibration model only)”, page 65
		Slope see Chapter 6.8.18 “Changing the Slope of a property”, page 71
		Bias see Chapter 6.8.17 “Changing the Bias of a property”, page 71
		Mahalanobis see Chapter 6.8.19 “Changing the Mahalanobis of a property (Calibration model only)”, page 72
		Target see Chapter 6.8.20 “Changing the Target of a property”, page 72
		Tolerance Min. see Chapter 6.8.24 “Changing the Tolerance minimum of a property”, page 74
		Tolerance Max. see Chapter 6.8.23 “Changing the Tolerance maximum of a property”, page 74
		Limit Min. see Chapter 6.8.22 “Changing the Limit minimum of a property”, page 73
		Limit Max. seeChapter 6.8.21 “Changing the Limit maximum of a property”, page 73

Prediction type	Explanation	Available predictions settings
[Calculated Property]	Uses define properties that are mathematical calculated from other properties. e.g. Dry Matter = 100 - Moisture	Decimal Places see Chapter 6.8.15 “Changing the Decimal places of a property”, page 70
		Unit see Chapter 6.8.16 “Changing the Unit of a property”, page 70
		Formula see Chapter 6.8.10 “Changing the Formula (Calculated Property only)”, page 67
		Slope see Chapter 6.8.18 “Changing the Slope of a property”, page 71
		Bias see Chapter 6.8.17 “Changing the Bias of a property”, page 71
		Target see Chapter 6.8.20 “Changing the Target of a property”, page 72
		Tolerance Min. see Chapter 6.8.24 “Changing the Tolerance minimum of a property”, page 74
		Tolerance Max. see Chapter 6.8.23 “Changing the Tolerance maximum of a property”, page 74
		Limit Min. seeChapter 6.8.22 “Changing the Limit minimum of a property”, page 73
		Limit Max. see Chapter 6.8.21 “Changing the Limit maximum of a property”, page 73

Prediction type	Explanation	Available predictions settings
[Color]	Only for models with a visible detector. Measures the sample color.	Decimal Places see Chapter 6.8.15 “Changing the Decimal places of a property”, page 70
		Observer see Chapter 6.8.11 “Changing the Observer (Color only)”, page 68
		Illuminate see Chapter 6.8.12 “Changing the Illuminant (Color only)”, page 68
		Metric see Chapter 6.8.13 “Changing the Metric (Color only)”, page 69
		Metric Element see Chapter 6.8.14 “Changing the Metric Element (Color only)”, page 69
		Slope see Chapter 6.8.18 “Changing the Slope of a property”, page 71
		Bias see Chapter 6.8.17 “Changing the Bias of a property”, page 71
		Target see Chapter 6.8.20 “Changing the Target of a property”, page 72
		Tolerance Min. see Chapter 6.8.24 “Changing the Tolerance minimum of a property”, page 74
		Tolerance Max. see Chapter 6.8.23 “Changing the Tolerance maximum of a property”, page 74
		Limit Min. see Chapter 6.8.22 “Changing the Limit minimum of a property”, page 73
		Limit Max. see Chapter 6.8.21 “Changing the Limit maximum of a property”, page 73

Proceedings:

Navigation path
➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Prediction type]*.
⇨ The display shows a dialog box with the selectable values.
▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.
▶ Editing the available prediction settings according to your needs.

6.8.6 Changing the Initial Wavelength Range (Calibration model only)

Select the wavelength range for initial calibration.

NOTE
Changes in the project file replace the selection made here.

The following settings are available:

Wavelength type	Explanation
[NIR only]	NIR wavelength range only (900 - 1700 nm)
[VIS only]	VIS wavelength range only (400 - 900 nm)
[VIS NIR]	NIR and VIS wavelength range (400 - 1700 nm)

Proceedings:

Navigation path
➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Initial Wavelength Range]*.
⇨ The display shows a dialog box with the selectable values.
▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.
⇨ The value for the Initial Wavelength Range is saved.

6.8.7 Changing the Postpredicted Value (Calibration model only)

The following settings are available:

Postprediction type	Explanation
[Predicted Value]	Calculates the values as predicted by the chemometric model.
[Residuum]	Is an indication of the applicability of the model. The Residuum is the RMS value of the difference between pre-treated sample and model reconstructed spectra.
[Mahalanobis Distance]	Calculates the value on basis of a mahalanobis calculation
[Calibration Base Standard]	Converts the parameter value of the calibration to the value obtained at a different moisture content. A property moisture is necessary for carrying out this postprediction type. See: Chapter 6.8.8 “Changing the Calibration Base (Calibration model only)”, page 65 Chapter 6.8.9 “Changing the Display Basis (Calibration model only)”, page 66

Proceedings:

Navigation path
➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

- ▶ Navigate to the *[Application]* menu via the navigation path.
- ▶ Tap the function *[Edit]* on the function bar.
- ⇨ The display highlights the function *[Edit]* in green.
- ▶ Tap the name of the application that you wish to edit.
- ⇨ The display highlights the application in green.
- ▶ Tap the name of the property that you wish to edit.
- ⇨ The display shows the view *Property*.
- ▶ Tap the action *[Postpredicted Value]*.
- ⇨ The display shows a dialog box with the selectable values.
- ▶ Select a value.
- ▶ Tap the button *[OK]*.
- ⇨ The dialog box closes.
- ⇨ The setting is saved.
- ⇨ The value is saved.

6.8.8 Changing the Calibration Base (Calibration model only)

The following settings are available:

Type	Explanation
[Dry Basis]	The property value is expressed neglecting the presence of water in the sample. The water contribution is subtracted from the calculation.
[Moisture xx %]	The property value is expressed assuming xx % water content. The amount of water is expressed as a percentage of the total weight.
[As Is]	The property value is expressed including the presence of water in the sample. The water contribution is included in the calculation.

Proceedings:

Navigation path
➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

☑ The post prediction type *[Calibration Base Standard]* is selected.

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Calibration Base]*.

⇨ The display shows a dialog box with the selectable values.

▶ Select a value.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The setting is saved.

⇨ The value for the calibration base is saved.

6.8.9 Changing the Display Basis (Calibration model only)

The following settings are available:

Type	Explanation
[Dry Basis]	The property value is expressed neglecting the presence of water in the sample. The water contribution is subtracted from the calculation.
[Moisture xx %]	The property value is expressed assuming xx % water content. The amount of water is expressed as a percentage of the total weight.
[As Is]	The property value is expressed including the presence of water in the sample. The water contribution is included in the calculation.

Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

☑ The post prediction type *[Calibration Base Standard]* is selected.

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Display basis]*.

⇨ The display shows a dialog box with the selectable values.

▶ Select a value.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The setting is saved.

⇨ The value for the Display basis is saved.

6.8.10 Changing the Formula (Calculated Property only)

Calculation formula for the prediction.
Rules how to enter a formula see Chapter 10.3 “Rules entering a formula”, page 109
Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Formula]*.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter the formula.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The formula is saved.

6.8.11 Changing the Observer (Color only)

The settings available corresponding to the international standard CIE 1931 / CIE 1964.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Observer]*.
⇨ The display shows a dialog box with the selectable values.
▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.
⇨ The value for the Observer type is saved.

6.8.12 Changing the Illuminant (Color only)

The settings available corresponding to the international standard ISO 11664-2:2007 / CIE S 014-2:2006.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Illuminant]*.
⇨ The display shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the Illuminant is saved.

6.8.13 Changing the Metric (Color only)

The following settings are available:

Type	Explanation
[Lab]	Calculates the metrics in the L*a*b color space.
[LCh]	Calculates the metrics in the L*C*h color space.
[XYZ]	Calculates the values in XYZ color space.

Proceedings:

Navigation path
➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Metric]*.

⇨ The display shows a dialog box with a numeric input box.

▶ Enter the value in the numeric input box.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The value for the Metric is saved.

6.8.14 Changing the Metric Element (Color only)

Available options depend on the metric selected in Chapter 6.8.13 “Changing the Metric (Color only)”, page 69

Proceedings:

Navigation path
➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Metric Element]*.

⇨ The display shows a dialog box with the selectable values.

▶ Select a value.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The setting is saved.
⇨ The value for the Metric Element is saved.

6.8.15 Changing the Decimal places of a property

Number of decimal places displayed by a property.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Decimal places]*.
⇨ The display shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the Decimal places is saved.

6.8.16 Changing the Unit of a property

NOTE
Special characters

▶ Tab the button *[Shift]* on the alphanumeric input box.
⇨ The alphanumeric input box shows the available special characters.

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.

▶ Tap the action *[Unit]*.

⇨ The display shows a dialog with an alphanumeric input box.

▶ Enter a unit for the property.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The Unit is saved.

6.8.17 Changing the Bias of a property

A bias is a constant value.
This value is added to the result of a prediction to correct a constant deviation between predicted values and reference values.

Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Bias]*.

⇨ The control panel shows a dialog box with a numeric input box.

▶ Enter the value in the numeric input box.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The value for the Bias is saved.

6.8.18 Changing the Slope of a property

The slope is a factor that is used to correct proportional systematic differences between the result of a measurement and the reference value.
Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Slope]*.
⇨ The control panel shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the Slope is saved.

6.8.19 Changing the Mahalanobis of a property (Calibration model only)

The Mahalanobis distance is a measure of spectral similarity between the measured spectrum and the Dataset used in the calibration.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Mahalanobis]*.
⇨ The control panel shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the Mahalanobis is saved.

6.8.20 Changing the Target of a property

Sets the target value, relative to which the tolerances are considered.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Target]*.
⇨ The control panel shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the Target is saved.

6.8.21 Changing the Limit maximum of a property

Sets the upper limit for the property.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.
▶ Tap the action *[Limit Max.]*.
⇨ The control panel shows a dialog box with a numeric input box.
▶ Enter the value in the numeric input box.
▶ Tap the button *[OK]*.
⇨ The dialog box closes.
⇨ The value for the Limit is saved.

6.8.22 Changing the Limit minimum of a property

Sets the lower limit for the property.
Proceedings:

Navigation path

➔ 

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50
▶ Navigate to the *[Application]* menu via the navigation path.
▶ Tap the function *[Edit]* on the function bar.
⇨ The display highlights the function *[Edit]* in green.
▶ Tap the name of the application that you wish to edit.
⇨ The display highlights the application in green.
▶ Tap the name of the property that you wish to edit.
⇨ The display shows the view *Property*.

▶ Tap the action *[Limit Min.]*.

⇨ The control panel shows a dialog box with a numeric input box.

▶ Enter the value in the numeric input box.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The value for the Limit is saved.

6.8.23 Changing the Tolerance maximum of a property

Tolerance is a difference from the target value.
Sets the upper tolerance relative to the target.
Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Tolerance Max.]*.

⇨ The control panel shows a dialog box with a numeric input box.

▶ Enter the value in the numeric input box.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The value for the Tolerance is saved.

6.8.24 Changing the Tolerance minimum of a property

Tolerance is a difference from the target value.
Sets the lower tolerance relative to the target.
Proceedings:

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property that you wish to edit.

⇨ The display shows the view *Property*.

▶ Tap the action *[Tolerance Min.]*.

⇨ The control panel shows a dialog box with a numeric input box.

▶ Enter the value in the numeric input box.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The value for the Tolerance is saved.

6.9 Deleting a property

NOTE

It is not possible to delete a property after it has been used for measurement.

Proceedings:

Navigation path
➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap the name of the application that you wish to edit.

⇨ The display highlights the application in green.

▶ Tap the name of the property you wish to remove.

⇨ The display highlights the application in green.

▶ Tap the function *[Remove]* on the function bar.

▶ Select *[Yes]* to confirm the action in response to the confirmation question.

⇨ The property is deleted.

6.10 Carrying out a measurement

NOTE

Barcode / Sample ID / Order / Note

Barcode, Sample ID, Order and Note for a sample can be edited during the measurement process at any time.

- ▶ See Chapter “Insert sample ID”, page 39
- ▶ See Chapter “Insert barcode”, page 40
- ▶ See Chapter “Insert note”, page 40
- ▶ See Chapter “Insert order”, page 40
- ▶ See Chapter “Insert Sample ID Autoincrement Prefix”, page 39

NOTE

Returning the test sample in the production can cause contamination.

- ▶ Do not return test sample in the production.

NOTE

Contaminated or defective sample carrier

A contaminated or defective sample carrier causes measuring errors.

- ▶ Do not use defective sample carriers.
- ▶ Make sure that the sample carrier is clean.

NOTE

Wrong measurement results due to overfilled petri dishes.

The sample material can fall out from overfilled Petri dishes. This sample material can lead to an accumulation of material on the measurement window leading to incorrect measurement results.

- ▶ Do not overfill petri dishes.

6.10.1 Preparing the instrument

Time required: up to 30 min

Precondition:

☑ All commissioning operations have been completed. See Chapter 5 “Installation”, page 21

☑ All commissioning operations have been completed.

- ▶ Tap the ***On/Off*** master switch.
- ⇨ The system starts up.
- ⇨ The display highlights the status bar yellow.
- ⇨ Once the startup phase is complete the status bar changes from yellow to black.

6.10.2 Starting measurement

Navigation path

➔ 

Precondition:

☑ The instrument is prepared. See Chapter 6.10.1 “Preparing the instrument”, page 76

- ▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the application you wish to use.

⇨ The display highlights the application in green.

▶ Tap the function *[Select]* on the function bar.

⇨ The display changes to the *[Start]* menu.

▶ According to the application requirements put the sample in the sample presentation area.

▶ Tap the *[Control]* button.

⇨ The instrument is carrying out the measurement.

⇨ The status bar shows the status **Measuring**.

6.10.3 Ending measurement

Precondition:

☑ The control button shows one of the status measurement finished.

▶ The symbol of the control button shows in which specifications category the sample fits.

The following specifications categories are possible:

Specifications categories	Explanation see Chapter “Control button”, page 38	Explanation see Chapter 6.10.4 “Measurement results”, page 77
Within specification	x	x
Tolerance	x	x
Limit	x	x

▶ Continue according to the specification the sample is in.

Within specification	Tolerance	Limit
▶ Tap the function *[Confirm]* on the function bar. ⇨ The measurement is saved.	▶ Tap the control button ▶ Tap the function *[Confirm]* on the function bar. ⇨ The measurement is saved.	▶ Tap the control button ▶ Tap the function *[Confirm]* on the function bar. ⇨ The measurement is saved.

Prediction details and history

Precondition:

☑ The predictions are shown on the home screen.

▶ Tap on one of the properties.

⇨ The display shows the detailed prediction information of the current measurement as well as the same information for the last 7 samples measured with the same application.

▶ Tap *[OK]* to close the window

6.10.4 Measurement results

Measurement results are displayed after a measurement in the *Start* menu.

Measurement result	Explanation
	• The tested sample is in the specifications.
	• The calibration model is missing.

Measurement result	Explanation
	• Mahalanobis outlier
	• The predicted value is outside calibration range.
	• The predicted value is outside of the set limit.
	• The predicted value is outside the tolerance.

6.10.5 Shutting down the instrument

Navigation path

➔ 

▶ Navigate to the *[Start]* menu via the navigation path.
▶ Tap the function *[Switch off]* on the function bar.
▶ Answer *YES* to the confirmation question.
⇨ The instrument is shutting down.

6.11 Editing the values of the metadata fields (Sample ID, Order, Note)

NOTE
The labels of the order and the note fields can be different depending on the settings according to Chapter 5.6.6 “Changing the label of the order and note fields”, page 29.

Performing this action will change the values in the database and in the history menu.

NOTE
The new values will be applied for reports and exports created after the change. Reports and exports created before the change will not be recreated.

Navigation path

➔  ➔ *[History]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Select a sample.
▶ Tap the function *[Edit]* on the function bar.
▶ Tap the button  .
▶ Select the metadata field for which you would like to change the value and tap the button.
⇨ The control panel shows a dialog with an alphanumeric input box.
▶ Enter the new value.
▶ Tap the button *[OK]*.
▶ If necessary, repeat this for other meta data fields.
▶ Tap the button *[Save]*.

6.12 Enter reference values

Navigation path	
➔ 	➔ *[History]*

Function bar symbols used in this section:

	*[Edit]*	Allows the selected item to be edited.
	*[Add to Calibration Dataset]*	Adds the selected item to the calibration dataset.

Precondition:

☑ The software is in administrator mode.

☑ Samples have been measured with the instrument and are properly and uniquely labeled.

☑ The reference values of the samples have been determined by a primary method.

▶ Navigate to the *[History]* menu via the navigation path.

▶ Tap the function *[Edit]* on the function bar.

⇨ The display highlights the function *[Edit]* in green.

▶ Tap on the name of the measurement you wish to edit.

⇨ The sample is highlighted green and the measurement details with the properties appear on the right side of the screen.

▶ Tap on the property you wish to edit.

⇨ The display shows a dialog box with a numeric input box.

▶ Enter the reference value.

▶ Tap the button *[OK]*.

⇨ The reference value is set.

▶ Enter the reference values for other parameters if required.

▶ Tap the button *[Add to Calibration Dataset]*.

⇨ The button will be highlighted in green and the measurement is activated for AutoCal.

▶ Repeat these steps for all samples you wish to add to the calibration.

6.12.1 Import reference values via an Excel template

Navigation path	
➔ 	➔ *[History]*

Function bar symbols used in this section:

	*[Export]*	Exports the marked data.

Precondition:

☑ The software is in administrator mode.

☑ Samples have been measured with the instrument and have been properly and uniquely labeled .

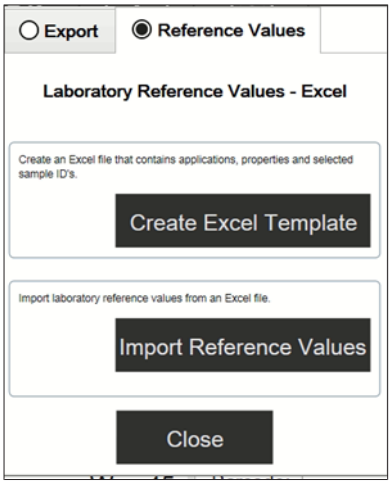
☑ The reference values of the samples have been determined by a primary method.

▶ Navigate to the *[History]* menu via the navigation path.

▶ Select relevant measurements (those for which new reference values are available). See *Quick Guide ProxiMate – Exports and reports* on how to select multiple samples

▶ Tap the *[Export]* function on the function bar.

⇨ The display shows a dialog.



▶ Select the *Reference Values* tab.

▶ Select the *[Create Excel Template]* button.

⇨ The display shows a windows menu.

▶ Select a location according to your needs. Do not rename the template file.

▶ Tap the *[Save]* button.

⇨ The display shows a confirmation that the template was created and saved.

▶ Tap the button *[OK]*.

⇨ The template is exported.

▶ Transfer the template to a trusted location on a PC, otherwise it will be opened in protected mode.

▶ Open the template with Excel, enter the reference values.

▶ Safe the template with the reference values.

▶ Copy the template to a USB or to the ProxiMate.

▶ Navigate to the *History* menu via the navigation path.

▶ Tap the function *[Import]* on the function bar.

⇨ The display shows a dialog.

▶ Select the *Reference Values* tab.

▶ Select the*[Import Reference Values]* action.

⇨ The display shows the *Open files* dialog.

▶ Select the file you want to import.

▶ Tap the button *[OK]*.

⇨ The display shows a confirmation stating how many reference values were imported.

⇨ The reference values are imported and are displayed in the measurement details of the related samples.

6.13 Run AutoCal to create or update calibrations

Navigation path		
➔		➔ *[History]*

Function bar symbols used in this section:

	*[Autocal]*	Starts the auto calibration function.

Precondition:

☑ The software is in administrator mode.

☑ Reference values of at least three samples are set in the *[History]* menu for the chosen application and parameter and at least three reference values are different.

▶ Navigate to the *[History]* menu via the navigation path.

▶ Navigate to one of the measurements you wish to add to the calibration.

▶ Tap on the measurement.

⇨ The sample is highlighted green and the measurement details with the properties will appear on the right hand side of the screen.

▶ Tap the *[AutoCal]* button on the function bar.

⇨ The display shows a dialog box with a list of all properties of the selected application.

▶ Deselect all properties you do not want to update.

▶ Confirm with *[OK]*.

⇨ The display shows the *Updating Calibration* dialog.

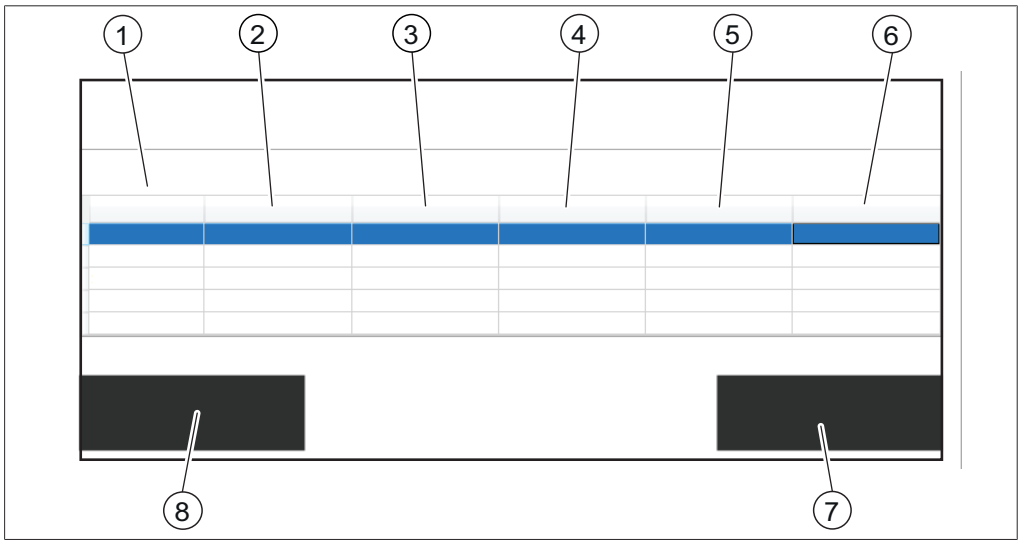
⇨ When the calibration process is finished, the display shows the *Confirm Calibration* dialog.

▶ Compare the calibration models before and after extension.

▶ *[Accept]* or *[Reject]* the new calibration model.

⇨ If the new calibration model is accepted, the old calibration model will be replaced and stored in the history folder of the calibration folder.

⇨ If the new calibration model is rejected, the old calibration model will remain.



1	Name of statistic parameters	2	Values of statistic parameters of actual calibration
3	Values of statistic parameters of new calibration	4	IDs of last n (default = five) measurements
5	Parameter values according to actual calibration	6	Parameter values as predicted by new calibration
7	Button *[Accept]*	8	Button *[Reject]*

6.13.1 Open the calibration summary to find statistical information

Navigation path		
➔		➔ *[Start]*

Function bar symbols used in this section:

	*[Select]*	Selects the marked application.

Precondition:
☑ At least one application is uploaded to NIRWise.

▶ Navigate to the *[Start]* menu via the navigation path.
▶ Tap on the *[Application]* button.
⇨ The *[Application]* menu is opened.
▶ Tap on the application of interest.
⇨ The application is highlighted green.
▶ Confirm with the *[Select]* button on the function bar.
⇨ The menu returns to the *[Start]* menu and the properties of the selected application are displayed on the right bottom side.
▶ Tap on the property of interest.
⇨ The display shows a dialog box with the calibration summary of this property.
▶ Confirm with *[OK]* to close the dialog box.

6.14 Importing and Exporting

6.14.1 Exporting measurement data

Create exports

Types of exports in NIRWise:

- tsv: Format used in the chemometrics software NIRWise Plus. Contains measured values, reference values and spectral data.
- jdx: General export format.
- csv: Contains measured values and optionally meta data and reference values and/or spectral data.

Create an export of a single sample

Navigation path		
➔		➔ *[History]*

Function bar symbols used in this section:

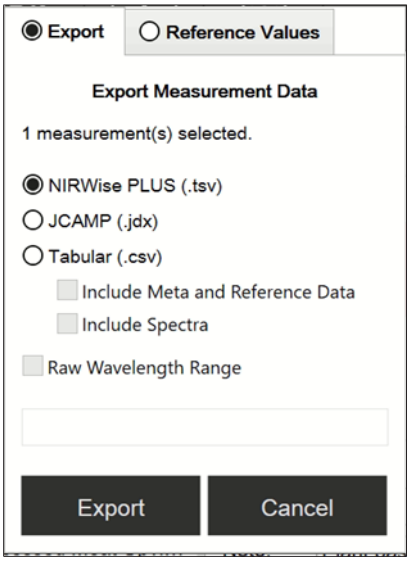
	*[Export]*	Exports the marked data.

Precondition:
☑ The software is in administrator mode.
☑ At least one measurement is available in the *History* menu.

▶ Navigate to the *History* menu via the navigation path.
▶ Navigate to the measurement you wish to export and tap it.
⇨ The display highlights the measurement in green.

▶ Tap the function *[Export]* on the function bar.

⇨ The display shows the *Export* menu.



▶ Select the file format which you wish to export.

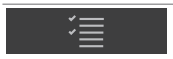
▶ Tap the *[Export]* button.

⇨ The display shows a dialog box confirming the successful export.

Create an export of multiple samples of the same application

Navigation path		
➔		➔ *[History]*

Function bar symbols used in this section:

	*[Export]*	Exports the marked data.
	*[Multiple selection]*	Activates multiple selection of measurements.

Precondition:

☑ The software is in administrator mode.

☑ At least two measurements from the same application are available in the *History* menu.

▶ Navigate to the *History* menu via the navigation path.

▶ Navigate one of to the measurements you wish to export and tap it.

⇨ The display highlights the measurement in green.

▶ Tap on the *[Multiple Selection]* button on the function bar.

⇨ The sample view shows only the measurements of the selected application and the *[Multiple Selection]* button is highlighted in green.

▶ Tap on all other samples that you wish to export.

⇨ All selected samples are highlighted in green.

▶ Tap the function *[Export]* on the function bar.

⇨ The display shows the *Export* menu.

▶ Select the file format which you wish to export.

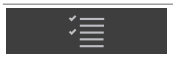
▶ Tap the *[Export]* button.

⇨ The display shows a dialog box confirming the successful export.

Create an export of all samples of the same application

Navigation path
➔  ➔ *[History]*

Function bar symbols used in this section:

	*[Export]*	Exports the marked data.
	*[Multiple selection]*	Activates multiple selection of measurements.
	*[Select all]*	Selects all measurements in the list. **NOTICE! only available if multiple selection is activated**

Precondition:

☑ The software is in administrator mode.

☑ At least two measurements from the same application are available in the *History* menu.

▶ Navigate to the *History* menu via the navigation path.

▶ Navigate one of to the measurements you wish to export and tap it.

⇨ The display highlights the measurement in green.

▶ Tap on the *[Multiple Selection]* button on the function bar.

⇨ The sample view shows only the measurements of the selected application and the *[Multiple Selection]* button is highlighted in green.

▶ Tap on the *[Select All]* button .

⇨ All samples of the application are highlighted in green.

▶ Tap the function *[Export]* on the function bar.

⇨ The display shows the *Export* menu.

▶ Select the file format which you wish to export.

▶ Tap the *[Export]* button.

⇨ The display shows a dialog box confirming the successful export.

Access created data files

Navigation path
➔  ➔ *[Tools]*

Function bar symbols used in this section:

	*[Go to windows]*	The view changes to the windows® surface.

▶ Navigate to the *[Tools]* menu via the navigation path.

▶ Tap the *[Go To Windows]* button.

⇨ The display switches to the desktop of the in-built computer.

▶ Open the *NirWiseData* folder on the desktop.

▶ Navigate to the subfolders *Exports* and then *Data*.

▶ Find the exported file labelled with the application name and the date and time stamp of the export.

6.14.2 Importing application data

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the function *[Import]* on the function bar.

⇨ The screen shows a dialog for choosing the folders.

▶ Navigate to the saving folder of the application you wish to import.

▶ Select the application.

⇨ The display shows a dialog with the properties of the application you wish to import. All properties are highlighted in green.

▶ Tap the properties you do not want to import.

⇨ The disabled properties are highlighted in white.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The application is imported.

6.14.3 Exporting application data

This export function allows the use of (unlicenced) applications onto another instrument.

NOTE

The location of the destination folder is fixed. See Chapter 10.2 “File explanations and folder locations”, page 108

Navigation path

➔ 

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the *[Application]* menu via the navigation path.

▶ Tap the application you wish to export.

⇨ The display highlights the application in green.

▶ Tap the function *[Export]* on the function bar.

⇨ The display shows a dialog with the properties of the application you wish to export. All properties are highlighted in green.

▶ Tap the properties you do not want to export.

⇨ The disabled properties are highlighted in white.

▶ Tap the button *[OK]*.

⇨ The dialog box closes.

⇨ The application is exported.

6.15 Create reports

Reports contain the following information:

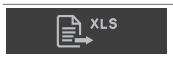
- Company information
- Instrument details
- Measurement summary (for multiple samples)
- Measurement details
- Measurement results
- Sample spectrum

6.15.1 Create a report of a single sample

Navigation path

➔		➔ *[History]*

Function bar symbols used in this section:

	*[Report]*	Generates on-screen report
	*[Print]*	Sends the report to the printer.
	*[Save PDF]*	Saves the report as PDF file.
	*[Save Excel]*	Saves the report as Excel file.

Precondition:

☑ At least one measurement is available in the *History* menu.

☑ A printer has been set up.

▶ Navigate to the *History* menu via the navigation path.

▶ Navigate to one of the measurements you wish to export and tap it.

⇨ The display highlights the measurement in green.

▶ Tap the function *[Report]* on the function bar.

⇨ The display shows the pdf report.

▶ To print the report, tap the *[Print]* button.

⇨ The display shows a dialog with the printing progress.

▶ To export the report as pdf file, tap the *[Save pdf]* button.

⇨ The display shows a dialog box confirming the successful export.

▶ To export the report as excel file, tap the *[Save excel]* button.

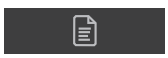
⇨ The display shows a dialog box confirming the successful export.

6.15.2 Create a report of multiple samples of the same application

Navigation path

➔		➔ *[History]*

Function bar symbols used in this section:

	*[Report]*	Generates on-screen report
	*[Multiple selection]*	Activates multiple selection of measurements.

	[Print]	Sends the report to the printer.
PDF	*[Save PDF]*	Saves the report as PDF file.
XLS	*[Save Excel]*	Saves the report as Excel file.

Precondition:

☑ The software is in operator mode for report viewing and exporting.

☑ The software is in administrator mode for report printing.

☑ At least two measurements from the same application are available in the *History* menu.

▶ Navigate to the *History* menu via the navigation path.

▶ Navigate to one of the measurements you wish to export and tap it.

⇨ The display highlights the measurement in green.

▶ Tap on the *[Multiple Selection]* button on the function bar.

⇨ The sample view shows only the measurements of the selected application and the *[Multiple Selection]* button is highlighted in green.

▶ Tap on all other samples that you wish to export.

⇨ All selected samples are highlighted in green.

▶ Tap the function *[Report]* on the function bar.

⇨ The display shows the pdf report.

▶ To print the report, tap the *[Print]* button.

⇨ The display shows a dialog with the printing progress.

▶ To export the report as pdf file, tap the *[Save pdf]* button.

⇨ The display shows a dialog box confirming the successful export.

▶ To export the report as excel file, tap the *[Save excel]* button.

⇨ The display shows a dialog box confirming the successful export.

6.15.3 Create a report of all samples of the same application

Navigation path

➔		➔ *[History]*

Function bar symbols used in this section:

	[Report]	Generates on-screen report
	[Multiple selection]	Activates multiple selection of measurements.
	[Select all]	Selects all measurements in the list. **NOTICE! only available if multiple selection is activated**
	[Print]	Sends the report to the printer.
PDF	*[Save PDF]*	Saves the report as PDF file.
XLS	*[Save Excel]*	Saves the report as Excel file.

Precondition:
☑ The software is in operator mode for report viewing and exporting.
☑ The software is in administrator mode for report printing.
☑ At least two measurements from the same application are available in the *History* menu.
▶ Navigate to the *History* menu via the navigation path.
▶ Navigate to one of the measurements you wish to export and tap it.
⇨ The display highlights the measurement in green.
▶ Tap on the *[Multiple Selection]* button on the function bar.
⇨ The sample view shows only the measurements of the selected application and the *[Multiple Selection]* button is highlighted in green.
▶ Tap on the *[Select All]* button.
⇨ All samples of the same application are highlighted in green.
▶ Tap the function *[Report]* on the function bar.
⇨ The display shows the pdf report.
▶ To print the report, tap the *[Print]* button.
⇨ The display shows a dialog with the printing progress.
▶ To export the report as pdf file, tap the *[Save pdf]* button.
⇨ The display shows a dialog box confirming the successful export.
▶ To export the report as excel file, tap the *[Save excel]* button.
⇨ The display shows a dialog box confirming the successful export.

6.15.4 Access created data files

Navigation path		
➔ 	➔ *[Tools]*	

Function bar symbols used in this section:

	*[Go to windows]*	The view changes to the windows® surface.

▶ Navigate to the *[Tools]* menu via the navigation path.
▶ Tap the *[Go To Windows]* button.
⇨ The display switches to the desktop of the in-built computer.
▶ Open the *NirWiseData* folder on the desktop.
▶ Navigate to the subfolders *Exports* and then *Data*.
▶ Find the exported file labelled with the application name and the date and time stamp of the export.

7 Cleaning and servicing

NOTE

- ▶ Carry out only the service and cleaning operations described in this section.
- ▶ Do not carry out any servicing and cleaning operations that involve opening the housing.
- ▶ Use only genuine BUCHI spare parts in order to ensure correct operation and preserve the warranty.
- ▶ Carry out the service and cleaning operations described in this section to extend the lifetime of the instrument.

7.1 Regular maintenance work

NOTE

If special cleaning processes are necessary contact BUCHI Customer Service.

www.buchi.com/contact

Component	Action	Frequency
Sample vessel	▶ Wipe down the sample containers with a damp cloth. ▶ If heavily soiled: • use mild detergent • rinse with clean water • wipe dry with a lint free cloth	Daily
Glass up view	▶ Wipe down the glass window with a damp cloth. ▶ If heavily soiled, use ethanol or a mild detergent.	Daily
Glass down view	▶ Wipe down the glass window with a damp cloth. ▶ If heavily soiled, use ethanol or a mild detergent.	Daily
Sample presentation	▶ Wipe down the sample presentation area with a damp cloth. ▶ If heavily soiled, use ethanol or a mild detergent.	Daily
Data	▶ Perform a data backup. See Chapter 7.6 “Carrying out a data backup”, page 101	Weekly
Casing	▶ Wipe down the casing with a damp cloth. ▶ If heavily soiled, use ethanol or a mild detergent.	Weekly
Cooling fins	▶ Remove dust and foreign objects from the cooling fins using compressed air or a vacuum cleaner.	Weekly
Control panel	▶ Carry out an Baseline Correction Vector test. See Chapter 7.5.1 “Carrying out a Baseline Correction Vector test”, page 100	Weekly

Component	Action	Frequency
Display	▶ Wipe down the display with a damp cloth. See Chapter 7.9 “Cleaning the display”, page 103	Weekly
Sample carrier sliders	▶ Check that the sample carrier sliders do not show excessive wear.	Monthly
Control panel	▶ Carry out an Advanced System Test. See Chapter 7.5.3 “Carrying out an Advanced System Test”, page 101	Monthly
Desiccant cartridge	▶ Check function of the desiccant cartridge. See Chapter 7.3 “Checking the desiccant cartridge”, page 97 ▶ If necessary change the desiccant cartridge. See Chapter 7.4 “Changing the desiccant cartridge”, page 99	Yearly
Control panel	▶ Carry out a Comprehensive System Test. See Chapter 7.5.2 “Carrying out a Comprehensive System Test”, page 101	Yearly

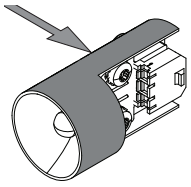
7.2 Changing the lamps

NOTICE

Risk of broken lamp

Touching the bulb or the reflector with hands can cause lamp damage.

▶ Do not touch the bulb with fingers.

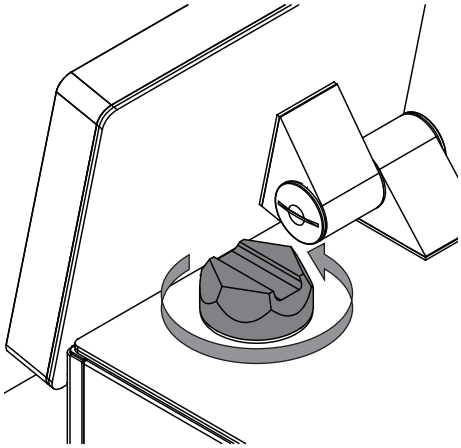


▶ Touch the lamp on the indicated areas.

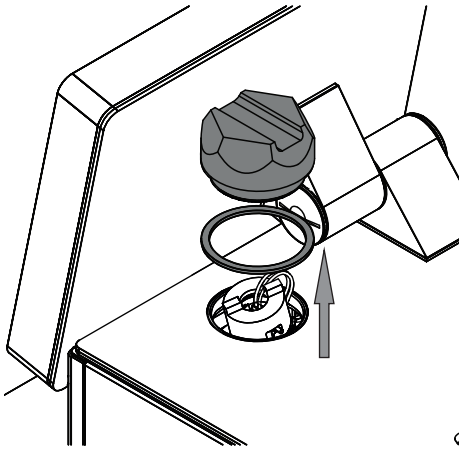
7.2.1 Changing the down view lamp

▶ Disconnect the power supply to the instrument.
▶ Wait 15 min. for lamp to cool.

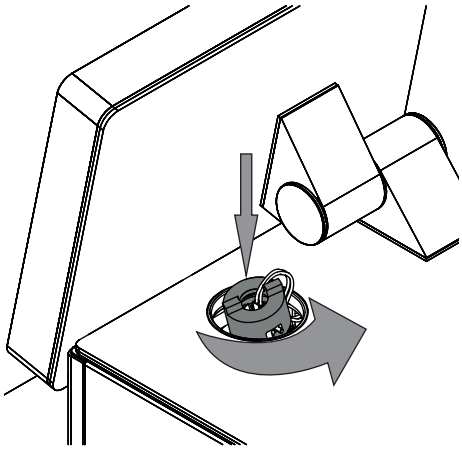
▶ Open the cover lid on the top of the instrument.



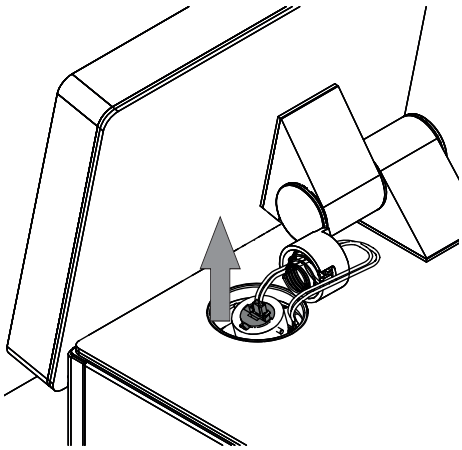
▶ Remove the seal and the cover lid.



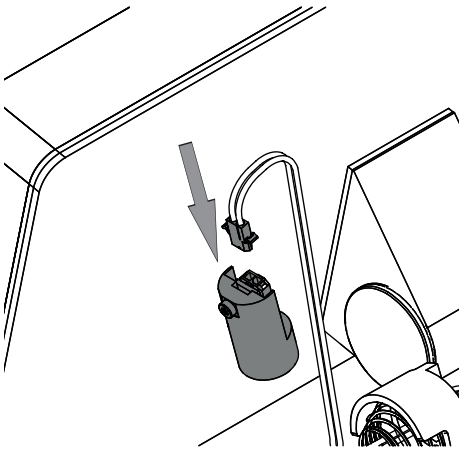
▶ Press the ferrule.
▶ Turn the ferrule 1/4 turn counterclockwise.



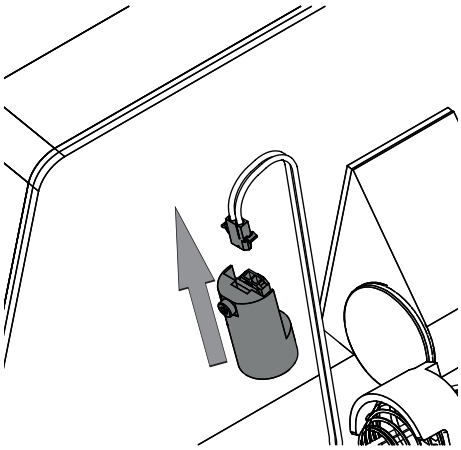
▶ Remove the defective lamp from the lamp socket.



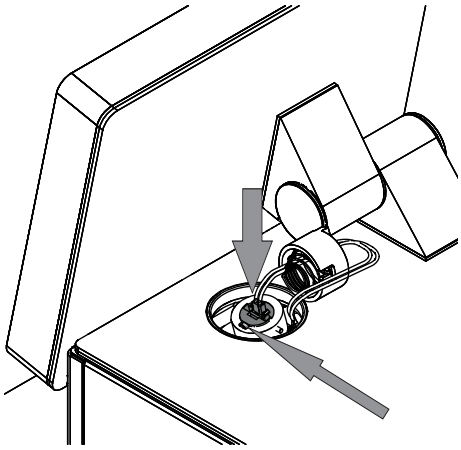
▶ Disconnect the defective lamp.



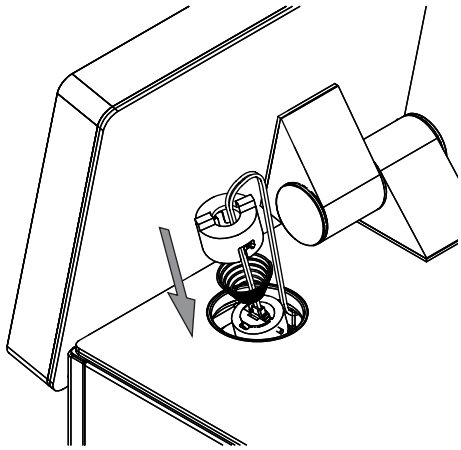
▶ Connect the new lamp.



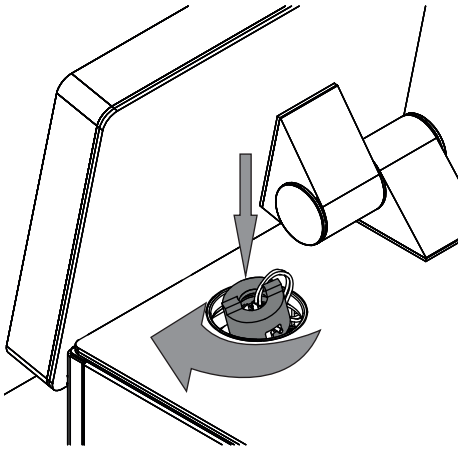
▶ Put the connected new lamp in the lamp socket.
▶ Make sure that the screw indicated is in the groove of the lamp socket.



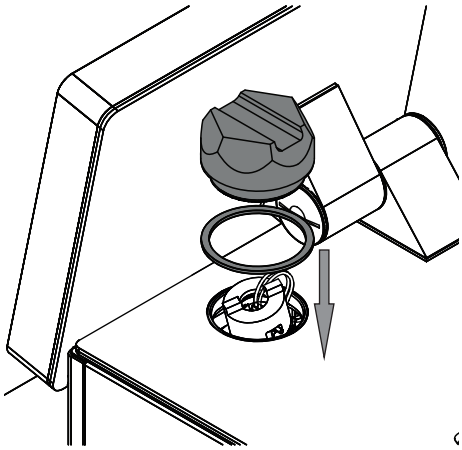
▶ Put ferrule and spring on the lamp socket.



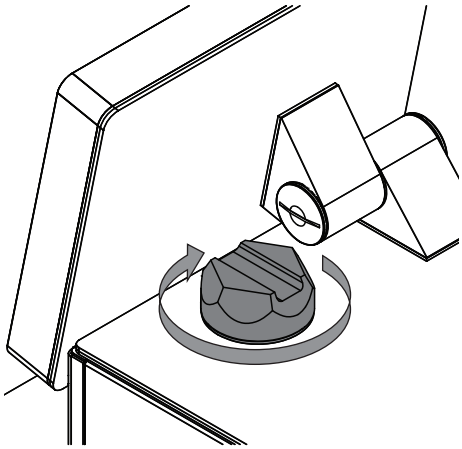
▶ Press the ferrule.
▶ Turn the ferrule 1/4 turn clockwise.



▶ Put the seal and the cover lid on the instrument.



▶ Attach the cover lid to the instrument.



▶ Change the desiccant cartridge. See Chapter 7.4 “Changing the desiccant cartridge”, page 99

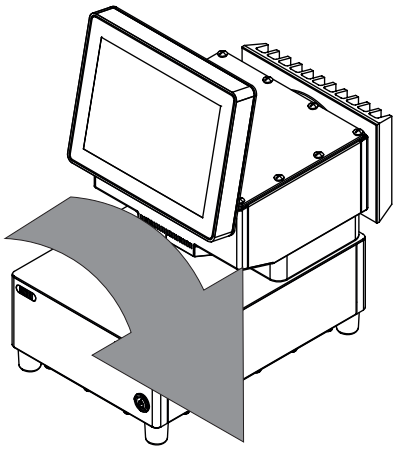
▶ Confirm lamp replacement. See Chapter 7.2.3 “Confirm Lamp Replacement”, page 97

▶ Carry out a baseline correction vector calibration. See Calibrating a Baseline Correction Vector (BCV)

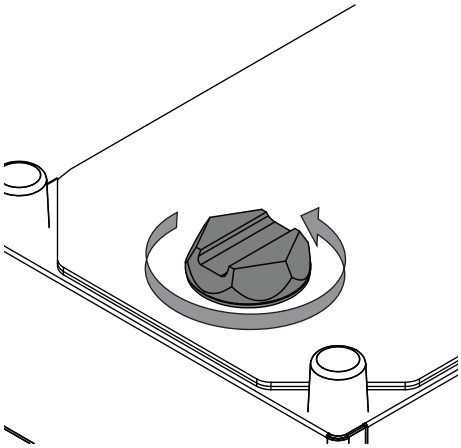
7.2.2 Changing the up view lamp

▶ Disconnect the power supply to the instrument.
▶ Wait 15 min. for lamp to cool.

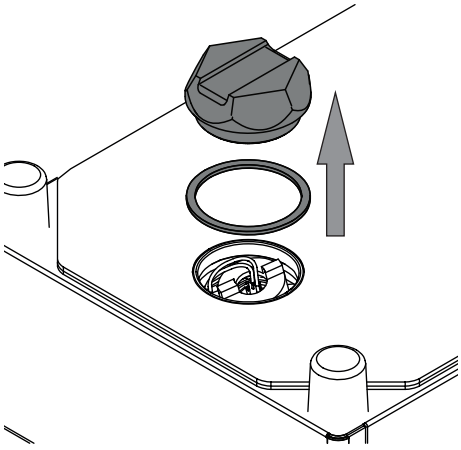
- ▶ Turn the instrument around.
- ▶ Make sure that the instrument cannot tip over during the lamp replacement procedure.



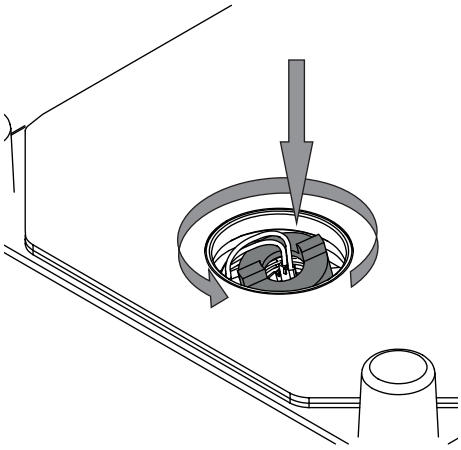
- ▶ Open the cover lid on the bottom of the instrument.



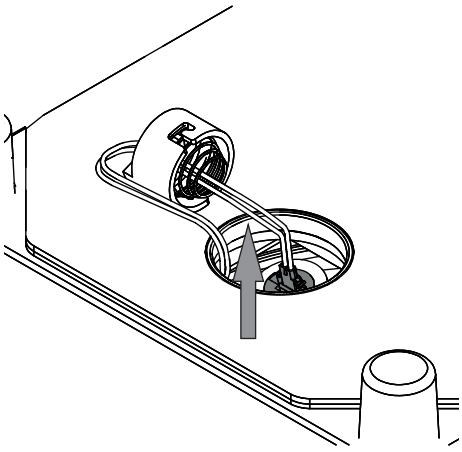
- ▶ Remove the seal and the cover lid.



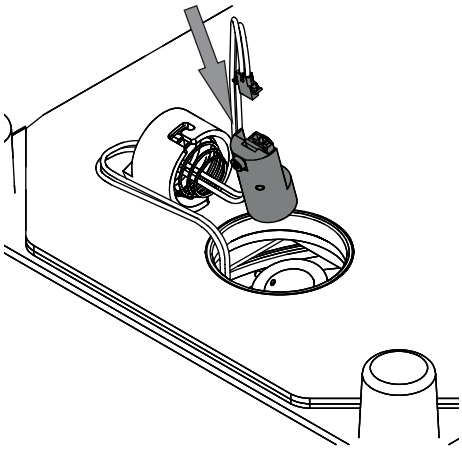
- ▶ Press the ferrule.
- ▶ Turn the ferrule 1/4 turn counterclockwise.



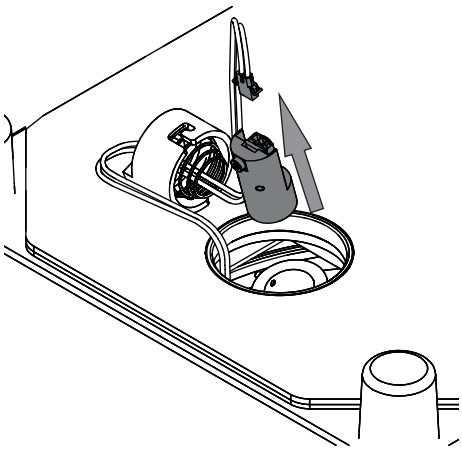
▶ Remove the defective lamp from the lamp socket.



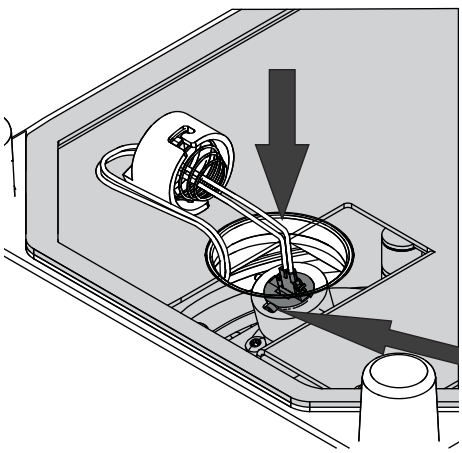
▶ Disconnect the defective lamp.



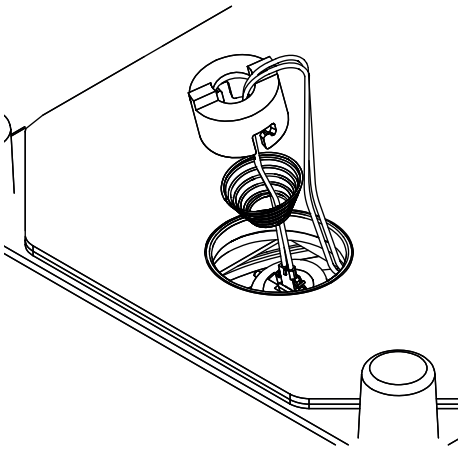
▶ Connect the new lamp.



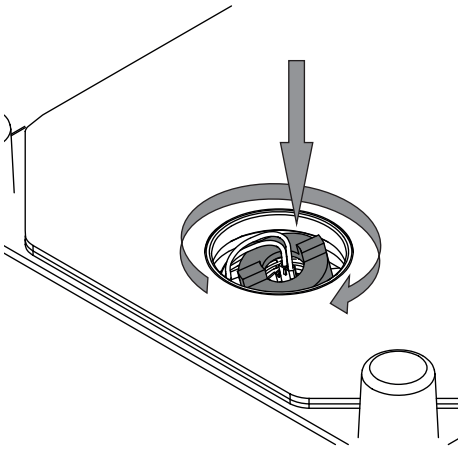
▶ Put the connected replacement lamp in the lamp socket.
▶ Make sure that the indicated screw is in the groove of the lamp socket.



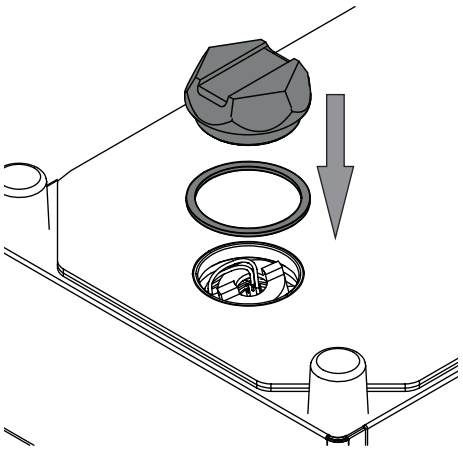
▶ Put ferrule and spring on the lamp socket.



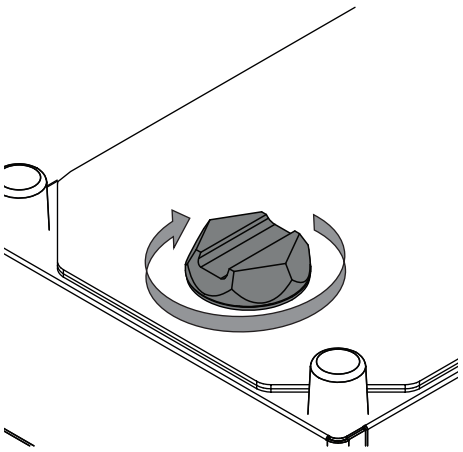
▶ Press the ferrule.
▶ Turn the ferrule 1/4 turn clockwise.



▶ Put the seal and the cover lid on the instrument.



▶ Attach the cover lid with the tool provided.



▶ Change the desiccant cartridge. See Chapter 7.4 “Changing the desiccant cartridge”, page 99

▶ Confirm lamp replacement. See Chapter 7.2.3 “Confirm Lamp Replacement”, page 97

▶ Carry out a baseline correction vector calibration. See Calibrating a Baseline Correction Vector (BCV)

7.2.3 Confirm Lamp Replacement

Navigation path	
➔ 	➔ *[Confirm Lamp Replacement]*

Precondition:

☑ The lamp has been changed.

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Tap the ***On/Off*** master switch.

⇨ The system starts up.

⇨ The display highlights the status bar yellow.

⇨ After completion the startup phase the display highlights the status bar black.

▶ Navigate to the action *[Confirm Lamp Replacement]* via the navigation path.

▶ Select which lamp was replaced (up view lamp or down view lamp).

▶ Confirm the secure question with *OK*.

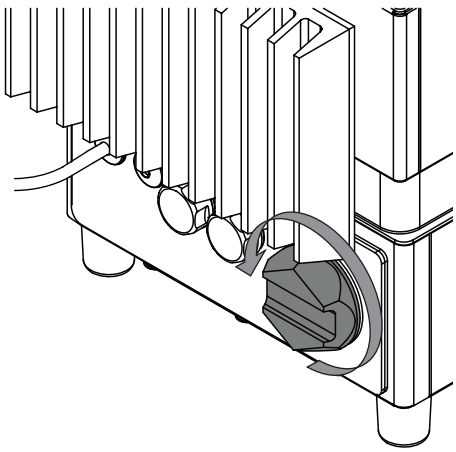
7.3 Checking the desiccant cartridge

NOTE

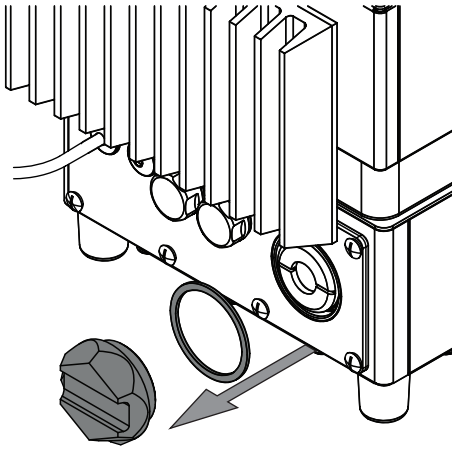
The drying cartridge changes color when the humidity reaches 40%.

Color	Description
Pink	Cartridge needs to be exchanged
Blue	Cartridge can still be used

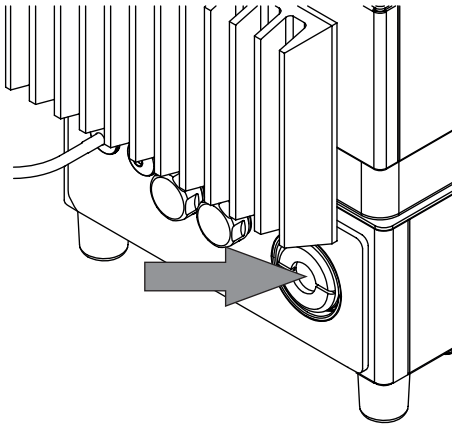
▶ Open the cover lid for the desiccant cartridge.



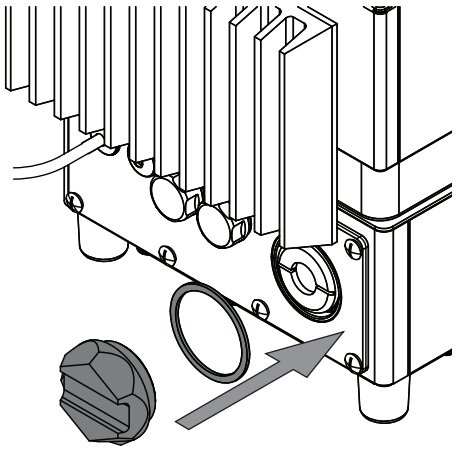
▶ Remove the cover lid and the seal.



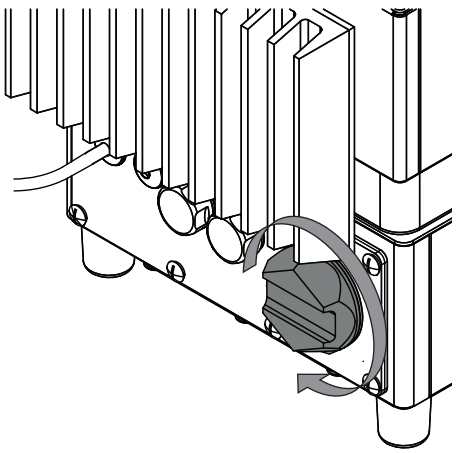
▶ Check the color of the window of the desiccant cartridge.
▶ If necessary change the desiccant cartridge. See Chapter 7.4 “Changing the desiccant cartridge”, page 99



▶ Put seal and cover lid on the instrument.

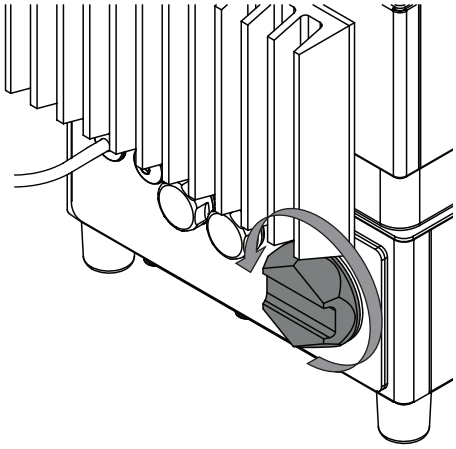


▶ Attach the cover lid.

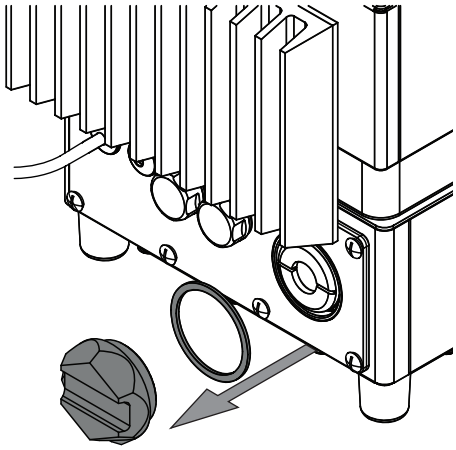


7.4 Changing the desiccant cartridge

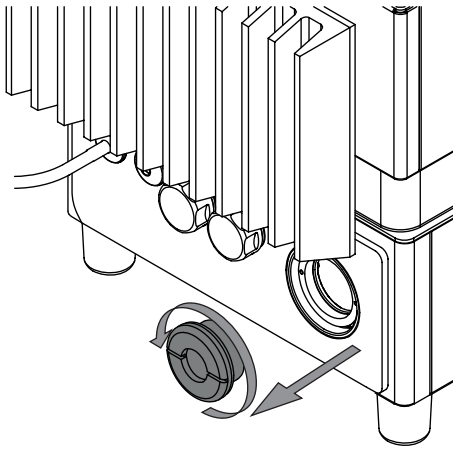
► Open the cover lid for the desiccant cartridge.



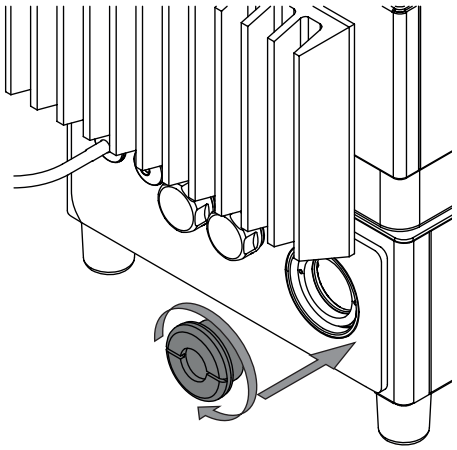
► Remove the cover lid and the seal.



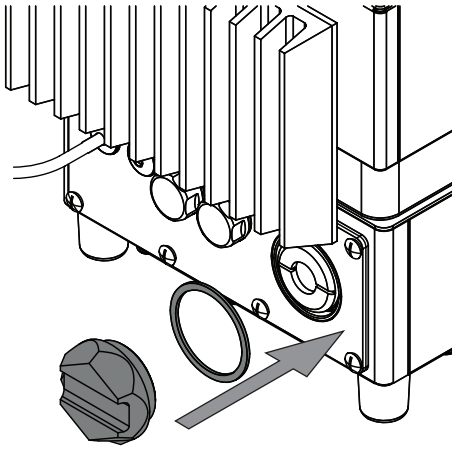
► Remove the used desiccant cartridge.



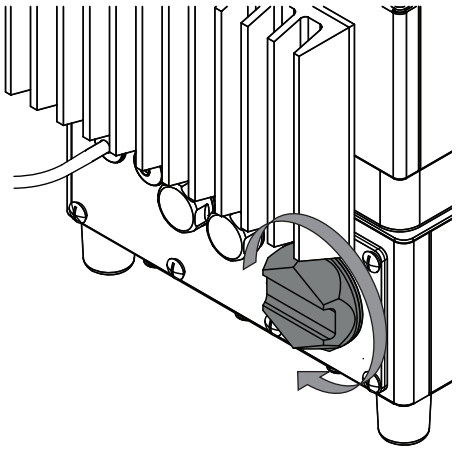
▶ Put a new desiccant cartridge in the instrument.



▶ Put seal and cover lid on the instrument.



▶ Attach the cover lid.



7.5 Carrying out system tests

7.5.1 Carrying out a Baseline Correction Vector test

Navigation path

➔  ➔ *[Test BCV]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the action *[Test BCV]* via the navigation path.

⇨ The display shows the dialog *Test BCV*.

- ▶ Select the name of the sample presentation you wish to test.
- ▶ Tap the button *[Start]*.
- ▶ Follow instructions on the display during the test.
- ▶ Confirm the instructions by tapping the *[OK]* button.
- ▶ Once the test is complete, the software records the results in a report.

⇨ The display shows Baseline Correction Tests is completed.

7.5.2 Carrying out a Comprehensive System Test

Navigation path	
➔ 	➔ *[Extended System Test]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

☑ External reference data for all standards are loaded.

☑ Performance Test Standards Kit is available.

- ▶ Navigate to the action *[Extended System Test]* via the navigation path.

⇨ The display shows the dialog *Extended System Test*.

- ▶ Select check box *[Comprehensive System Test]*
- ▶ Tap the button *[Start]*.
- ▶ Follow instructions on the display during the test.
- ▶ Confirm the instructions by tapping the *[OK]* button.
- ▶ Once the test is complete, the instrument records the results in a report.

⇨ The display shows Comprehensive System Tests is completed.

7.5.3 Carrying out an Advanced System Test

Navigation path	
➔ 	➔ *[Extended System Test]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

- ▶ Navigate to the action *[Extended System Test]* via the navigation path.

⇨ The display shows the dialog *Extended System Test*.

- ▶ Select check box *[Advanced System Test]*
- ▶ Tap the button *[Start]*.

⇨ The instrument starts the test.

- ▶ Once the test is complete, the instrument records the results in a report.

⇨ The display shows Advanced System Tests is completed.

7.6 Carrying out a data backup

NOTE

The location of the destination folder is fixed. See Chapter 10.2 “File explanations and folder locations”, page 108

Navigation path	
➔ 	➔ *[Backup NIRWise Data]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the action *[Backup NIRWise Data]* via the navigation path.

⇨ The display shows a dialog with values that can be saved.

▶ Select the values according to your needs.
▶ Tap the button *[Start]*.

⇨ The software creates a .zip file with the selected data.

▶ Save the data to an external data store.

7.7 Restoring a data backup

7.7.1 Via the Tools Menu

Navigation path		
➔		➔ *[Restore Backup]*

Precondition:
☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

▶ Navigate to the action *[Restore Backup]* menu via the navigation path.

⇨ The control panel shows a dialog box.

▶ Tap the button *[Yes]* if you want to continue with the restore process.

⇨ NIRWise closes and the *[Proximate Data Backup Restore]* dialog opens.

▶ Select a backup file by clicking on the *[Open Directory]* button.
▶ Choose the correct backup file
▶ Press *[Restore]*.
▶ Wait until the process is finished and open NIRWise.

7.7.2 Via the short cut

Precondition:
☑ The NIRWise application is closed.

▶ Navigate to the short cut *[BackupRestore]* on the desktop of the computer.
▶ Double-click to open.

⇨ The *[Proximate Data Backup Restore]* dialog opens.

▶ Select a backup file by clicking on the *[Open Directory]* button.
▶ Choose the correct backup file.
▶ Press *[Restore]*.
▶ Wait until the process is finished and open NIRWise.

7.8 Cleanup the database

NOTE

Before using the database cleanup, create a backup of the current database, see Chapter 7.6 “Carrying out a data backup”, page 101 and store it in a safe location.

NOTE

Samples that contain reference values will not be deleted by this operation.

NOTE

Operation of the instrument will be limited once the disk is full =90% of the available disk space if used.

- ▶ Use the feature *[Database Cleanup]* form the *[Tools View]* to clean up the old data.

NIRWise will show consecutive warnings when 90% (45000 - 48999 samples), 98% (49000 – 49899 samples), and 99.8% (49900 – 49999 samples) of the available disk space are used.
Once the database reaches 50000 samples, the following warning is displayed: The disk is full.
The system may become slow.

- ▶ Use the feature *[Database Cleanup]* from the *[Tools View]* to clean up the old data.

Navigation path

➔		➔ *[Database Cleanup]*

Precondition:

☑ The software is in administrator mode. See Chapter 6.5 “Log in administrator mode”, page 50

- ▶ Navigate to the action *[Database Cleanup]* menu via the navigation path.
- ▶ The display shows a dialog box with two options.

7.8.1 By percentage

- ▶ Select how much of the database in percent you would like to delete.
- ▶ Tap the button *[Delete]*.

⇨ The chosen amount of data is deleted from the database starting with the oldest entry.

7.8.2 By time period

- ▶ Choose the *[By period]* tab.

⇨ The display shows a dialog box with start and end date. The start date is automatically the date of the oldest entry in the database.

- ▶ Tap the button to adjust the timestamps.
- ▶ Tap the button *[Delete]*.

⇨ The data for the chosen time frame is deleted from the database.

7.9 Cleaning the display

The cleaning mode switches off the touch function of the touchscreen.

Navigation path

➔		➔ *[Cleaning Mode]*

- ▶ Navigate to the action *[Cleaning Mode]* via the navigation path.
- ⇨ The touch function of the display is locked.
- ⇨ The display shows a dialog box with a numeric input box.
- ▶ Wipe down the display with a damp cloth.
- ▶ Enter the displayed secure code.
- ▶ Tap the button *[OK]*.
- ⇨ The dialog box closes.
- ⇨ The touch function of the display is unlocked.

8 Help with faults

8.1 Troubleshooting

Problem	Possible cause	Action
The sample carrier does not rotate smoothly	Sample presentation area is dirty	▶ Wipe down the sample presentation area with mild detergent. ▶ Rinse the sample presentation area with clean water. ▶ Dry the sample presentation area with a lint free cloth.
Inaccurate Results	Direct solar radiation	▶ Make sure, that there is no direct solar radiation.
	Sample cup not correctly positioned in sample carrier	▶ Check that the sample cup sits correctly in the sample carrier.
	Sample cup not filled	▶ Fill the sample cup prior to measurement.
The display is black	The instrument is in standby	Tap the display.

8.2 Error messages

Error code	Error message	Solution
1000	Unspecified error.	▶ Restart the instrument. ▶ Contact BUCHI Customer Service.
1001	The communication with the instrument could not be established. The configured serial port is {0}.	▶ Restart the instrument. ▶ Contact BUCHI Customer Service.
1003	Instrument data is not available or is not valid. Check if serial number and instrument options are set.	▶ Restart the instrument. ▶ Contact BUCHI Customer Service.
1004	The '{0}' view dark reference max value ({1} cnt) is out of the expected range ({2}..{3} cnt).	▶ Contact BUCHI Customer Service.
1005	Lamp has failed	▶ Replace the lamp. See Chapter 7.2 “Changing the lamps”, page 90
1006	The internal reference '{0}' might not be moving properly.	▶ Contact BUCHI Customer Service.
1007	The current system temperature ({0} °C) is outside the expected range ({1}..{2} °C).	▶ Move the Instrument to a location where the ambient temperature meets specification.

Error code	Error message	Solution
1008	Adjusting the IWR level failed for view '{0}' (NirTargetSaturation = {1}, NirTargetExposureTime = {2} µs).	▶ Check operation of source lamp. ▶ Contact BUCHI Customer Service.
1009	The Peltier temperature ({0} °C) is out of the expected range ({1}..{2} °C).	▶ Contact BUCHI Customer Service.
1010	The device did not respond within given timeout of {0} ms for command '{1}'.	▶ Restart the instrument. ▶ Contact BUCHI Customer Service.
1011	The internal white reference signal is not valid. For more details see log files.	▶ Restart the instrument. ▶ Contact BUCHI Customer Service.
1500	Unknown error occurred while generating report '{0}': {1}	▶ Restart the instrument. ▶ Reattempt creating a report. ▶ Contact BUCHI Customer Service.
1501	Unknown error occurred while exporting report '{0}': {1}	▶ Restart the instrument. ▶ Reattempt exporting a report. ▶ Contact BUCHI Customer Service.
2500	Failed to create NIRWise data backup. Error: '{0}'.	▶ Restart the instrument. ▶ Reattempt data backup. ▶ Contact BUCHI Customer Service.
2502	A critical error occured during test run. Test run has been canceled. For more details see log file.	▶ Restart the instrument. ▶ Reattempt test. ▶ Contact BUCHI Customer Service.

9 Taking out of service and disposal

9.1 Taking out of service

- ▶ Switch off the instrument and disconnect it from the mains power supply.
- ▶ Remove all cables from the device.

9.2 Disposal

The operator is responsible for proper disposal of the instrument.

- ▶ When disposing the equipment observe the local regulations and statutory requirements regarding waste disposal.
- ▶ When disposing, observe the disposal regulations of the materials used. For the used materials see Chapter 3.7 “Technical data”, page 18 or the material labeling on the parts.

9.3 Returning the instrument

Before returning the instrument, contact the BÜCHI Labortechnik AG Service Department.
https://www.buchi.com/support/contact

10 Appendix

10.1 Measurement results

Measurement results are displayed after a measurement in the *Start* menu.

Measurement result	Explanation
	• The tested sample is in the specifications.
	• The calibration model is missing.
	• Mahalanobis outlier
	• The predicted value is outside calibration range.
	• The predicted value is outside of the set limit.
	• The predicted value is outside the tolerance.

10.2 File explanations and folder locations

NOTE

Hidden folders

By default settings the following folder locations are hidden.

- ▶ Start the software *[Windows Explorer]*.
- ▶ Navigate to folder options via the following navigation path: View ➔ Folder Options ➔ View
- ▶ Activate the function *[Show hidden files, folders and drives]*.

Explanation	Type	Folder
Calibration files	.cal	C:\ProgramData\BUCHI\NIRWise\Calibrations
Data files for calibration	.tsv	C:\ProgramData\BUCHI\NIRWise\Calibrations\Data
Device specific data files for calibration	.tsv	C:\ProgramData\BUCHI\NIRWise\Calibrations\Local
Manually exported files with different content	diverse	C:\ProgramData\BUCHI\NIRWise\Export\Data
LIMS system files	.xml .csv	C:\ProgramData\BUCHI\NIRWise\Export\LIMS
License request file	.xml	C:\ProgramData\BUCHI\NIRWise\Export\LicenseRequests

Explanation	Type	Folder
External References	.brf	C:\ProgramData\BUCHI\NIRWise\References
Measurement Reports	.xls / .pdf	C:\ProgramData\BUCHI\NIRWise\Reports
System Test Reports	.pdf	C:\ProgramData\BUCHI\NIRWise\Reports\SystemTests
Measurement report templates	.xls	C:\ProgramData\BUCHI\NIRWise\Templates
Licenses	.xml	C:\ProgramData\BUCHI\LicenseManager\License
History files for NIRWise Plus	diverse	C:\ProgramData\BUCHI\NIRWise\Calibrations\Local\History
Report from latest calibration	.rtf	C:\ProgramData\BUCHI\NIRWise\Calibrations
NIRWise Plus project file, containing all .tsv files and the settings for the calibration	.prj	C:\ProgramData\BUCHI\NIRWise\Calibrations

10.3 Rules entering a formula

Naming conventions for variables

- ACII characters only
- Use Underlines between words
- No numbers at the beginning of a name
- No C# keywords
- No math functions

Calculation conventions

		Symbol
Operators	Addition	+
	Subtraction	-
	Multiplication	*
	Division	/

		Symbol
Math functions	Logarithm of x	Log(x)
	Logarithm of x to a specified base	Log(x,base)
	Log base 10 of x	Log10(x)
	X raised to the specified power	Pow(x,power)
	The square root of x	Sqrt(x)
	Sine of x	Sin(x)
	Cosine of x	Cos(x)
	Absolute value of a double-precision floating-point number x	Abs(x)
	Rounds double-precision floating-point value x to the nearest integer value	Round(x)
	Rounds double-precision floating-point value x to a specified number of decimal places	Round(x,decimal)

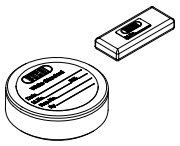
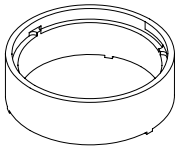
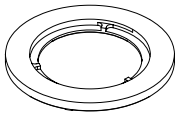
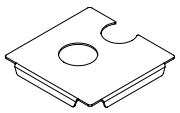
10.4 Spare parts and accessories

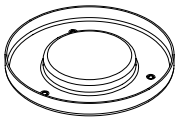
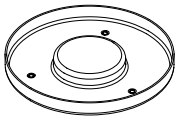
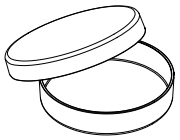
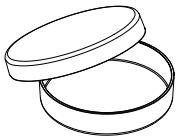
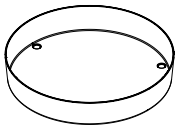
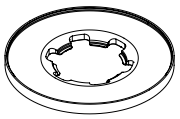
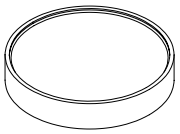
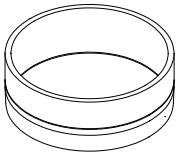
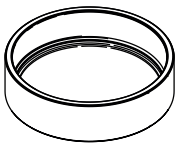
Use only genuine BUCHI consumables and spare parts in order to ensure correct, safe and reliable operation of the system.

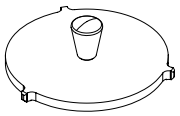
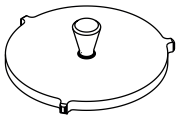
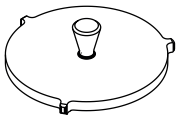
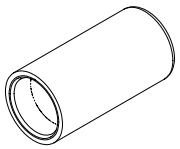
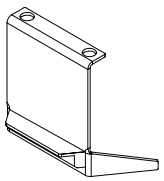
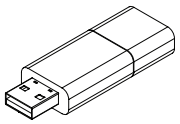
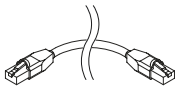
NOTE

Any modifications of spare parts or assemblies are only allowed with the prior written permission of BUCHI.

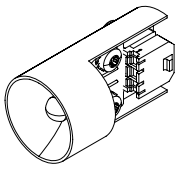
10.4.1 Accessories

	Order no.	Image
External White Reference	11067547	
White reference spacer for down view	11067378	
White reference spacer for up view	11067377	
White reference locating plate	11067391	

	Order no.	Image
PET Large Sample Cup	11067692	
FDA food approved large sample cup	11068015	
Glass petri dishes 10 pcs. (up view) Not suitable for use with Transflectance Cover	11072073	
Plastic petri dishes 240 pcs. (down view)	11066381	
Stainless steel petri-dish For down view measurements only	11074314	
Large sample carrier	11067691	
Carrier for small sample cup (down view)	11065472	
High Performance Sample Cup	11067399	
Robust cup	11055058	

	Order no.	Image
Transflectance cover 0.3 mm Not suitable for use with robust cup	041636	
Transflectance cover 2.0 mm For measurement of crude palm oil. Not suitable for use with robust cup.	11067919	
Transflectance cover for robust cup	11055998	
Protection cover USB-WiFi stick	11066582	
Light shield (down view)	11067281	
Performance test standards kit (7 pcs.)	11067545	
Recertification of performance test standards kit	11070905	
NIRWise PLUS Chemometrics suite	11068025	
Set Network cable RJ45 5m	11068780	

10.4.2 Spare parts

	Order no.	Image
Spare lamp	11065441	
Replacement Window HPSC	046246	

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