



EASYCAL™ 5

Kalibrier-Software | Calibration software

Imprint

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The original operating manual is in German. Other languages are a translation of the original operating manual.

Subject to technical changes, errors, and misprints.

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1 Instructions for use

1.1 Software version described

This user manual describes EASYCAL™ 5 up to software version:

V.5.0.17.218

1.2 Who are these instructions meant for?

Readers implement specific test processes in the EASYCAL™ 5 software. The readers have administrator authorizations and can create work instructions for the testing personnel after the testing process has been implemented.

1.3 Format

Format	Meaning	Format	Meaning
1. Task	Indicates a task.	✓	Indicates a condition.
1., 2., 3, ...	Indicates the individual steps of a task.	→	Indicates a result.

1.4 Glossary

Glossary entries are indicated by chevrons (>> <<).

In the user manual integrated in the software: When you move the cursor over the entry, this is shown as a tool tip. Clicking on the entry takes you to the glossary.

In PDF user manuals: Clicking on the entry takes you to the glossary.

Example:

[>>Error limit<<](#)

1.5 Using the integrated help menu

EASYCAL™ 5 has an integrated help menu. You open this by clicking on the button . Use the integrated help menu as follows:

Navigating backward

- a. Right-click in the help menu and select “Back”.

Navigating forward

- a. Right-click in the help menu and select “Forward”.

Printing the help menu

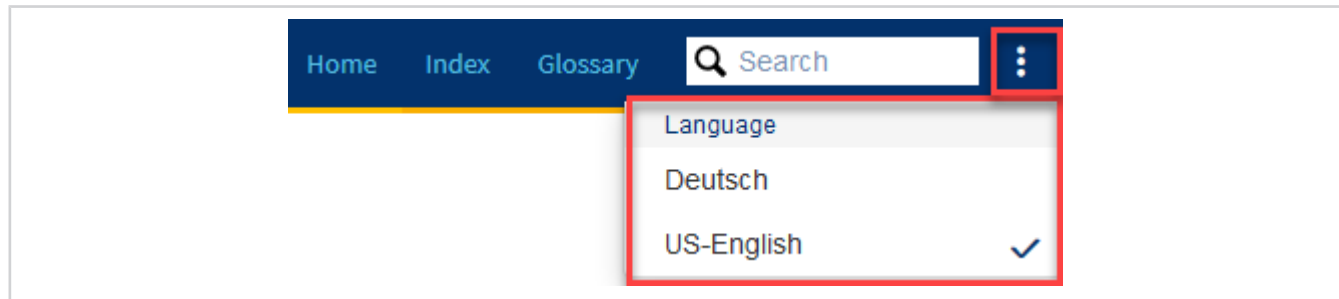
- a. Right-click in the help menu and select “Print...”.

Paths to menu items

The paths to menu items are shown as follows:

>> Main menu > submenu > submenu

Changing the language

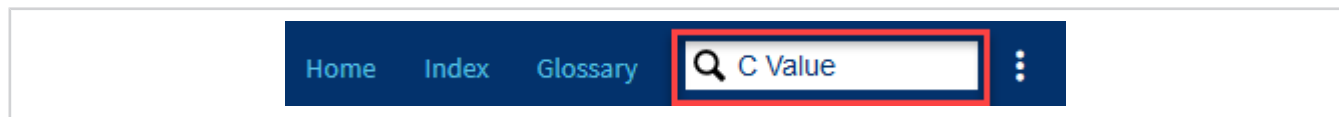


a. Click on item menu.

b. Click on the desired language.

➔ The display is changed to the desired language.

Searching content



a. Enter the search word.

➔ When entering the word “value,” the search function finds both “C-value” as well as “values,” “evaluation,” etc.

Keyword Index

Use the keyword index to jump directly to the content via keywords.

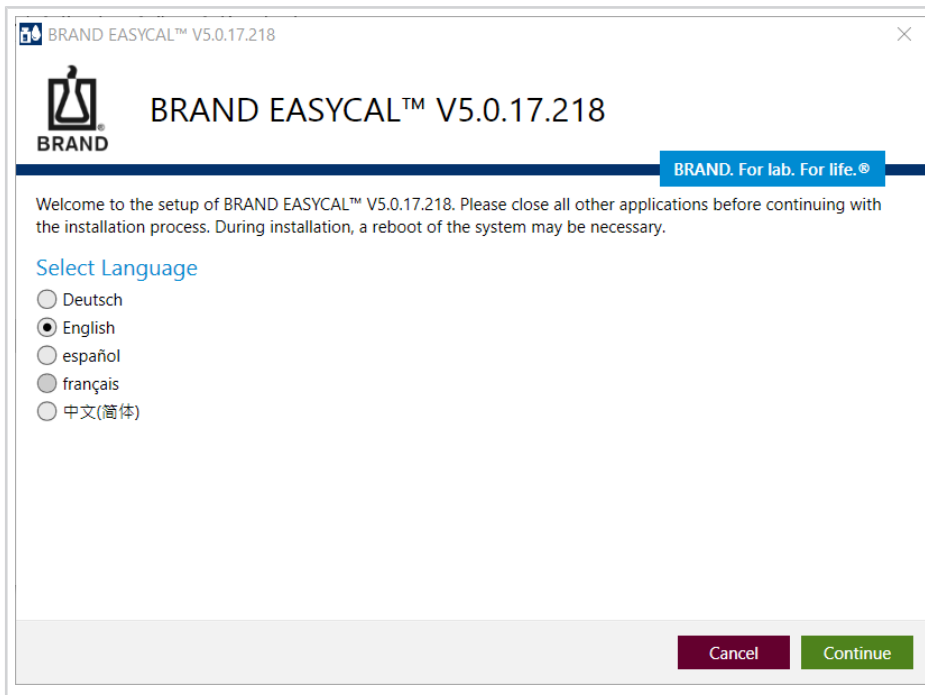
Glossary

Use the glossary to find term definitions.

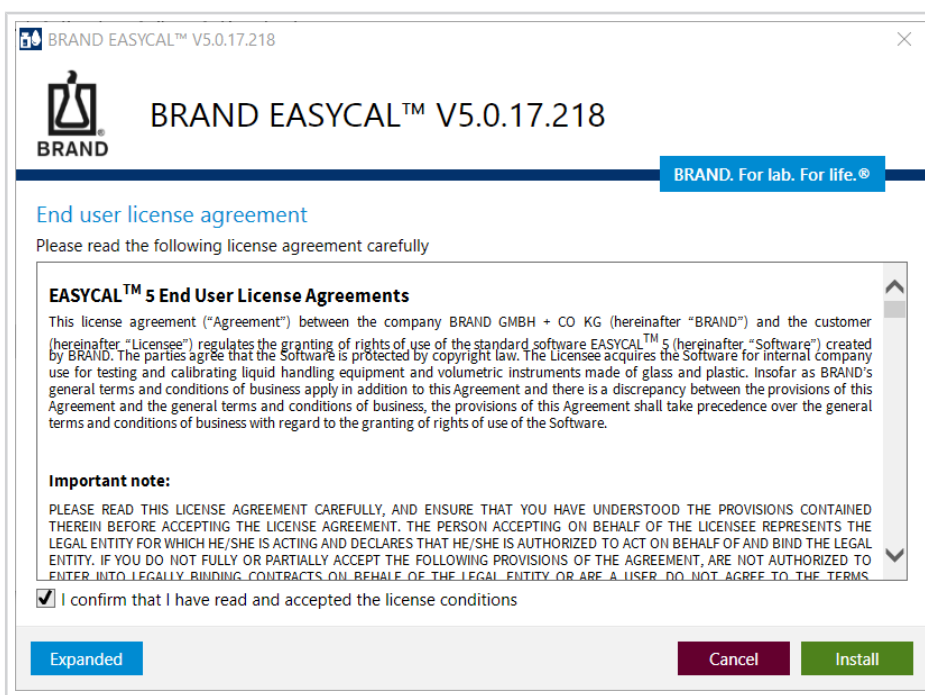
2 Installation

2.1 Installation procedure

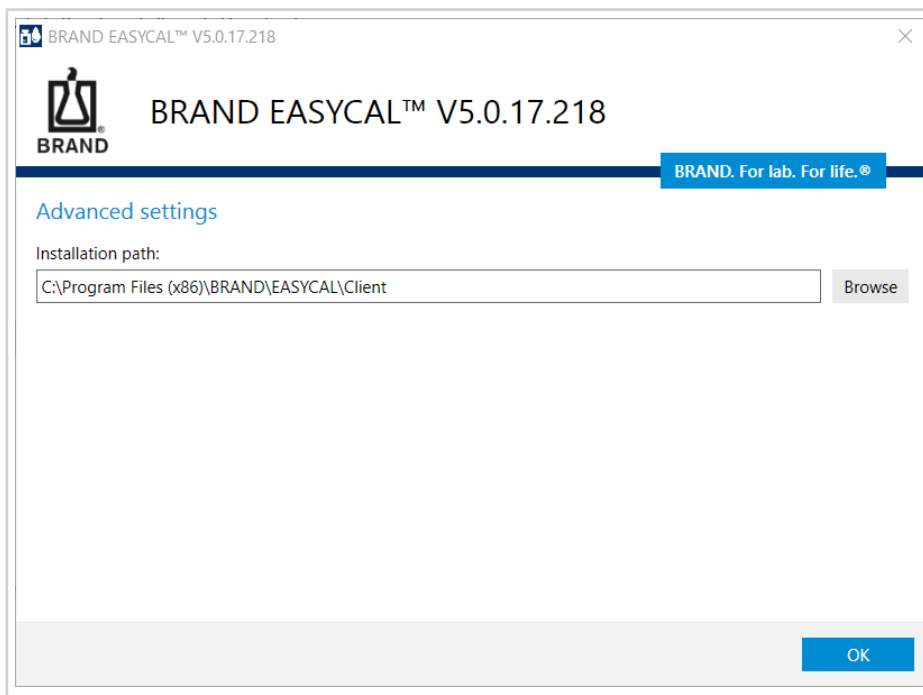
- a. Download the installation file:
<https://www.brand.de/service-support/software>
- b. Select the installation language. You can change the language of the software interface at a later point in time.



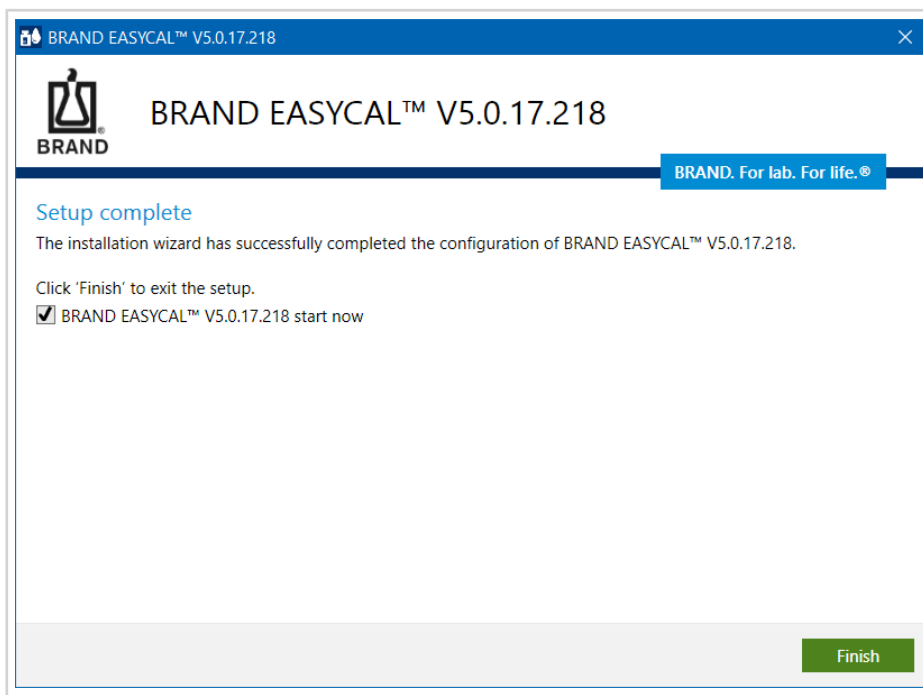
- c. Confirm the license agreement.



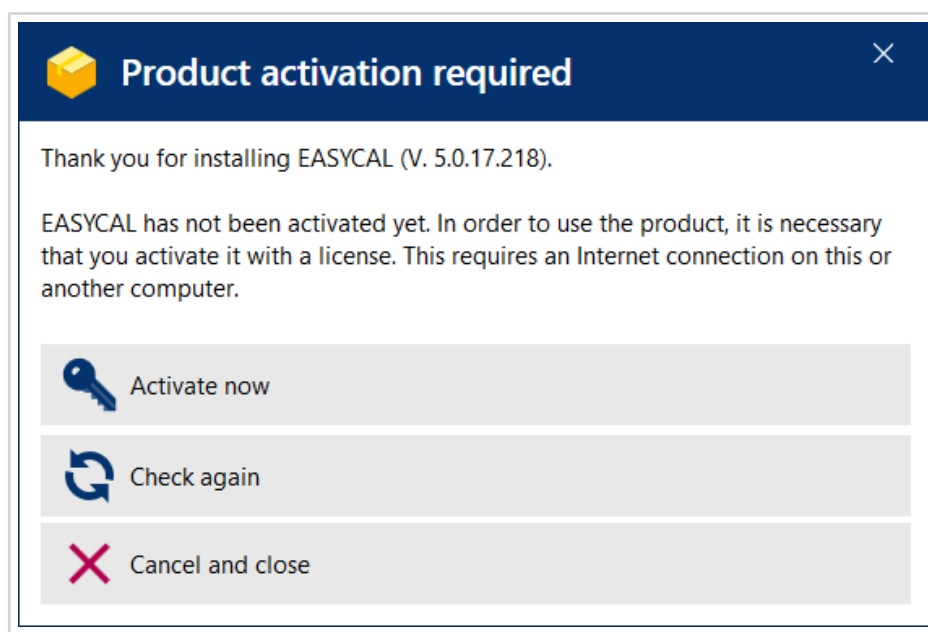
- d. Select the installation path via Advanced settings.



- e. Installation is carried out. Conclude the installation.



- f. Activate EASYCAL 5. To do this, follow the instructions on the opened web page <https://license.brand.de>.



2.2 Information regarding your Software

Compatibility

Compatibility	Notes
EASYCAL™ 3 EASYCAL™ 4	Because EASYCAL™ 5 is a new product, it is not possible to data from older versions.
Data transfer from the demo version	Standalone license: Data from the demo version can be reused at this workstation. Server license: Data from the demo version <u>cannot</u> be used for productive work with the server license.
Merging installations	EASYCAL™ 5 standalone installations or server installations cannot be merged into one installation.

System requirements

	Standalone	Server
Operating system	PC operating system from Windows 10	Operating system from Windows 10 or Windows Server 2016
Database	Local storage	Local storage If a server operating system is used, the databases can also be stored locally on this operating system without having to use an SQL server. Alternatively: SQL Server from Microsoft SQL Server 2016
Working memory	16 GB RAM	16 GB RAM

License model

Licenses	Description
Standalone installation	One standalone license per computer is required. Multiple users can log on to this computer.
Client-server systems	Consisting of at least one client and the server. The server manages the client licenses and allocates them according to availability (as floating licenses).

System requirements EASYCAL™ 5 standalone

	Standalone
Operating system	PC operating system from Windows 10
Database	Local storage
Working memory	16 GB RAM

System requirements EASYCAL™ 5 as Server

	System requirements
CPU:	Processor with min. 1 GHz clock rate
Working memory	min. 16 GB RAM
Network	Local network infrastructure
Operating System	from version Windows 10, alternatively also Windows Server 2016
Data base	Local storage. If a server operating system is used, the databases can also be stored locally on this operating system without having to use an SQL server. Alternative: SQL Server from version Microsoft SQL Server 2016
Internet	A permanent broadband internet connection is highly recommended

2.3 Transfer licenses (use on another computer)

NOTICE

Transfer the license

Transferring the demo license is not possible.

Client licensing is tied to the hardware of the particular computer on which EASYCAL™ 5 was installed. If this computer is replaced or if EASYCAL™ 5 is to be used on another computer, you can “transfer” the license. When transferring licenses, they are first deactivated and can then be reactivated on another computer.

- a. Export all data via the “Import/export center”; see Data import and export, p. 124.
- b. Go to <http://license.brand.de>.
- c. Enter the ticket number you received on your order confirmation.

- d.** Click “Deactivate/transfer licenses” and follow the instructions shown.
- e.** Reinstall EASYCAL™ 5 .
- f.** Re-activate the license.
- g.** Import all data via the “Import/expert center”; see Data import and export, p. 124.

2.4 End user license agreement

See also

→ EULA (p. 12)

EASYCAL™ 5 End User License Agreements

This license agreement (“Agreement”) between the company BRAND GMBH + CO KG (hereinafter “BRAND”) and the customer (hereinafter “Licensee”) regulates the granting of rights to use the standard software EASYCAL™ 5 (hereinafter “Software”) created by BRAND. The parties agree that the Software is protected by copyright law. The Licensee acquires the Software for internal company use for testing and calibrating liquid handling equipment and volumetric instruments made of glass and plastic. Insofar as BRAND’s general terms and conditions of business apply in addition to this Agreement and there is a discrepancy between the provisions of this Agreement and the general terms and conditions of business, the provisions of this Agreement shall take precedence over the general terms and conditions of business with regard to the granting of rights to use the Software.

Important note:

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1. Subject matter of the Agreement

- 1.1. The subject matter of this Agreement is the provision of Software in object code, the granting of rights to use the Software and the maintenance of the Software.
- 1.2. BRAND supplies the Software to the Licensee by way of download and provides the user documentation in electronic format. The Software is protected by means of a license key, which the Licensee receives via e-mail. The Licensee receives the license key exclusively for using the Software in accordance with this Agreement.
- 1.3. Installation and configuration services are not subject matter of the Agreement.
- 1.4. The Software contains the open source software programs listed under Section 11th. The open source license agreements for these open source software programs apply independently from the regulations of this License Agreement, taking priority over it.

2. Intended purpose of use

- 2.1. To fulfill the intended purpose of use of the Software, BRAND offers different license types and models, which are described below.
- 2.2. BRAND offers the following license types for the Software:

2.2.1 Standalone application / standalone license

The standalone license authorizes the Licensee to execute and use the Software on a single end device in accordance with the conditions of this Agreement. In this case, the Software may be used by an unlimited number of persons on the assigned end device, provided it is ensured that the Software is only used on one operating computer by one device at a time. Virtualization of the assigned device or using other mechanisms to allow use by multiple operating computers is not permitted. Using the Software through a remote connection or automated use by compile servers, build servers or similar server types is not permitted.

2.2.2 Server application

2.2.2.1 Server license

The server license authorizes the Licensee to execute and use the Software on an assigned server in accordance with the conditions of this Agreement. A server license must be used in conjunction with at least one client license, which is purchased separately.

2.2.2.2 Client license

The client license authorizes the Licensee to execute and use the Software on an unlimited number of devices within a server system in accordance with the conditions of this Agreement and the number of purchased client licenses. A client license must be used in conjunction with a server license, which is purchased separately.

2.3. BRAND offers the following license models for the Software:

2.3.1 Demo license

Subject to compliance with the terms and conditions of this Agreement, the demo license authorizes the Licensee to use the Software free of charge over a defined period (hereinafter “Test Period”) for the purposes of evaluating or testing the Software with respect to its suitability for the Licensee. Upon expiration of the Test Period, the license automatically becomes invalid and further use of the Software is prohibited.

2.3.2 Permanent license

A permanent license refers to a specific major version of the Software as well as the updates to this major version provided by BRAND and grants the right to use the Software for an unlimited period of time.

3. Granting a license

- 3.1. BRAND grants the Licensee the geographically unrestricted, simple (non-exclusive), non-transferable right to use, duplicate, edit and decompile the Software in accordance with this Agreement (see Section 3.2 to Section 3.4) and in accordance with the purchased license type and model. The permitted use comprises the installation of the Software as well as the intended use by the Licensee. The license is granted under the condition precedent that the license fee has been paid in full by the Licensee or a license fee is not required (demo license).
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- 3.3. The right to edit the Software is limited to maintaining or restoring the agreed functionality of the Software.
- 3.4. The right to decompile the Software can only be exercised when prescribed by law if decompilation is necessary to achieve interoperability with another software program and insofar as BRAND has not provided the Licensee with the information required for decompilation within a reasonable period upon request.
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- 3.6. In case of a violation of the terms of use of this Agreement, BRAND shall reserve all rights to prohibit or stop unlicensed use of the Software, including in particular the right to injunctions and compensation for damage. Unauthorized access may carry criminal law consequences in accordance with relevant laws. The provisions of this section in relation to duplication and publication shall also apply to the user handbooks and other documents related to the Software provided by BRAND.

4. Software maintenance

- 4.1. BRAND further develops the Software to ensure it is of high quality and up to date, adapts it to changing requirements, fixes errors to maintain the quality promised in this Agreement and provides the Licensee with any resulting software patches, bug fixes and updates in accordance with section 4.2. Software maintenance is provided in accordance with the respective state of the art and in such a way that it is oriented towards the interests of all software users. The services are provided only with respect to the last supplied Software version. BRAND can provide patches, bug fixes and updates in accordance with the regulations for the initial provision of the Software. In the event of changes to the state of the art, BRAND reserves the right to change delivery.
- 4.2. Software maintenance includes the following services (hereinafter “Software Maintenance”):
 - Provision of patches and bug fixes to correct program errors (see Section 7.2 Sentence 4);
 - Provision of service packs;
 - Provision of updates in a minor release (e.g. from Version 1.0 to Version 1.1);
 - Provision of updated software documentation in electronic format.

The installation of software, patches, service packs and updates as well as configurations, parameterizations or software adjustments and backups are not included in Software Maintenance.

5. Fees

- 5.1. The license fees for a permanent license are due for payment upon transmission of the license key.
- 5.2. Subject to an express provision to the contrary, all fees are understood as net fees, i.e. plus statutory sales tax. BRAND shall separately disclose the tax rate and the amount of sale tax on the invoice.

6. Copyright law

EASYCAL™ 5 is a software product developed and produced by BRAND, while the open source software mentioned in Section 11 is a third-party software. The Software is subject to international and national copyright law protection. BRAND holds and retains all rights to, ownership in, and all claims relating to the Software, including all copyrights, patents, operating and company secrets, brands, and other intellectual property.

With this License Agreement, the Licensee does not acquire any ownership of the Software; the Licensee only acquires the Software rights listed in Section 3rd.

7. Warranty

- 7.1. The parties agree that software cannot be created without technical limitations. BRAND assumes the warranty only for the software components created by or commissioned by BRAND and declares in this respect that for the warranty period the Software is essentially capable of performing the functions described in the documentation (hereinafter the "Agreed Functions"). In the case of updates, the warranty claims are limited to new features compared to the previous software version. Minor deviations from the agreed functions shall not be grounds for a warranty claim. Program malfunctions caused by an inappropriate installation of the Software not conforming to the operating manual, accidents, misuse or improper application shall be excepted from the warranty. In particular, no warranty shall be granted that the Software provided is compatible with the data processing environment the Licensee is using.
- 7.2. Insofar as the Software is found to contain a defect, BRAND shall guarantee the opportunity to provide supplementary performance within an appropriate time period. BRAND shall be entitled to a right to select from among types of supplementary performance. Should the reasonable period expire without result or should a reasonable number of attempts at supplementary performance fail, the Licensee may, under the statutory requirements, at his/her discretion withdraw from the Agreement, reduce the price and claim damages or reimbursement of expenses. If the defect does not adversely affect the functionality or only to a negligible degree, BRAND is entitled under exclusion of further warranty rights to repair the defect by supplying a new minor version of the Software or a patch, bug fix or update within the scope of its planning for further development of the Software.
- 7.3. The period of limitation for warranty claims is 12 months and begins with delivery of the license key. In the case of delivery of patches, bug fixes and updates, the period begins with provision of the patch, bug fix and update.

8. Obligations of the Licensee

- 8.1. Establishing a functional software environment for the Software shall be the sole responsibility of the Licensee. The same applies to regular backups.
- 8.2. The Licensee undertakes to install the Software within ten (10) business days after receipt of the license key and to inspect basic program functions for functionality. Defects determined during this inspection or which may be determined, must be disclosed to BRAND by email at easycal@brand.de within an additional ten (10) business days. Claims for defects not determinable during the framework of the regular inspection must be announced to BRAND by email at easycal@brand.de within 10 business days after their discovery. In case of a violation of this inspection and notice obligation, the delivered Software shall be deemed accepted with regards to the defect in question.
- 8.3. The Licensee shall be responsible for securing the data in accordance with the state of the art and normal data processing operations and shall take reasonable precautions in the event that the Software used by him/her does not work properly in whole or in part, e.g. by performing regular backups, diagnosing faults and/or regularly checking the results. Disadvantages and additional costs due to a violation of these obligations shall be borne by the Licensee.

9. Confidentiality

- 9.1. The parties undertake to treat all sensitive information of which they become aware during the performance of this contract as confidential and to use it only for contractually agreed purposes. Sensitive information within the meaning of this provision includes information, documents, specifications and data that are indicated as such or are to be regarded as sensitive by their nature. If sensitive information as defined above is requested by a public body from one party, the other party shall be informed immediately and even before the information is released to the public body.
- 9.2. The aforementioned obligations shall not be affected by any termination of this Agreement. Upon termination of this Agreement, both parties undertake to return or destroy sensitive information at their discretion, provided that this has not been properly used.

10. Liability

10.1. BRAND shall be liable under this Agreement only in accordance with the following provisions:

- without limitation for damages caused intentionally or by gross negligence by BRAND, its legal representatives or executive employees as well as for damages caused intentionally by other vicarious agents; for gross negligence of other vicarious agents, the liability shall be determined according to the regulations for minor negligence;
- without limitation for damages resulting from injury to life, limb or health which have been caused by BRAND, its legal representatives or vicarious agents;
- for damages due to missing warranted features up to an amount which was covered by the purpose of the warranty and which was recognizable for BRAND at the time the warranty was given;
- for product liability damages according to the provisions of the Product Liability Act, and
- for damages resulting from the violation of cardinal obligations by BRAND, its legal representatives or vicarious agents. Cardinal obligations are essential obligations that form the basis of the Agreement, were vital for conclusion of the Agreement and the fulfillment of which the Licensee may rely on. If BRAND fails to meet these cardinal obligations due to minor negligence, liability on the part of BRAND shall be limited to the amount which was foreseeable for BRAND at the time of the respective performance.

10.2. BRAND shall be liable for the due diligence customary in the industry. A determination of whether BRAND is at fault in a matter must take into account the fact that software cannot be manufactured without technical limitations.

10.3. BRAND shall not be liable for the loss of data and/or programs to the extent to which such damages result from the failure on the part of the Licensee to complete data backups and thereby ensure that lost data can be restored with a reasonable amount of effort.

10.4. Any further liability of BRAND is excluded on these grounds.

11. Additional applicable regulations

The Software includes open source software programs. The open source license agreements for these open source software programs also apply, taking priority over this License Agreement. You can find the specific open source software programs and valid license agreements in the Software's version information.

12. Final provisions

12.1. The assignment of claims shall only be permitted following prior written approval from the other respective contractual party. This approval may not be refused unfairly. This shall not affect the regulations of Sec. 354 a HGB (Commercial Code).

12.2. A right of retention may only be asserted due to counterclaims from the respective contractual relationship.

12.3. The contractual parties may only make offsets with claims that have been legally determined or that are uncontested.

12.4. There shall be no ancillary agreements to this Agreement. Amendments and supplements to this Agreement shall require the written form. This written form requirement may only be waived following written agreement. The written form requirement shall be considered satisfied if the notices, changes or amendments are sent by email to and received by the email address used in the transmission of the license keys.

12.5. The law of the Federal Republic of Germany shall apply without restriction, under exclusion of the conflict-of-law rules of international private law, as well as the United Nations Convention on Contracts for the International Sale of Goods (CISG).

12.6. The place of fulfillment is Wertheim. The exclusive place of jurisdiction for all legal disputes arising from or in conjunction with this Agreement is Frankfurt am Main. BRAND shall, however, also be entitled to lodge complaints at the Licensee's general place of jurisdiction.

12.7. If individual provisions of this Agreement shall be or become invalid in whole or in part, this shall not affect the validity of the remaining provisions. If the invalid provisions is replaced by a valid one, the Parties hereby already agree to enact a provision coming as close as possible to the economic purpose of the invalid one. The same shall be true of any contractual gaps.

BRAND GMBH + CO KG - Otto-Schott-Str. 25 - 97877 Wertheim - Germany - Tel.: +49 9342 808-0 - Fax: +49 9342 808-91505 - E-Mail: easygal@brand.de - Internet: www.brand.de

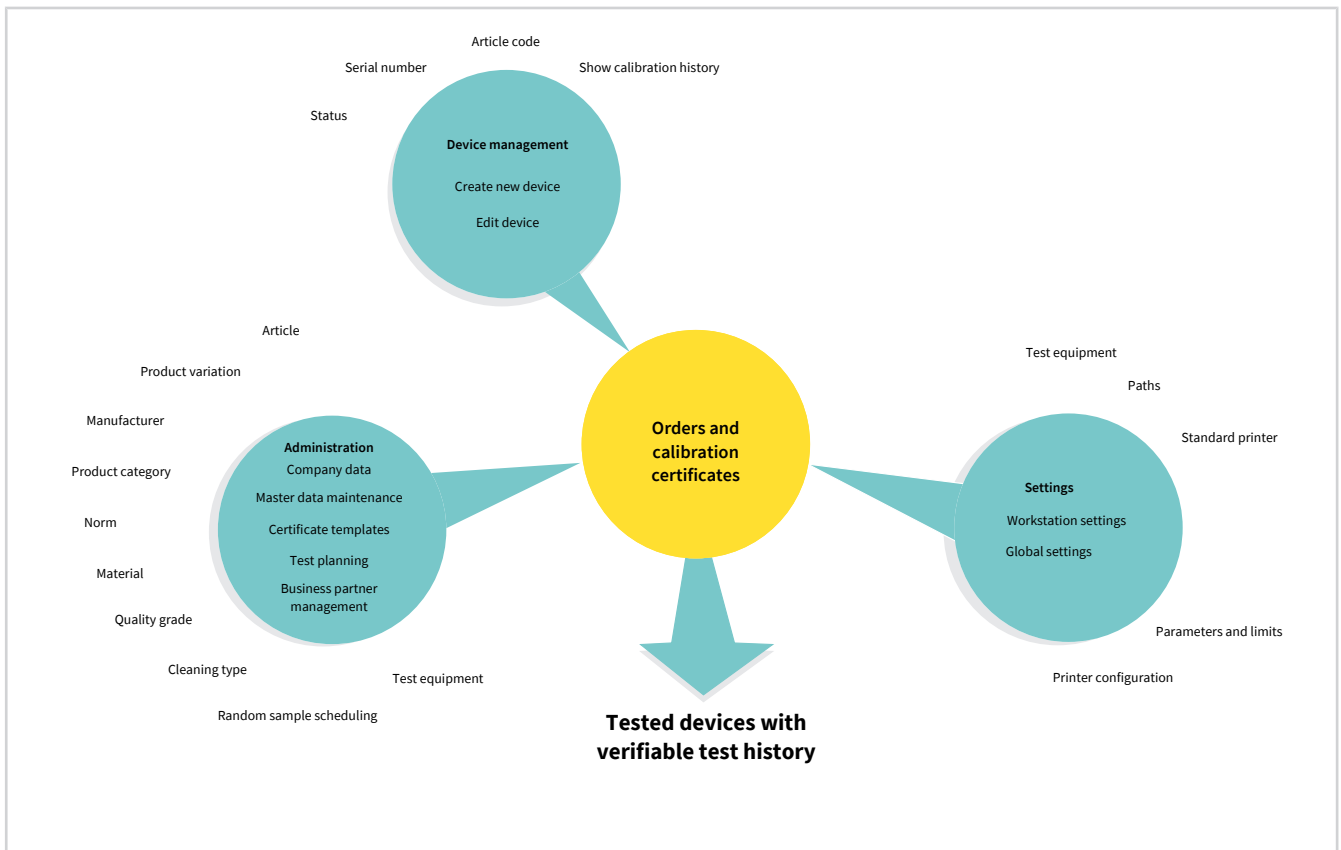
Version 1.2 – 05/15/2022

2.5 Convert demo license to standalone license

- a.** Go to <https://license.brand.de>.
- b.** Enter the license code of the stand-alone license; see Client (standalone) or server installation
↳ You will find this code in your order documents.
- c.** Follow the instructions shown at <https://license.brand.de>.

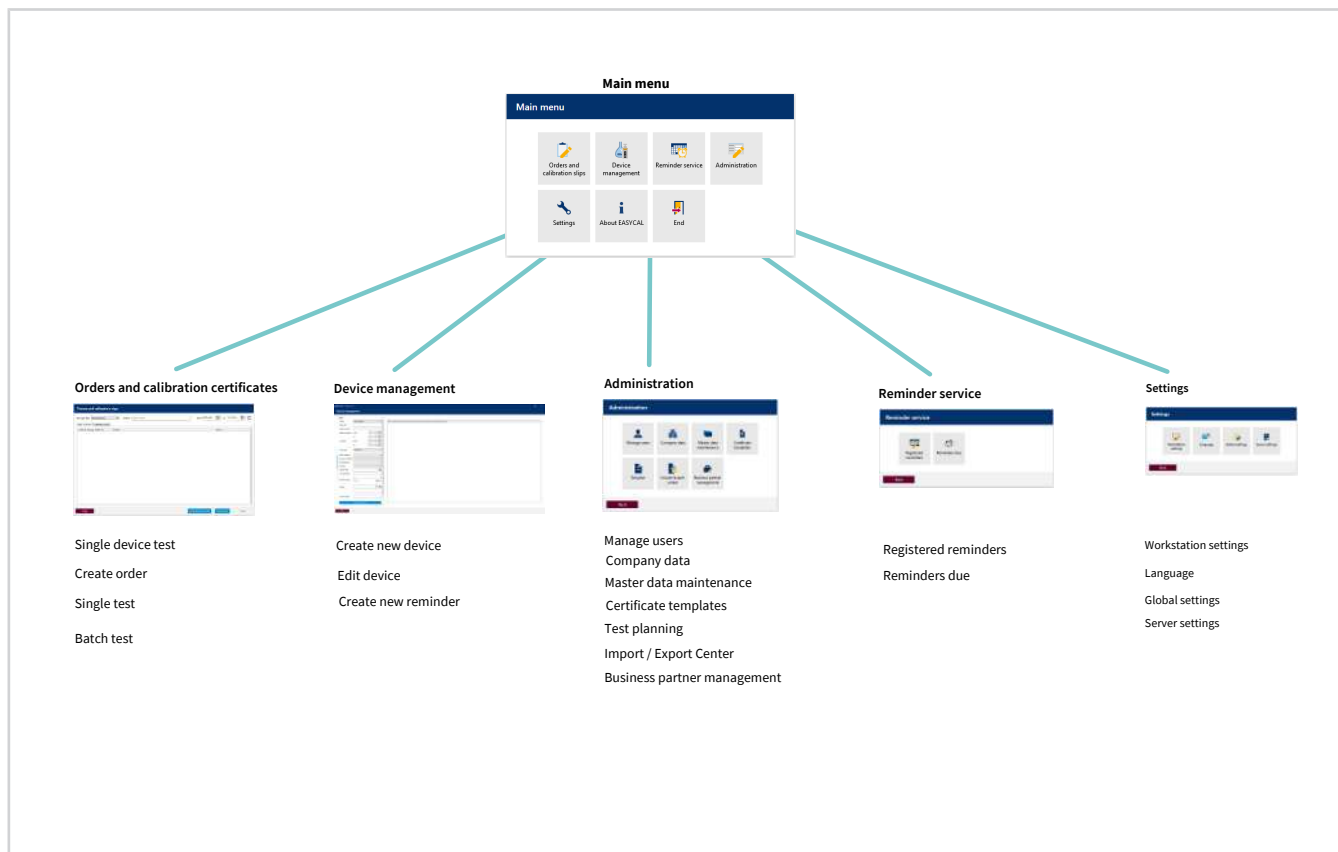
3 Function and application

EASYCAL™ 5 is a software for managing and testing liquid handling devices and volumetric instruments. In order to perform device tests, the software obtains information from various areas. The device test thus requires that these data are available; otherwise, the device test cannot be started. Relevant for this are device data, master data, test plans, and certificate templates. The following illustration shows the rough information flows within the software.



Menu distribution

The following figure shows the main menu distribution. The main menu takes you to the operational level of the software. All data that you create or change in Device management, Administration and Settings affect order processing in Orders and calibration certificates. A recurring principle of the software are menu items that have the text “Assignment” in their name. In this menu you assign one or more data sets to each other (e.g., in the “Print template assignments” menu, you assign a master layout to a certificate template).



User

In User Management, you create new users and user groups using an initial default user, see User, p. 60.

NOTICE

Change default user

After completing the configuration work, change the default user (user: admin | password: start) to avoid unauthorized access to the system!

Data creation

The following description assumes that no further data has been created in EASYCAL™ 5 .

1. Create test equipment

Create the existing or necessary test equipment that is available at the respective workstation and is required for device tests; see Master data maintenance, p. 69 and Test equipment, p. 87.

You have thus defined the workstation where a test can take place.

2. Define basic settings

Define relevant basic settings of the device test. These are:

- Workstation settings; see Workstation settings, p. 126
- Global settings; see Global settings, p. 130

The software thus knows which ambient conditions apply at the workstation.

3. Create master data

You create the underlying data via the master data; e.g., an article. An article can describe several identical devices, see Master data maintenance, p. 69 and Articles, p. 70.

You can also conduct a device test without having created the corresponding article in the master data. If you create an order, the device is created with the serial number entered there at the latest when the calibration certificate is created and saved. After this the device can also be found in device management and re-used for future tests.

4. Create test plan

Create a test plan. A test plan contains all the criteria to be tested. You also assign a test type to this test plan. This depicts something like a predefined test procedure; see Test planning, p. 112 and Test plan overview, p. 112 as well as Test types (user authorizations), p. 60.

5. Create certificate

Before you can start the test, you still need the test certificate with which you can verify the test. You create this in the certificate templates menu; see Certificate templates, p. 97.

6. Performing a test

Via the “Orders and calibration certificate” menu, you now start testing the device; see Orders and calibration certificates, p. 42.

4 Tutorial

This example shows the test procedure – from creating an order, to testing, to printing a certificate. The section refers to master data available in the demo license and serves as an initial introduction to the program.

Logging in

When the EASYCAL™ 5 program is started, a login dialog appears. The user logs in here with their user name and password.

Creating an order

- a. Navigate from the Main menu to Orders and calibration certificates.

Orders and calibration slips

Test type filter: Not specified Search: from 1/11/2022 to 1/26/2022

Order overview **Calibration slips**

Order I	Test typ	Order number	Article	Status
2	SPEC	2022-01-25-15-2	EC-12484 - Burette BLAUBRAND®, straight stopcock, Schilling, class AS; 0.02 - 10 ml	Created
1	STD	123456	EC-704106 - Transferpette® Fixed volume; 5 µl	Finished

[Back](#) [Individual device test](#) [Create order](#) [Open](#)

- b. Click on Create order.

Select order type

Batch test

Use when testing random samples (of any size). Batch certificates are issued.

Individual test

Use for 100% test or test of a single device.

Each device receives its own certificate.

Back

c. Click on Single test.

Individual test - Create order

Test type ▼

Order no.

Article code 🔍

Article

Volume ranges +

Test plan 🔍

Number of devices 1 ↕

Order no.

OC-Number

☐ Prepare calibration slips

☐ Pre- and post-test required

Notes on the order

Customer 🔍

End customer 🔍

Back
Start test

d. In Test type select STD – standard values.

NOTICE

Test types

Test types organize your test procedures. You cannot create any additional test types; instead, you must select from the test types already provided. Test plans and the certificate documents are linked to the test type. In User Management, the respective authorization must be given to the user for the corresponding test type. Because you are currently logged in as Global Admin, you have access to all data.

Individual test - Create order

Test type: **STD – standard values** Number of devices: **1** Customer:

Order no.: Order no.:

Article code:  OC-Number:

Article:

☐ Prepare calibration slips

☐ Pre- and post-test required

Notes on the order:

End customer:

Volume ranges: 

Test plan: 

Back Start test

- e. Click on the magnifying glass next to “Article code” to see the articles already created.

BRAND - EASYCAL™ 5

Individual test - Create order

Test type: **STD – standard values** Number of devices: **1** Customer:

Order no.: Order no.:

Article code:  OC-Number:

Article:

Volume ranges: 

Test plan: 

Back

Select article

Search:

Article code	Vol	Manufacturer	Product	Product variation	Volume range	Status
10_copy	1	BRAND GMBH + CO KG	Dispensette® S Organic	Fixed volume, Special fixed volume	0.05 - 5 ml	Released
10002	0	BRAND GMBH + CO KG	Burette	SILBERBRAND, ohne Hahn, class B, Economy	0.1 - 25 ml	Released
10012	0	BRAND GMBH + CO KG	Compact Burette	SILBERBRAND, class B, Economy	0.1 - 25 ml	Released
100210	6	Eppendorf AG	Research® plus	Fixed volume, medium grey	10 µl	Released
100211	7	Eppendorf AG	Research® plus	Fixed volume, light grey	20 µl	Released
100211_copy	0	Eppendorf AG	Research® plus	Fixed volume, light grey	20 µl	Released
100212	6	Eppendorf AG	Research® plus	Fixed volume, yellow	10 µl	Released
100212_copy	0	Eppendorf AG	Research® plus	Fixed volume, yellow	10 µl	Released
100213	6	Eppendorf AG	Research® plus	Fixed volume, yellow	20 µl	Released
100214	7	Eppendorf AG	Comforpette®	Fixed volume	20 µl	Released
100215	6	Eppendorf AG	Research® plus	Fixed volume, yellow	50 µl	Released
100216	6	Eppendorf AG	Research® plus	Fixed volume, yellow	100 µl	Released
100217	6	Eppendorf AG	Research® plus	Fixed volume, yellow	200 µl	Released
100218	6	Eppendorf AG	Research® plus	Fixed volume, blue	200 µl	Released
100219	6	Eppendorf AG	Research® plus	Fixed volume, blue	250 µl	Released
100220	6	Eppendorf AG	Research® plus	Fixed volume, blue	500 µl	Released
100221	6	Eppendorf AG	Research® plus	Fixed volume, blue	1000 µl	Released
100310	6	Eppendorf AG	Research® plus	Adjustable volume, dark grey	0.1 - 2.5 µl	Released
100311	8	Eppendorf AG	Research® plus	Adjustable volume, dark grey	0.5 - 10 µl	Released

Daniel (hrig) Last status: The application is prepared ? Help

- f. Enter “Transferpette S 1000” in the search box. Notice how the article selection changes while you type. All EASYCAL™ 5 search boxes behave in this same way. We always recommend using the search function first because EASYCAL™ 5 comes with an extensive master database.

NOTICE

Editing predefined EC data records

The prefix “EC” indicates that it is a predefined data record that cannot be changed. If you want to change such data records, you must make a copy of the data record and edit and save it under a different name. See the help menu in EASYCAL™ 5 for more information.

BRAND - EASYCAL™ 5

Individual test - Create order

Test type: **STD – standard values** Number of devices: **1** Customer:

Order no.:

Article code: OC-Number:

Article:

Volume ranges:

Test plan:

Back

Select article

Search:

Article code	Vei	Manufacturer	Product	Product variation	Volume rang	Status
700762	2	Treff AG	TreffLab-Transferpette®	Fixed volume	1000 µl	Released
700780	2	Treff AG	TreffLab-Transferpette®	Adjustable volume	1000 - 1000	Released
700784	2	Treff AG	TreffLab-Transferpette®	Adjustable volume	1000 - 1000	Released
700791	0	Treff AG	TreffLab-Transferpette®	Adjustable volume	1000 - 1000	Released
700793	0	Treff AG	TreffLab-Transferpette®	Adjustable volume	1000 - 1000	Released
700965	0	BRAND GMBH + CO KG	Transferpette® α	1.0 ml, 1-Stop	1000 µl	Released
700966	0	BRAND GMBH + CO KG	Transferpette® α	100 - 1000 µl, 1-Stop	1000 µl	Released
704162	3	BRAND GMBH + CO KG	Transferpette®	Fixed volume	1000 µl	Released
704180	4	BRAND GMBH + CO KG	Transferpette®	Adjustable volume	100 - 1000	Released
704762	5	BRAND GMBH + CO KG	Transferpette® S	Fixed volume	1000 µl	Released
704780	6	BRAND GMBH + CO KG	Transferpette® S	Adjustable volume	95 - 1000 µl	Released
704780-4711	0	BRAND GMBH + CO KG	Transferpette® S	Adjustable volume	100 - 1000	Released
704780-4712	0	BRAND GMBH + CO KG	Transferpette® S	Adjustable volume	100 - 1000	Released
704780-4713	0	BRAND GMBH + CO KG	Transferpette® S	Adjustable volume	100 - 1000	Released
704784	4	BRAND GMBH + CO KG	Transferpette® S	Adjustable volume	1000 - 1000	Released
704941	2	BRAND GMBH + CO KG	Transferpette® S	1.0 ml, 1-Stop	1000 µl	Released
704945	2	BRAND GMBH + CO KG	Transferpette® S	100 - 1000 µl, 1-Stop	100 - 1000	Released
704980	5	BRAND GMBH + CO KG	Transferpette® α	Adjustable volume	100 - 1000	Released
704984	5	BRAND GMBH + CO KG	Transferpette® α	Adjustable volume	1000 - 1000	Released

Daniel mrog Last status: The application is prepared

- g. Select the article code EC-704780 and confirm your selection by double-clicking.
- h. Select the corresponding test plan in Test plan. Normally, there are 1 – 2 entries here.
- i. The general conditions for the test as well as the error limits of the assigned article are stored in the test plan.

Individual test - Create order

Test type: **STD – standard values** Number of devices: **1** Customer:

Order no.:

Article code: **704780** OC-Number:

Article: **Transferpette® S**
Adjustable volume
BRAND GMBH + CO KG

☐ Pre- and post-test required

Notes on the order:

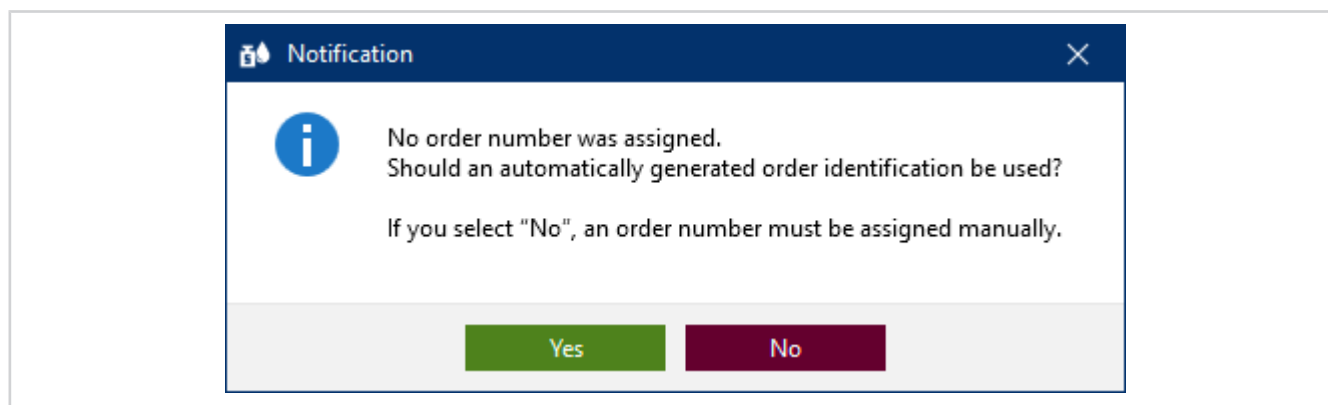
End customer:

Volume ranges:

Test plan: **4437.0 - EC-STD-ISO-PiPip-var-LHDiv**

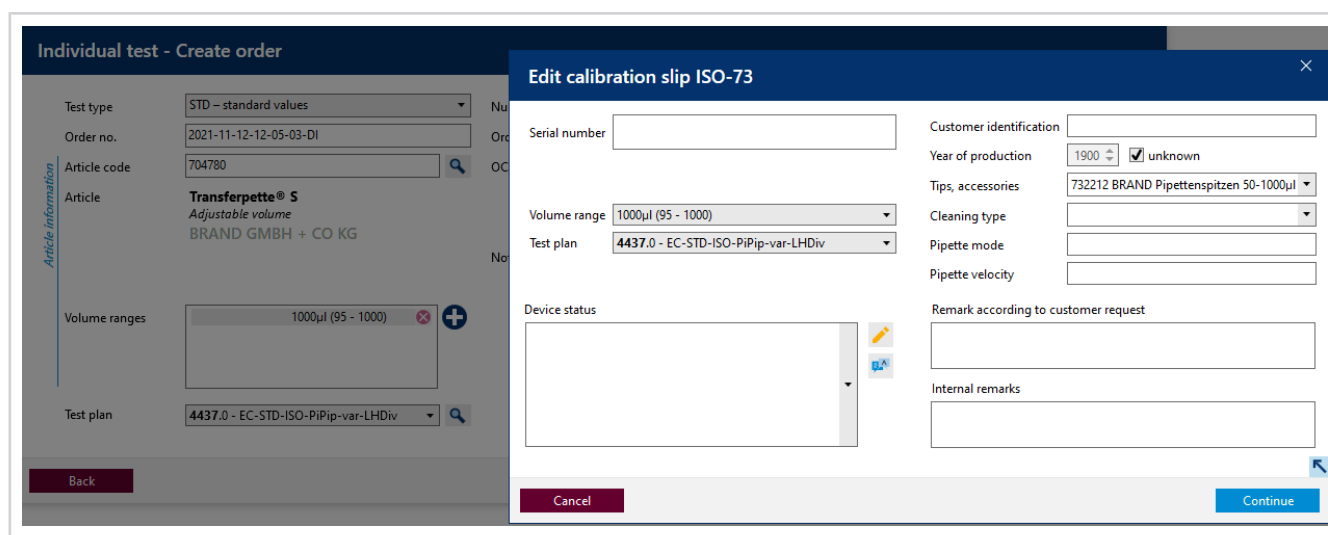
Back **Start test**

- j. Click on Start test.



➔ A message appears to notify you that no order number has been assigned. If your company or quality management process has specific guidelines regarding the organization of tests, select No and enter an order number based on your specifications. If there are no guidelines for the organization of tests, select Yes and EASYCAL™ 5 automatically assigns a unique order number. At this point, deciding early on for a consistent approach is recommended.

k. Continue the tutorial by clicking on Yes. The order number is created on the basis of the current time stamp.



l. Optionally, you can enter a serial number for device identification – you should also do this for real tests. However, this is not necessary for the tutorial.

m. Click on Continue. The test order is now created.

➔ The window for starting the actual test opens.

Specifying the test equipment

BRAND - EASYCAL™ 5

2021-11-12-12-05-03-DI / ISO-73 - - 704780 BRAND GMBH + CO KG Transferpette® S Adjustable volume 95 - 1000µl

Test equipment > 2. TV > 1. TV > NV

✓ / ✗ A / B / C [µl] [Measurement] +

Air temperature	Thermometer		351000-71
Temperature of the medium	Thermometer		351000-71
Relative humidity	Hygrometer		600029-10
Air pressure	Barometer		600029-10
Weight	Single-channel balance	Calibrate now	20210708-RZ-01
Weight	Single-channel balance	Calibrate now	20210708-RZ-01
Weight	Single-channel balance	Calibrate now	20210708-RZ-01

Back Previous device Previous characteristic Next characteristic Additional device Device evaluation Complete test Print preview

- a. The necessary parameters as well as the test equipment type and test equipment (test equipment number) are preset in “Test equipment.” Since only one piece of test equipment is created, this selection is left as it is.

Performing a test

- a. Continue by clicking on Next criterion.

BRAND - EASYCAL™ 5

2021-11-12-12-05-03-DI / ISO-73 - - 704780 BRAND GMBH + CO KG Transferpette® S Adjustable volume 95 - 1000µl

Test equipment > 2. TV > 1. TV > NV

✓ / ✗ A / B / C [µl] [Measurement] +

Ambient data

☒ Request ambient data

Target value: 100 µl Number: 0 / 10

Letzte Messungen: Neue Messungen:

0 / 0 Apply measured value

Test equipment disconnected

Statistics of device

Statistics of order

Back Previous device Previous characteristic Next characteristic Additional device Device evaluation Complete test Print preview

- b. You now see the central input screen of the measurement functionality of EASYCAL™ 5.

- c. Enter a fictitious weight value in Neue Messung. Start with “0.1” and click on “Apply measured value” or acknowledge the entry with [Enter]. A window appears, in which you must enter the measured values or complete them.

NOTICE

Decimal separator

The decimal separator (comma or point) is selected via the language selection in the software.

Enter measured values

Temperature difference

0.00 °C

0.5 °C

Weight

0.1

g

☒ Manual

Air temperature

0

°C

(20°C - 25°C)

☒ Manual

Temperature of the medium

0

°C

(20°C - 25°C)

☒ Manual

Relative humidity

0

%rh

(40%rh - 65%rh)

☒ Manual

Air pressure

0

mbar

(960mbar - 1025mbar)

☒ Manual

Cancel

Apply

- d. Enter a fictitious value for the environmental parameters as follows:

Enter measured values

Temperature difference

0.00 °C

0.5 °C

Weight

0.1

g

☒ Manual

Air temperature

21

°C

(20°C - 25°C)

☒ Manual

Temperature of the medium

21

°C

(20°C - 25°C)

☒ Manual

Relative humidity

40

%rh

(40%rh - 65%rh)

☒ Manual

Air pressure

961

mbar

(960mbar - 1025mbar)

☒ Manual

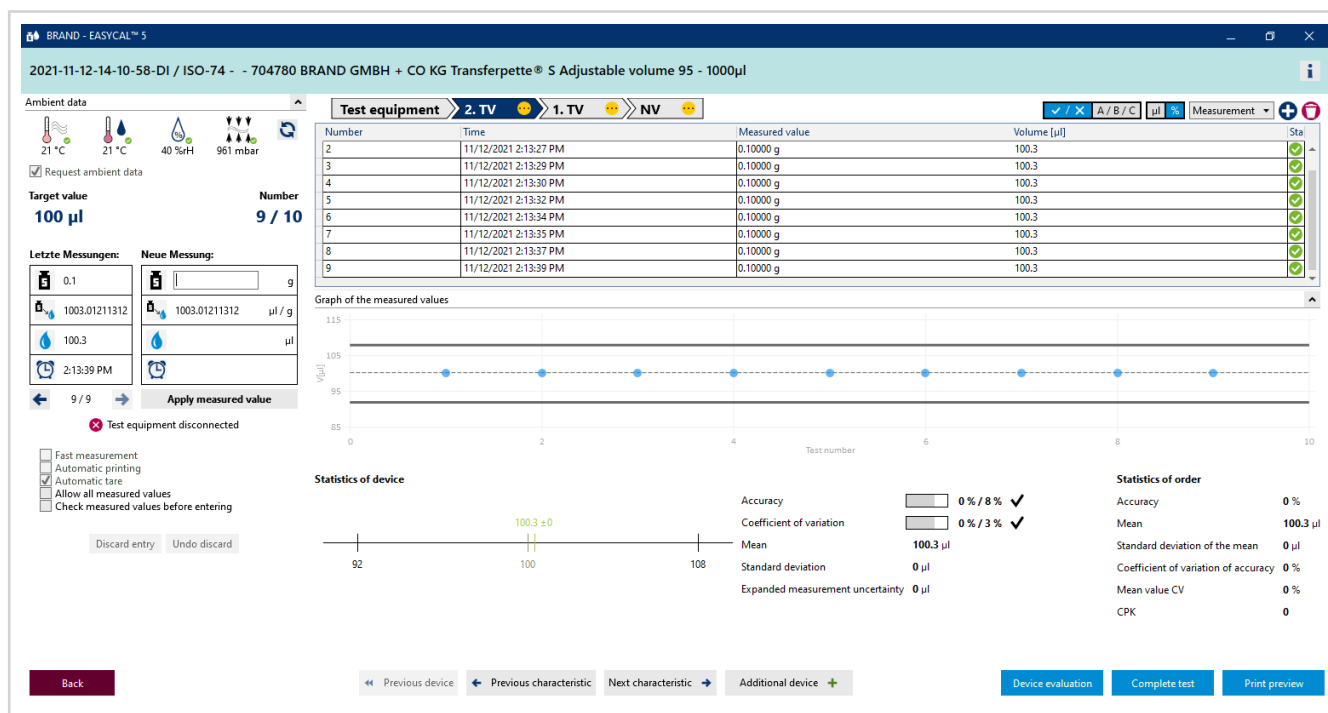
Cancel

Apply

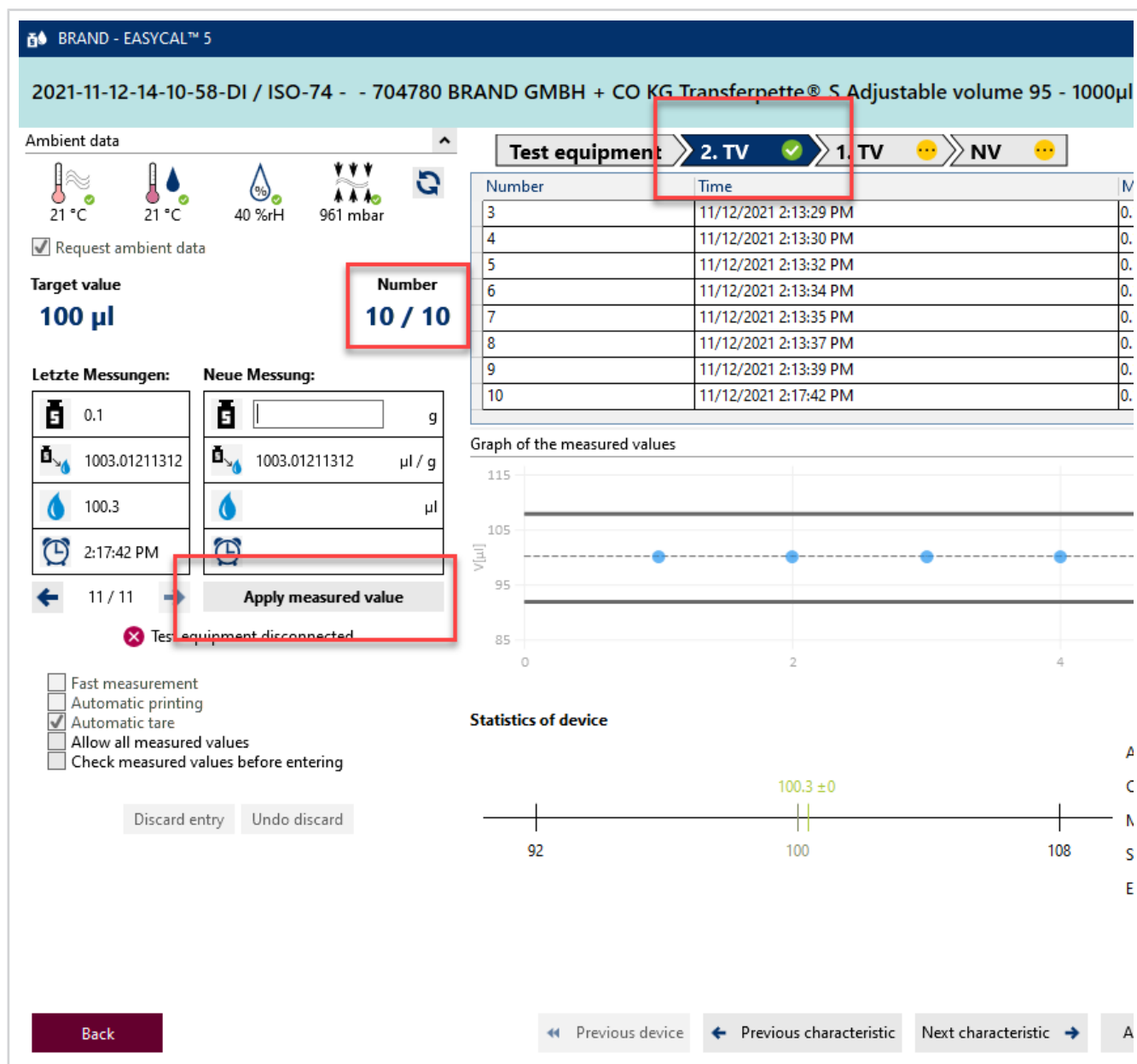
- e. Click on Apply. The first measurement is now completed. The measured value and the volume calculated from it appear in the table.

Test equipment > 2. TV > 1. TV > NV					✓ / ✗ A / B / C μl % Measurement + ⓘ	
Number	Time	Measured value	Volume [μl]		Sta	
1	11/12/2021 2:06:42 PM	0.10000 g	100.3		✓	

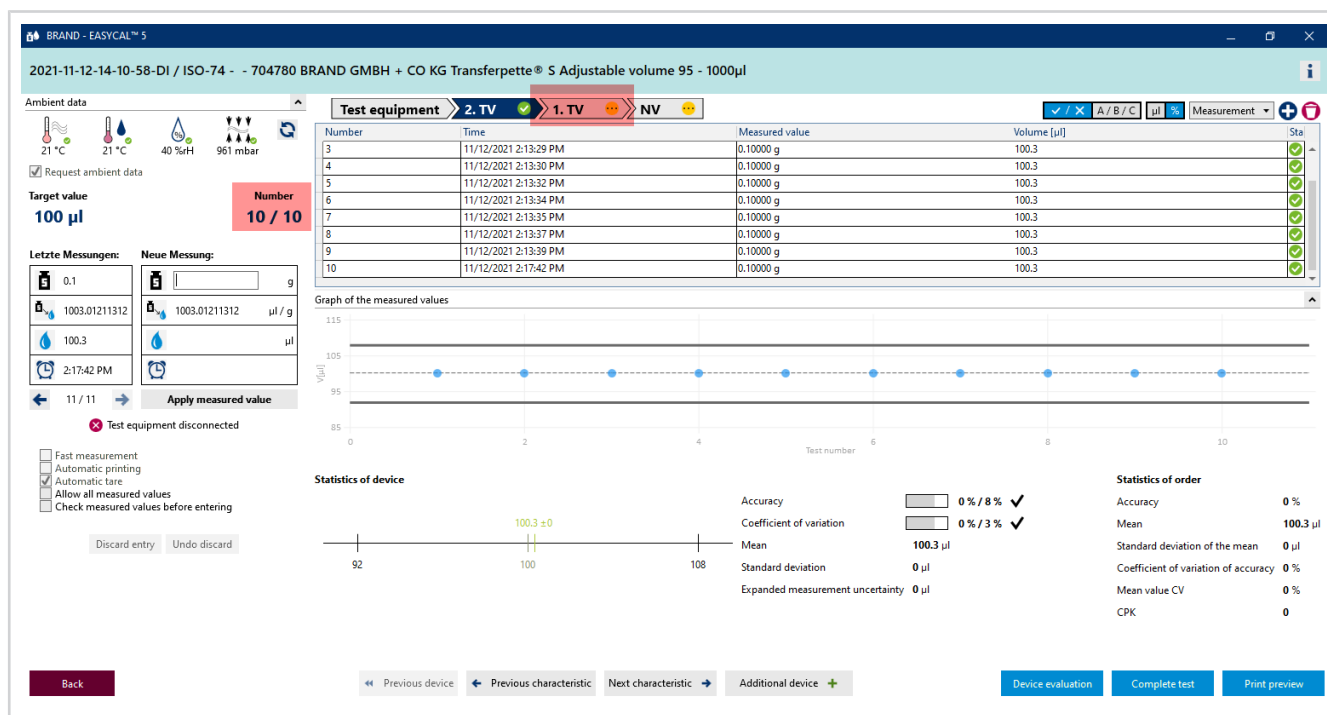
- f. Now enter the value 0.1 g as the measured value 8 times in the same way. The table fills up.



- g. The light blue color in the section above the table indicates that the order is “in progress.” Click on the  icon to show/hide the extended certificate information.
- h. Re-enter 0.1 as the measured value and pay attention to the progress display above the table of measured values.



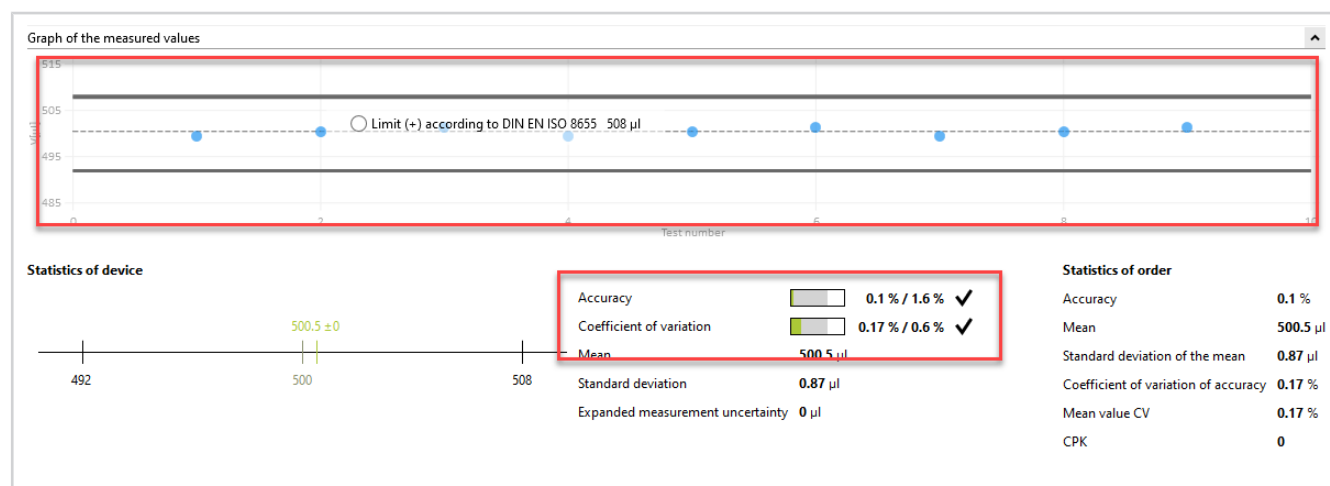
- i. Once the 10th measured value is entered, all required measurements have been carried out for the “2.TV” criterion. The criterion receives a green check mark. You can enter additional measured values, but this is not required.



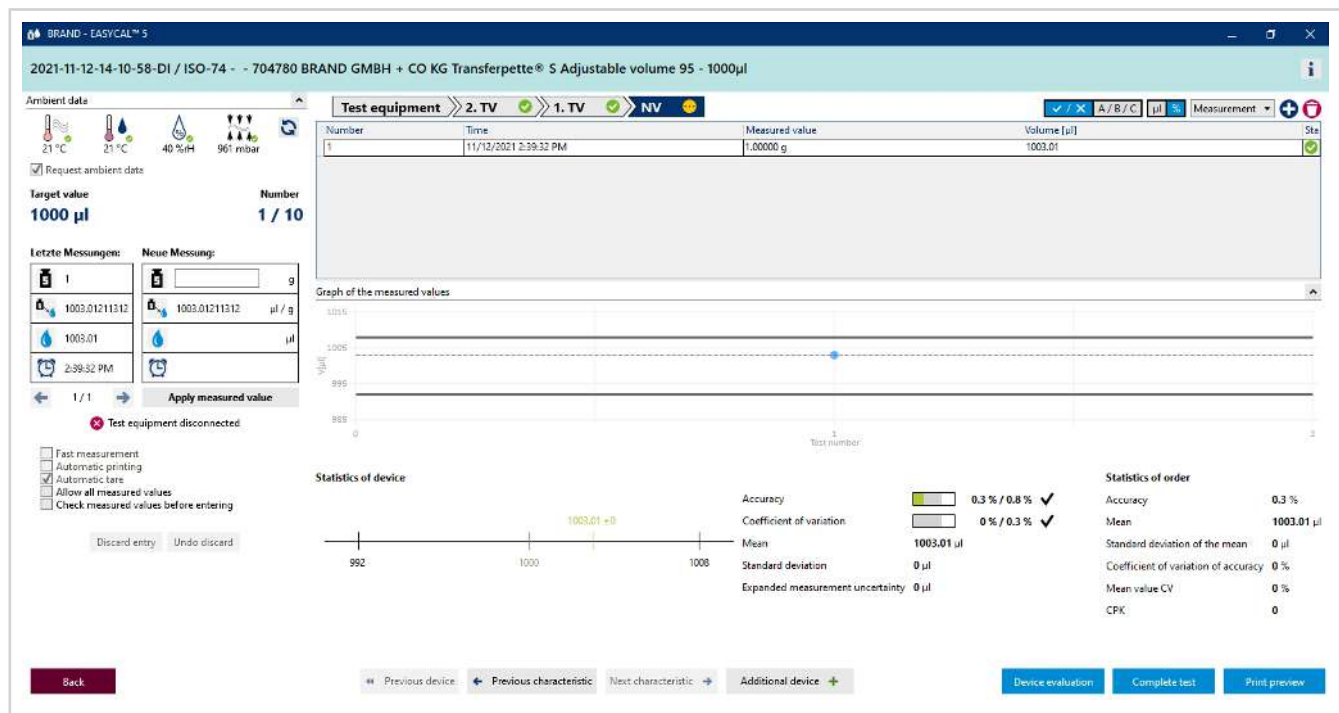
j. Click on “1.TV” in the progress display to jump to the next test criterion.

k. For Neue Messung enter the following values in succession: 0.498 / 0.499 / 0.500. Repeat this 2 times.

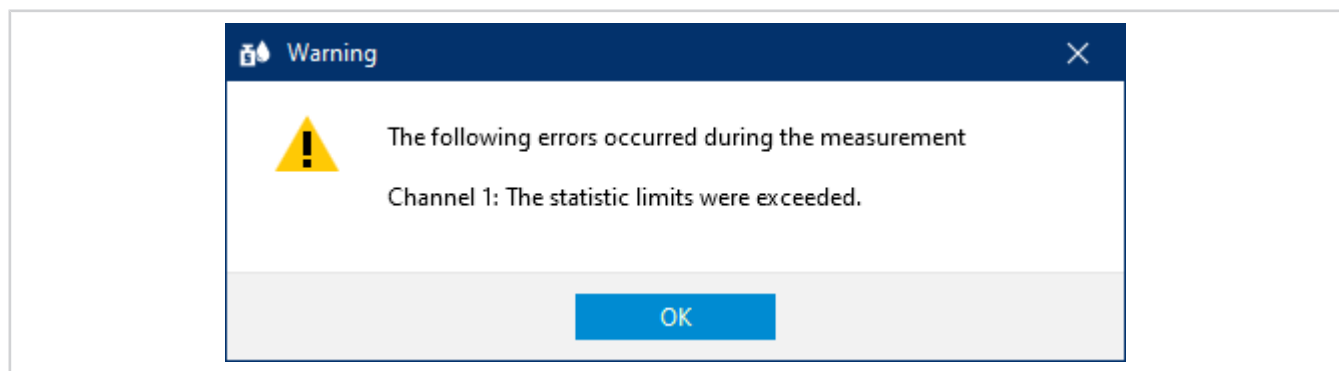
➤ In the “Graph of the measured values” you see the position of the individual measured values in relation to the defined error limits (solid line) and the calculated mean value. In “Device statistics” you see the calculated actual value for accuracy and coefficient of variation in comparison to the defined limits.



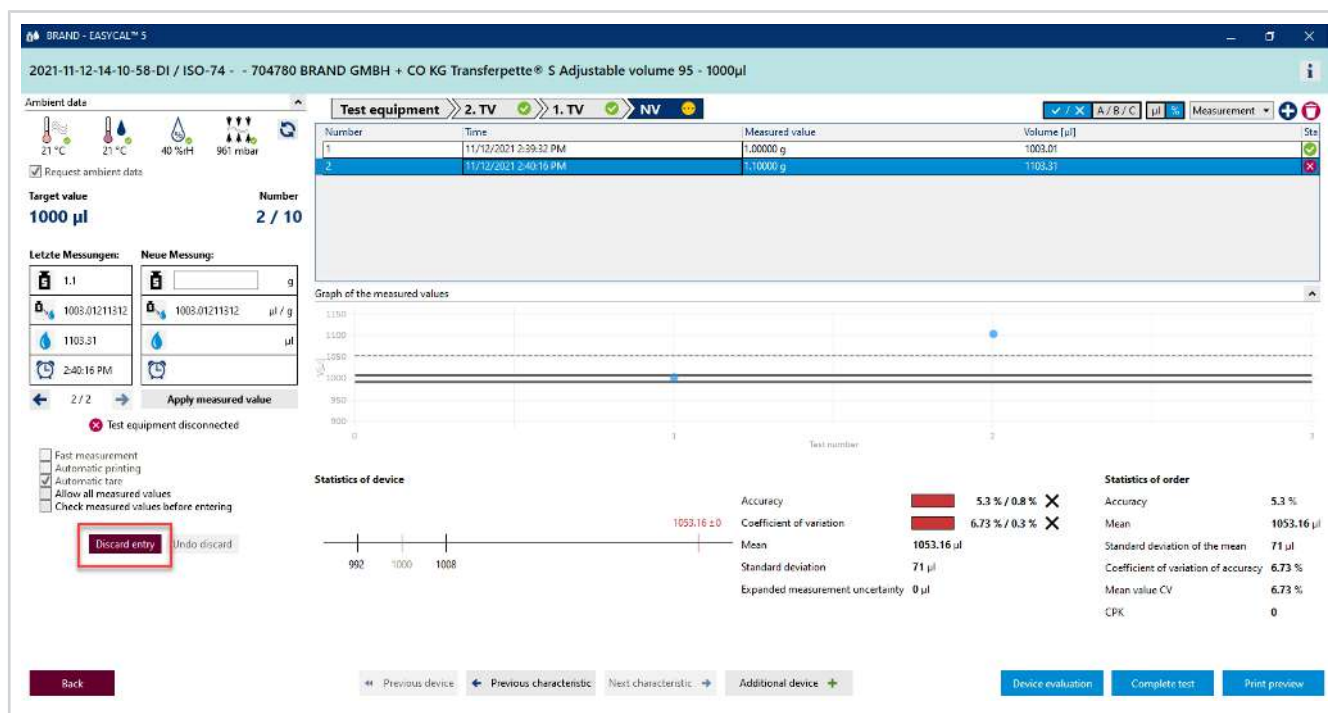
l. Enter 0.498 again as the measured value, confirm the environmental parameters and then click on “NV” in the progress display. Then enter 1 as the measured value.



m. We assume you mistyped. Enter 1.1 as the measured value and confirm the environmental parameters. A warning appears:



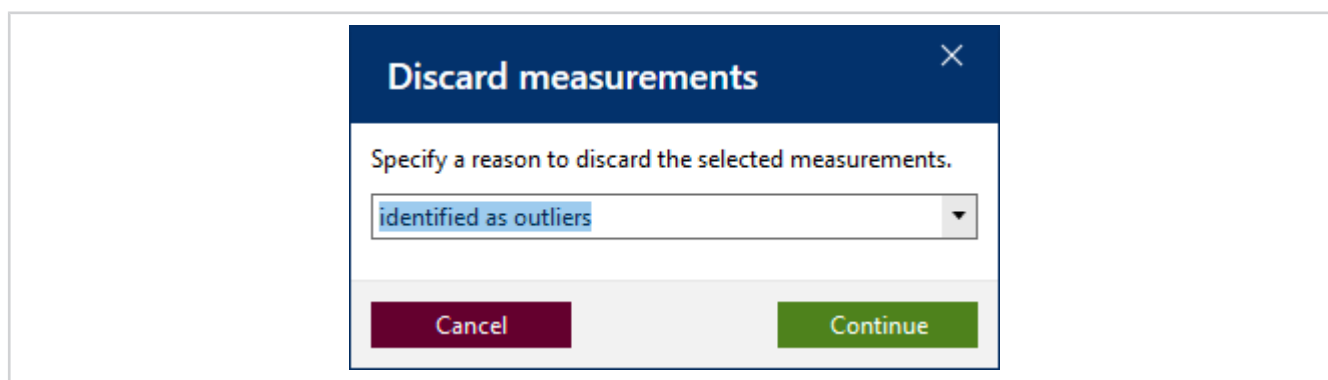
n. Acknowledge this warning by clicking on OK.



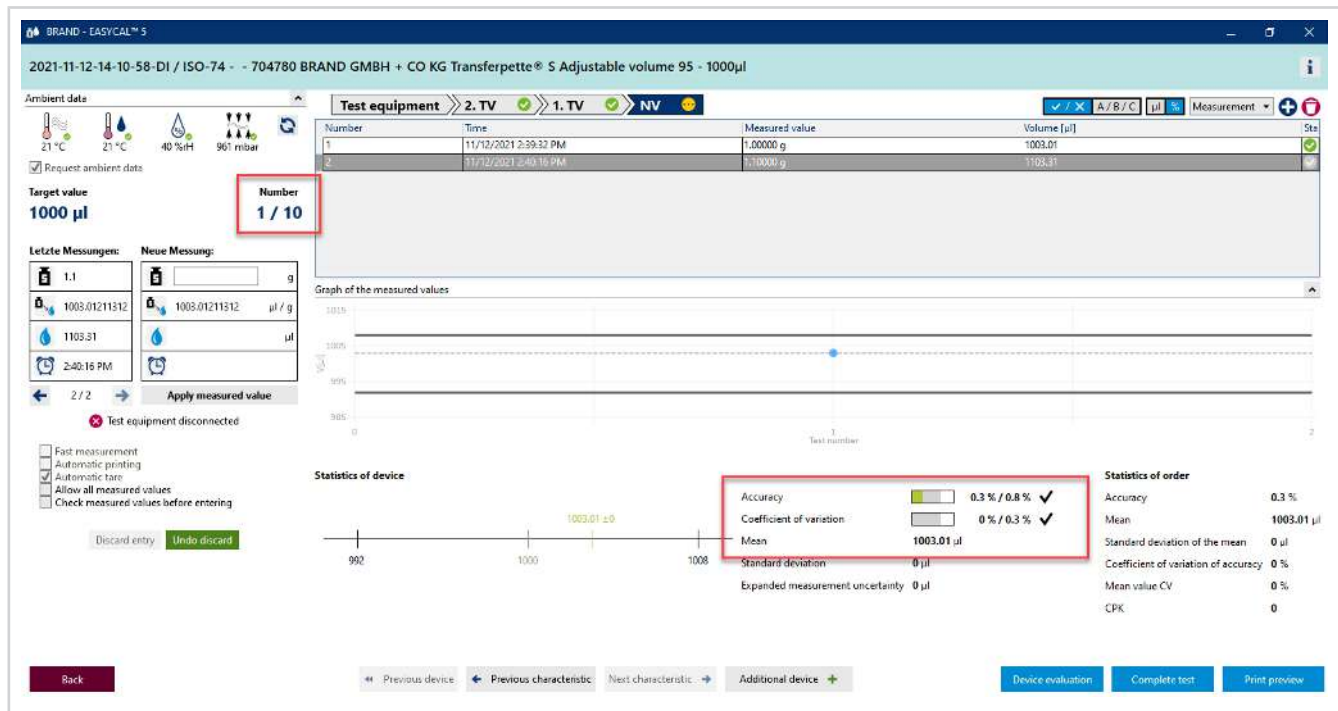
➤ You see that the different sections of the input screen respond according to the new measured value. You cannot delete this measured value – however, you can discard it. The value remains visible, but is no longer used for the statistics.

o. Click on the number of the measurement in the table and then click on “Discard entry.”

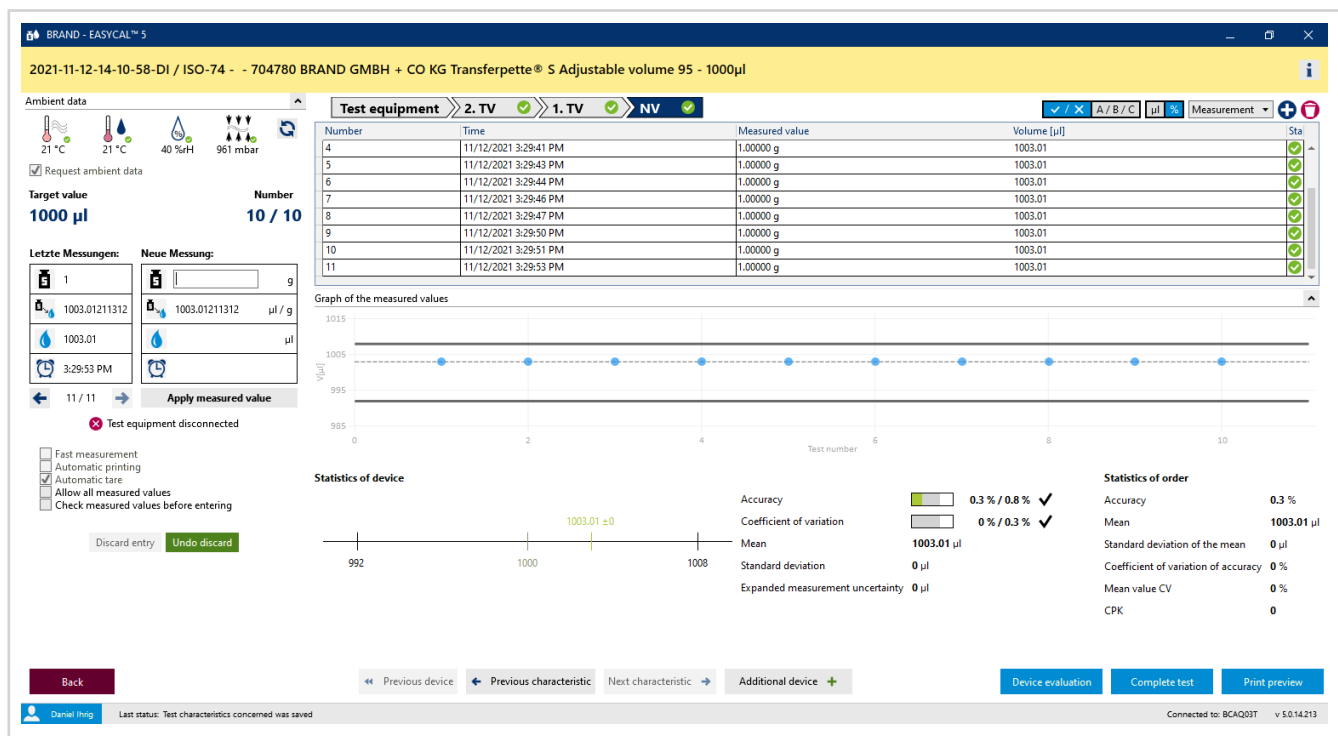
➤ A notice appears.



p. Specify a reason, e.g. Identified as outliers.. Alternatively, you can select a reason from the drop-down menu (the text here can be updated in the master data). Confirm your selection by clicking on Continue.



- q. The measured value “1.1” is no longer taken into account in the evaluation.
- r. Continue entering measured values until “Count” reads “10/10.” Once the last required measured value is entered, the color in the section above the table changes from light blue to yellow. This indicates that the order is completed.



- All criteria in the progress display also have a green check mark. The discarded measurement is shaded in pink.

Finishing a test

BRAND - EASYCAL™ 5

2021-11-12-14-10-58-DI / ISO-74 - 704780 BRAND GMBH + CO KG Transferpette® S Adjustable volume 95 - 1000µl

Ambient data: 21 °C, 21 °C, 40 %RH, 961 mbar

Request ambient data: ☒

Target value: 1000 µl

Number: 10 / 10

Letzte Messungen: 1, 1003.01211312, 1003.01, 3:29:53 PM

Neue Messung: 1003.01211312 µl / g

Apply measured value

Test equipment: 2. TV, 1. TV, NV

Number	Time	Measured value	Volume [µl]	Status
1	11/12/2021 2:39:32 PM	1.00000 g	1003.01	OK
2	11/12/2021 2:40:16 PM	1.10000 g	1103.31	OK
3	11/12/2021 3:29:39 PM	1.00000 g	1003.01	OK
4	11/12/2021 3:29:41 PM	1.00000 g	1003.01	OK
5	11/12/2021 3:29:43 PM	1.00000 g	1003.01	OK
6	11/12/2021 3:29:44 PM	1.00000 g	1003.01	OK
7	11/12/2021 3:29:46 PM	1.00000 g	1003.01	OK
8	11/12/2021 3:29:47 PM	1.00000 g	1003.01	OK
9	11/12/2021 3:30:40 PM	1.00000 g	1003.01	OK

Graph of the measured values

Statistics of device: 1003.01 ± 0

Statistics of order: Accuracy 0.3 %, Mean 1003.01 µl, Standard deviation of the mean 0 µl, Coefficient of variation of accuracy 0 %, Mean value CV 0 %, CPK 0

Accuracy: 0.3 % / 0.8 % ✓

Coefficient of variation: 0 % / 0.3 % ✓

Mean: 1003.01 µl

Standard deviation: 0 µl

Expanded measurement uncertainty: 0 µl

Back, Previous device, Previous characteristic, Next characteristic, Additional device, Device evaluation, Complete test, Print preview

a. Click on Finish test.

BRAND - EASYCAL™ 5

Order 2021-11-12-14-10-58-DI

Test type: STD - standard values, Article: 704780 - Transferpette® S Adjustable volume: 95 - 1000 µl

Order no.: 2021-11-12-14-10-58-DI, Test plan: 4437.0 - EC-STD-ISO-PIP-var-LHDiv

Order type: Individual test, Tester: D. Ihlig

Lot size: 1

Random sample size: 1 / 1

Status: Finished

Order no.: , Customer: , OC-Number: , End customer:

Notes on the order

Communication with the customer

Test characteristic	Description	Target	va	Mean	Tol target	Tol OK	Standard devi	A % target	A %	A % OK	CV % target	CV %	CV % OK	Q %	CPK	Min CPK	CPK OK
1	2. TV	100µl	100.3 µl		OK	OK	0 µl	8 %	0 %	OK	3 %	0 %	0 %	OK	0	0	OK
2	1. TV	500µl	500.4 µl		OK	OK	0.88 µl	1.6 %	0.1 %	OK	0.6 %	0.18 %	0.18 %	OK	0	0	OK
3	NV	1000µl	1003.01 µl		OK	OK	0 µl	0.8 %	0.3 %	OK	0.3 %	0 %	0 %	OK	0	0	OK

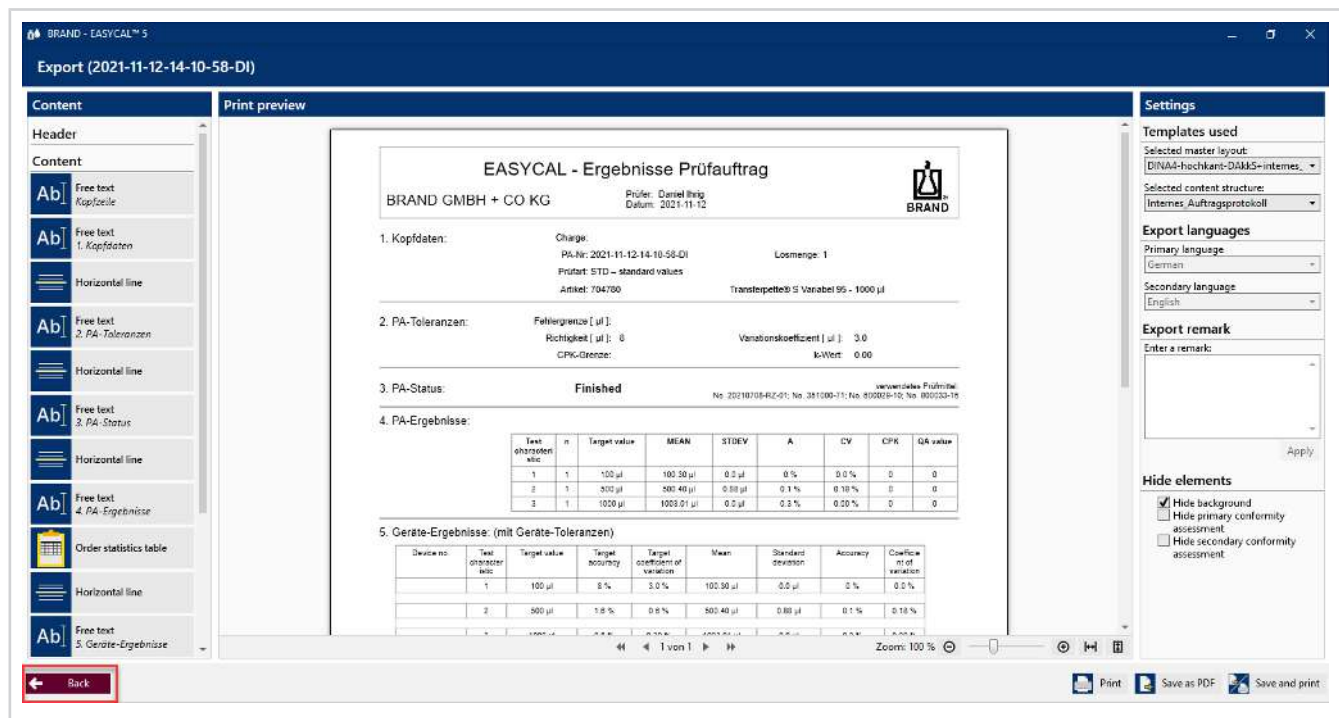
Device/calibration slip overview

Calibration slip type	Internal no.	Calibration slip no.	Serial number	Article code	Conducted tests	Status	Device status	Tester	Linked calibration slip
Individual test	13014	ISO-74		704780	30	Finished		D. Ihlig	

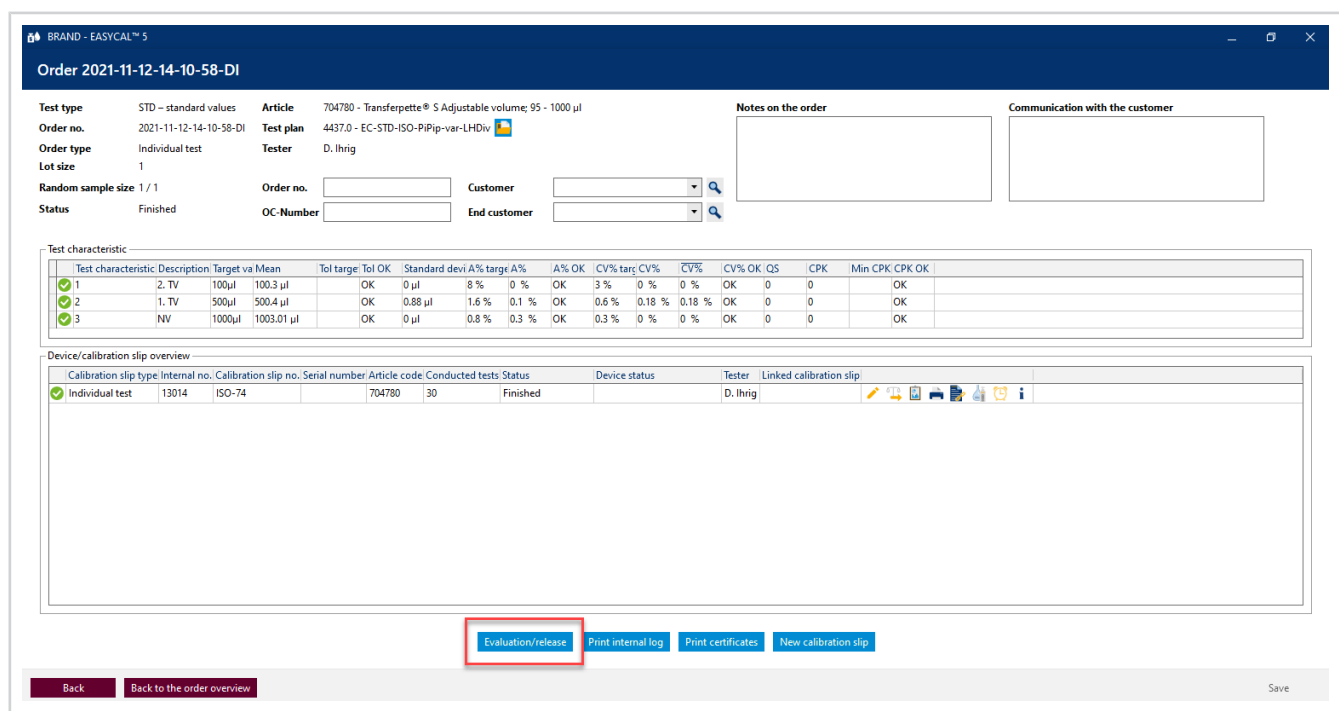
Evaluation/release, Print internal log, Print certificates, New calibration slip

Back, Back to the order overview, Save

b. You now see the order with a summary of measurements for the respective test criteria. Click on Print internal log.



- c.** You see the certificate editor in preview mode. Here you can print or export the provided report.
- d.** Leave the certificate editor by clicking on Back.



- e.** Click on Evaluation/release.

Evaluation/release

Current status
Finished

New status
Released

Remarks

☒ Apply to all

Cancel
Save

f. In the window that opens, select Released and acknowledge the entry with Saving....

BRAND - EASYCAL™ 5

Order 2021-11-12-14-10-58-DI

Test type
STD – standard values

Order no.
2021-11-12-14-10-58-DI

Order type
Individual test

Lot size
1

Random sample size
1 / 1

Status
Released

Article
704780 - Transferpette® S Adjustable volume: 95 - 1000 µl

Test plan
4437.0 - EC-STD-ISO-PiPip-var-LHDIV

Tester
D. Ihrig

Order no.

Customer

OC-Number

End customer

Notes on the order

Communication with the customer

Test characteristic

Test characteristic	Description	Target va	Mean	Tol target	Tol OK	Standard devi	A% target	A% OK	CV% target	CV% OK	CV% target	CV% OK	CV% target	CV% OK	CPK	Min CPK	CPK OK
1	2. TV	100µl	100.3 µl		OK	0 µl	8 %	0 %	OK	3 %	0 %	0 %	OK	0	0		OK
2	1. TV	500µl	500.4 µl		OK	0.88 µl	1.6 %	0.1 %	OK	0.6 %	0.18 %	0.18 %	OK	0	0		OK
3	NV	1000µl	1003.01 µl		OK	0 µl	0.8 %	0.3 %	OK	0.3 %	0 %	0 %	OK	0	0		OK

Device/calibration slip overview

Calibration slip type	Internal no.	Calibration slip no.	Serial number	Article code	Conducted tests	Status	Device status	Tester	Linked calibration slip
Individual test	13014	ISO-74		704780	30	Released		D. Ihrig	

Evaluation/release
Print internal log
Print certificates
New calibration slip

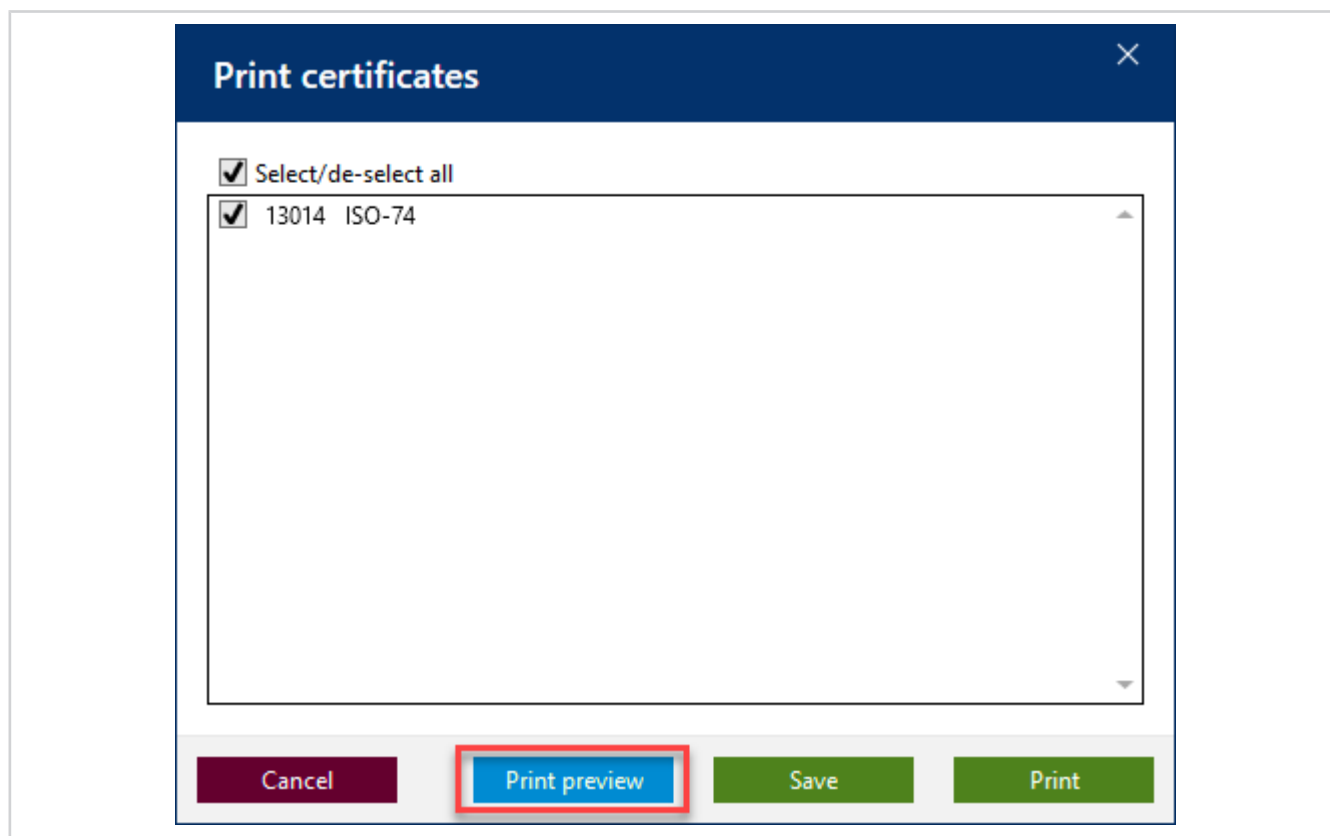
Back
Back to the order overview
Save

g. Click on Print certificates.

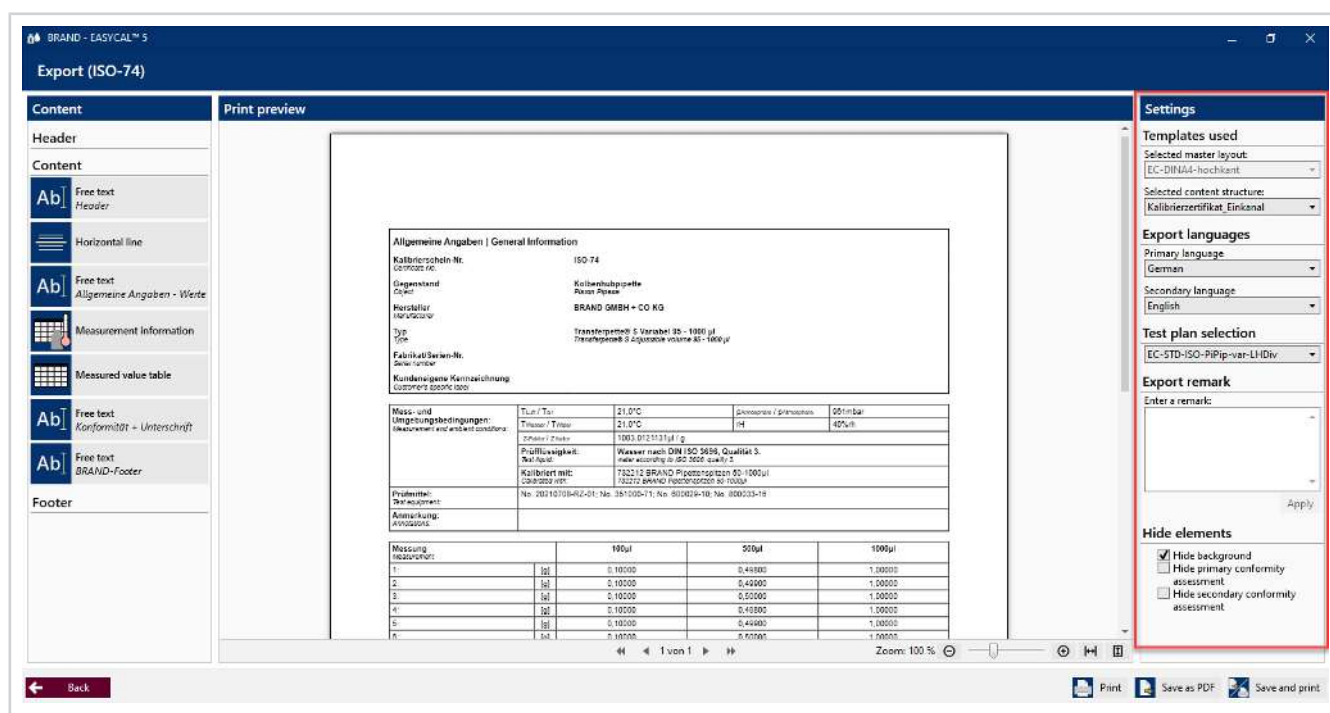
EasyCal™ 5 708410 V2

Operating manual English

35



h. Click on the check box and then on Print preview.



➤ The certificate editor opens in Print preview mode. You can adjust the settings in the right-hand section and enter export notes depending on the selected content structure.

BRAND - EASYCAL™ 5
Export (ISO-74)

Content

- Header
- Content
- Abj Freitext Kopf
- Horizontale Linie
- Abj Freitext Kalibriergegenstand
- Horizontale Linie
- Zusätzliche Exportmerkmale
- Horizontale Linie
- Prüfmerkmal Diagramme
- Seitenumbbruch
- Abj Freitext Seitenkopf
- Abj Freitext Kalibrierverfahren
- Messungsinformationen
- Profmittel / Umgebungsdaten

Print preview

Kalibrierschein / Calibration certificate

erstellt durch das Kalibrierlaboratorium
issued by the calibration laboratory

BRAND GMBH + CO KG
Otto-Schott-Straße 25 / 97077 Wertheim / Deutschland

Gegenstand / Objekt: Kolbenhubpipette / Piston Pipette
Hersteller / Manufacturer: BRAND GMBH + CO KG
Typ / Type: Transferpipette® S Variabel 95 - 1000 µl / Transferpipette® S Adjustable volume 95 - 1000 µl
Fabrizat/Serien-Nr. / Serial number: [blank]
Auftragsnummer / Order No.: [blank]
Datum der Kalibrierung / Date of calibration: 2021-11-12
Auftraggeber / Customer: [blank]
Kundenspezifische Kennzeichnung / Customer's specific label: [blank]

Prüfvolumen 100µl, Prüfvolumen 500µl, Prüfvolumen 1000µl

Zoom: 100 %

Settings

Templates used

Selected master layout: EC-DIN/4-hochkant
Selected content structure: VKV Kalibrierschein mit Grafik

Export languages

Primary language: German
Secondary language: English

Test plan selection

EC-STD-ISO-PIpip-var-LHDiv

Export remark

Enter a remark: [text area]

Hide elements

☒ Hide background
☐ Hide primary conformity assessment
☐ Hide secondary conformity assessment

Back, Print, Save as PDF, Save and print

- i. Here you can also export the certificate as a PDF or print it on paper. Click on Back to leave the Print preview.

BRAND - EASYCAL™ 5
Order 2021-11-12-14-10-58-DI

Test type: STD - standard values
Article: 704780 - Transferpipette® S Adjustable volume; 95 - 1000 µl
Order no.: 2021-11-12-14-10-58-DI
Test plan: 4437.0 - EC-STD-ISO-PIpip-var-LHDiv
Order type: Individual test
Tester: D. Ihrig
Lot size: 1
Random sample size: 1 / 1
Status: Released
Order no.: [blank]
Customer: [blank]
OC-Number: [blank]
End customer: [blank]

Notes on the order

Communication with the customer

Test characteristic

Test characteristic	Description	Target va Mean	Tol target	Tol OK	Standard devi	A% target	A% OK	CV% target	CV% OK	CV% target	CV% OK	CV% target	CV% OK	CPK	Min CPK	CPK OK
1	2. TV	100µl	100.3 µl	OK	0 µl	8 %	0 %	OK	3 %	0 %	0 %	OK	0	0	OK	
2	1. TV	500µl	500.4 µl	OK	0.88 µl	1.6 %	0.1 %	OK	0.6 %	0.18 %	0.18 %	OK	0	0	OK	
3	NV	1000µl	1003.01 µl	OK	0 µl	0.8 %	0.3 %	OK	0.3 %	0 %	0 %	OK	0	0	OK	

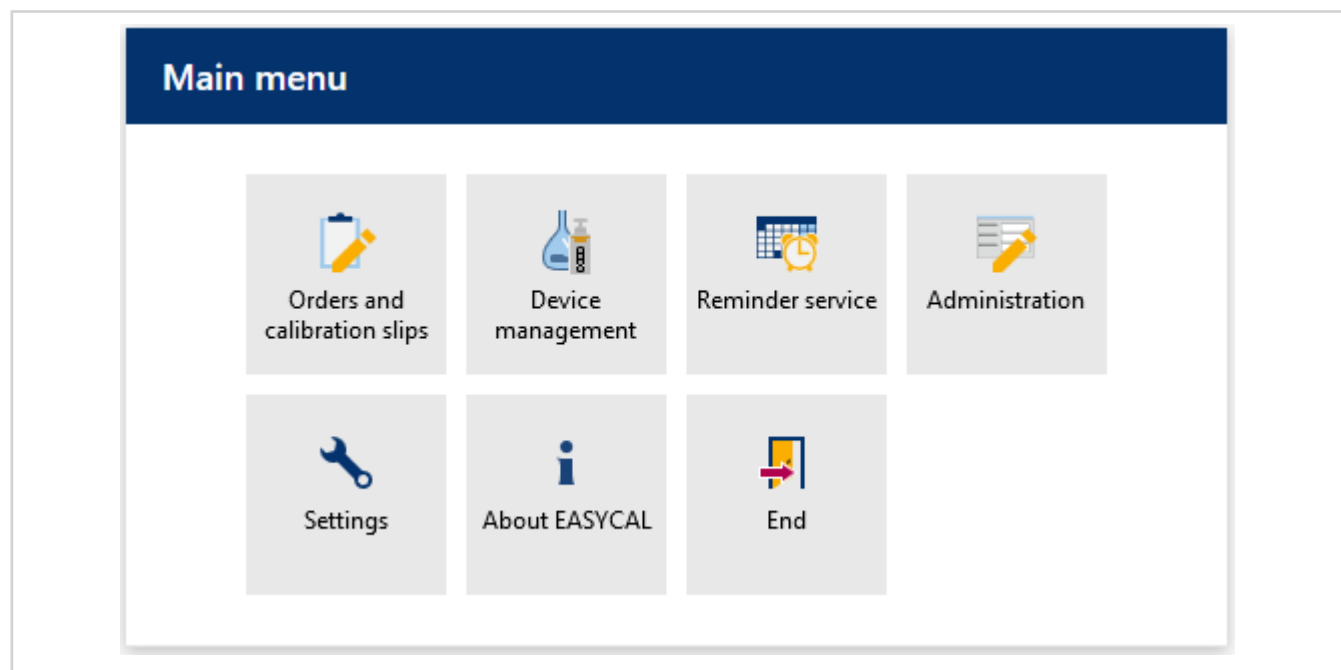
Device/calibration slip overview

Calibration slip type	Internal no.	Calibration slip no.	Serial number	Article code	Conducted tests	Status	Device status	Tester	Linked calibration slip
Individual test	13014	ISO-74		704780	30	Released		D. Ihrig	

Evaluation/release, Print internal log, Print certificates, New calibration slip

Back, Back to the order overview, Save

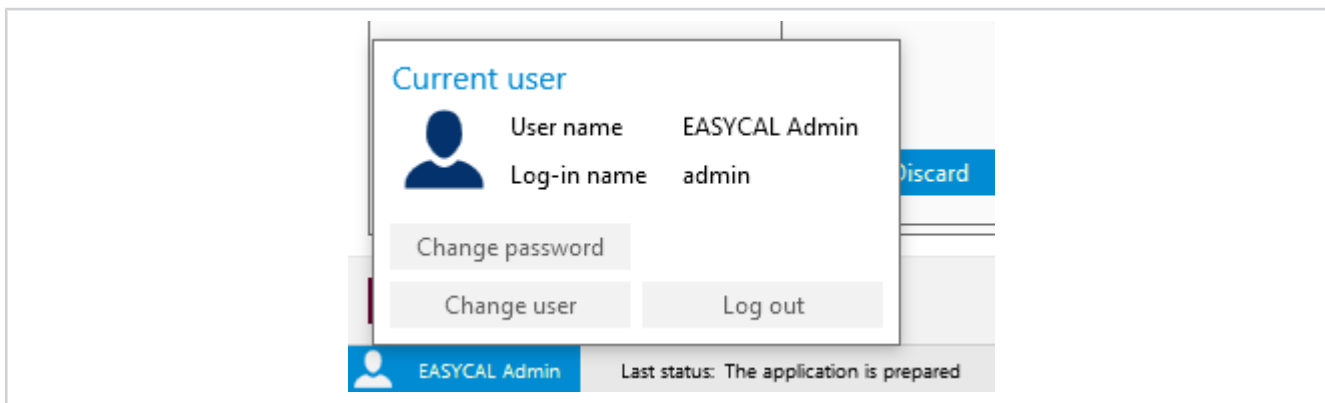
- j. Click on Back to the order overview
- k. From here you can create further orders and start tests. Click on Back to go to the main menu.



➔ This application example ends here.

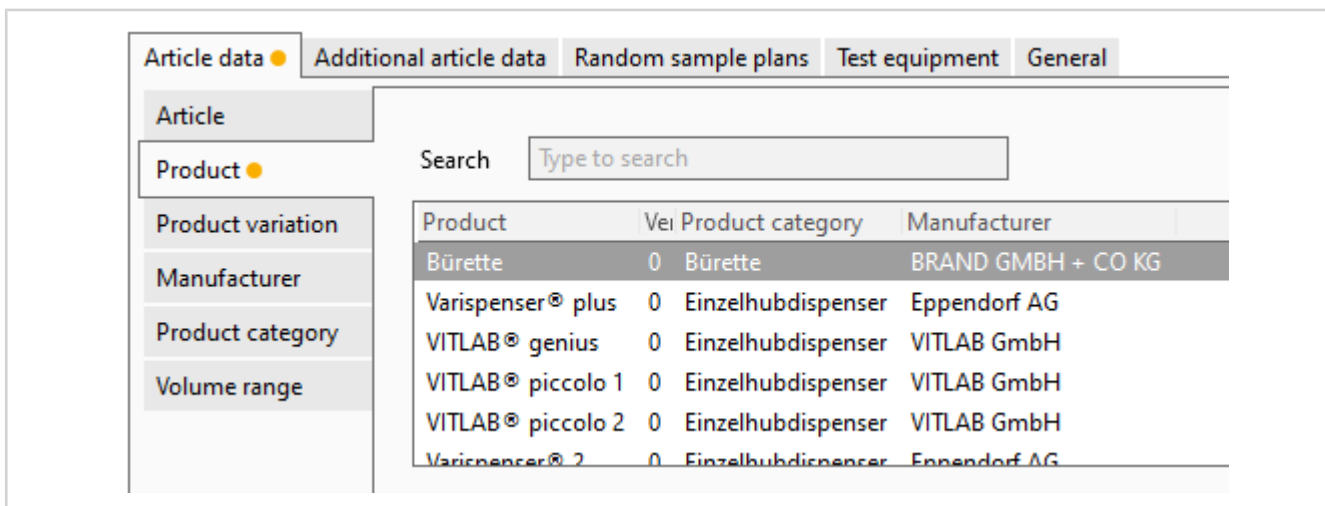
5 General operation

Log in, log out, and change the user



Click on the user name at the bottom left of the screen. You can change this user, log out, or change the password; see also User, p. 60.

Yellow dot on menu items and tabs



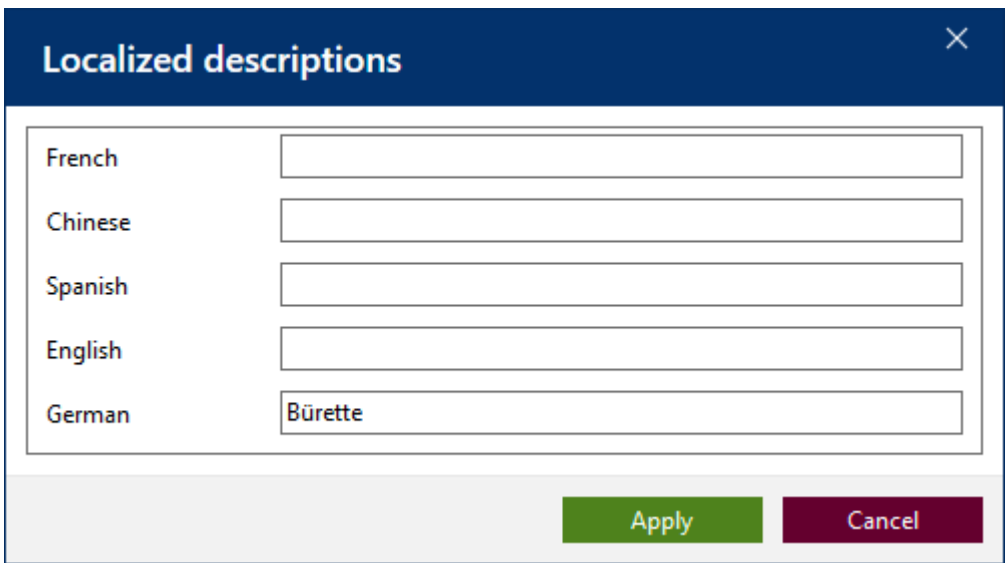
A yellow dot marks unsaved changes.

Fields with red borders/mandatory fields



Fields with red borders indicate missing entries or mandatory fields. If you move the mouse over the edge, “Tool tips” will be displayed.

Localized description



Localized descriptions	
French	
Chinese	
Spanish	
English	
German	Bürette

Apply Cancel

You can use the  button to localize descriptions or fields. These texts can then be used for output on certificates.

Warning triangle



If a warning triangle is displayed, this indicates missing information (e.g., that a piece of test equipment has not been set for the test).

Search fields

As soon as you type characters into the search box, the options are narrowed based on what you type. Use this option, especially when choosing the variety of items.

6 System information

>> Main menu > About EASYCAL

About EASYCAL



EASYCAL™

BRAND GMBH + CO KG

Version 5.0.17.218

 Code signing



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Functions available

Open source licenses



You are currently using a demo version.

To activate your full single client license, use the following link: <https://license.brand.de>.



EASYCAL basic functions

License: 11002 - Easycal 5 Demo License (30 days) (SNR: 130-3184513782)

Usage period: 22 / 30 days remain



Close

Available functions

This tab shows which program functions have been installed. Version information is also shown here. Next to “License” you see what type of license you are using to operate the Cooling Block. After the abbreviation “SNR:” you will find the serial number of the license container. Provide this number when communicating with BRAND.

Open source licenses

This tab provides an overview of the licenses used for developing the Cooling Block.

7 Orders and calibration certificates

>> Main menu > Orders and calibration certificates

Orders and calibration slips

Test type filter Not specified Search from to

Order overview Calibration slips

Order I	Test typ	Order number	Article	Status		
2	SPEC	2022-01-25-15-2	EC-12484 - Burette BLAUBRAND®, straight stopcock, Schilling, class AS; 0.02 - 10 ml	Created		
1	STD	123456	EC-704106 - Transferpette® Fixed volume; 5 µl	Finished		

BackIndividual device testCreate orderOpen

Use this menu to manage all orders and calibration certificates for the tested devices. These tests are therefore traceable. Together with the devices created, you can thus trace the test history for each device.

You will find a list of all orders created and calibration certificates generated in the “Order overview” and “Calibration certificates” tabs. You can filter the views by test type, search for texts or the order number, and limit the time period in which the order was created.

Via this button, you can display all calibration certificates created for the order so far.

Button	Meaning
Single device test	Start a single device test.
Create order	Create an order. In the following selection, you can start a single test (analog single device test) or a batch test .
Open	Open a selected order.

7.1 Creating an order

Select order type

Select order type

Batch test

Use when testing random samples (of any size). Batch certificates are issued.

Individual test

Use for 100% test or test of a single device.
Each device receives its own certificate.

Back

Select the desired order type Batch test or Single test

Create order

Single test

Individual test - Create order

Test type

Order no.

Article code

Article

Volume ranges

Test plan

STD - standard values

EC-704106

Transferpette®
Fix
BRAND GMBH + CO KG

5µl (5 - 5)

1826.0 - EC-STD-ISO-PiPip-5-fix-LHDiv

Number of devices

Order no.

OC-Number

Prepare calibration slips

Pre- and post-test required

Notes on the order

Customer

End customer

Back **Start test**

Ill. 1: Single test – Create order

In a single test, one or more devices of the same article are tested, and a certificate is issued to each device. The [test type](#), the article code, and the [test plan](#) must be selected. Depending on which test type is selected, only some of the test plans are offered for selection under “Test plan.”

Batch test

Batch test - Create order

Test type: I – IPC Glass/assembly

Order no.: 12345678

Article code: 27705

Article: **Graduated pipette type 3**
BLAUBRAND®, total delivery, class AS, Zero point at the top
BRAND GMBH + CO KG

Lot size: 20

Random sample size: 0

Batch: 5

☐ Prepare calibration slips

Volume ranges: 0.5ml (0.01 - 0.5)

Test plan: [dropdown]

Notes on the order: [text area]

Back Start test

Ill. 2: Batch test – Create order

In a batch test, a random sample is taken from a batch of equipment, and the random sample device is tested. One certificate is issued per device. Depending on the result of the random sample test, it can be assessed whether the lot meets the corresponding quality requirements. The [test type](#), the article code, and the [test plan](#) must be selected. In the case of a batch test, the identification of the batch and the size of a [lot](#) must also be specified. Depending on which test plan and random sample test (absolute or relative) is selected, the size of the random sample changes. In this example, the absolute random sample test with AQL 0.4 is assumed. This level requires 5 devices each as a random sample for a lot size of 1 ... 500.

Create calibration certificate

You can also enter further data about the order such as which customer the device comes from, who the end customer is, or even which order and purchase order numbers are required.

If the Prepare calibration certificates check box is clicked and the test is started by clicking on Start test, the following window will be displayed. Enter the serial number of the device to be checked here. You can also expand the view by clicking on the arrow to enter further data relevant for the calibration certificate.

New calibration slip

☒ Count up ☐ Count down

Serial number

Cancel Continue

New calibration slip

☒ Count up ☐ Count down

Serial number

Volume range

Test plan

Device status

Customer identification

Year of production ☒ unknown

Tips, accessories

Cleaning type

Pipette mode

Pipette velocity

Remark according to customer request

Internal remarks

Cancel Continue

III. 3: Single device test

Edit calibration slip STD-1

Serial number

Cancel Continue

Edit calibration slip STD-1

Serial number

Volume range

Test plan

Device status

Customer identification

Year of production ☒ unknown

Tips, accessories

Cleaning type

Pipette mode

Pipette velocity

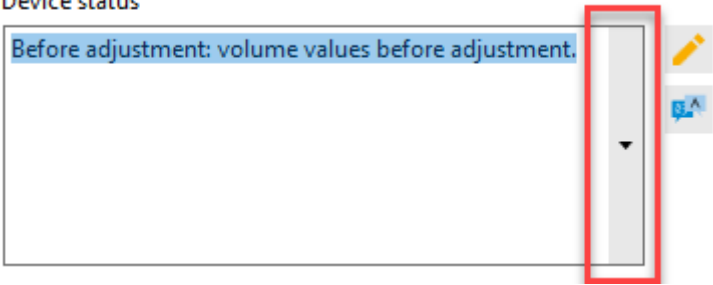
Remark according to customer request

Internal remarks

Cancel Continue

III. 4: Batch test

Field in expanded view	Description
Check box Count up Count down	Count up/down the number of the calibration certificate

Field in expanded view	Description
Serial number	Enter the serial number of the device to be checked here.
Volume range	The dialog adopts the previously selected volume range. You can adjust this again here.
Test plan	The dialog applies the previously selected test plan. You can adjust this again here.
Device status	Select a text describing the status of the device from predefined texts here. You can also use individual word blocks  to describe the device status. Alternatively, you can also enter free text here. You also translate this text in this window. Device status  You can create text modules and ready-made texts in master data maintenance under General; see Selection text
Customer identification	Assign a customer identifier
Production year	Enter the year of production of the device
Tips, accessories	If a device is tested with different tips than the customer uses, this information must be output. You can select the tips or the accessories used for this purpose.
Cleaning type	Select the cleaning type used for cleaning before the test.
Pipette mode	Specify the pipetting mode in which the pipette was tested.
Speed	Specify the speed settings used during the test.
Remark according to customer request	Free text field; enter the appropriate remarks.
Internal remarks	

See also

- Business partner management (p. 124)
- Master data maintenance (p. 69)
- Test planning (p. 112)

7.2 Selecting test equipment for the test

The screenshot shows the EASYCAL™ 5 software interface. At the top, a header bar displays 'BRAND - EASYCAL™ 5' (1) and a sequence of test criteria: '2022-01-26-18-10-32-EA / STD-2 - S123456 - EC-704106 BRAND + CO KG Transferpette® Fixed volume 5µl' (2). Below this, a 'Test equipment' section shows 'nominal vol.' with a green checkmark (3). A table lists required test equipment types (4) and their corresponding test equipment numbers (5). The table has three columns: 'Air temperature', 'Temperature of the medium', 'Relative humidity', 'Air pressure', and 'Weight'. The first column lists 'Thermometer', 'Thermometer', 'Hygrometer', 'Barometer', and 'Single-channel balance'. The second column lists 'EC-Test Multimeter', 'EC-Test Multimeter', 'EC-Test Multimeter', 'EC-Test Multimeter', and 'EC-Test-Balance'. The third column lists 'EC-Test Multimeter', 'EC-Test Multimeter', 'EC-Test Multimeter', 'EC-Test Multimeter', and 'EC-Test-Balance'. At the bottom, a navigation bar includes buttons for 'Back', 'Previous device', 'Previous characteristic', 'Next characteristic', 'Additional device', 'Device evaluation', 'Complete test', and 'Print preview' (7). The status bar at the very bottom shows 'EASYCAL Admin', 'Last status: Test characteristics concerned was saved', 'Connected to Local database', 'V 3.0.17.218', and a help icon.

- 1 Example identifier of the check
- 2 Sequence of test criteria. You switch through the test criteria using the buttons at the bottom of the screen (Previous criterion | Next criterion)
- 3 The required test equipment types, which stem from the test criteria, are listed here. A selection may also have to be made here. For multi-channel pipettes, for example, it is necessary to make a distinction between “single-channel balance” and “multi-channel balance.”
- 4 This column displays notes about the test equipment such as the pending calibration of a balance or the pending measurement function test dictated by the location of the test; see Location for test equipment, p. 89.
- 5 Here you select the test equipment by its test equipment number.
- 6 Display additional information about your order via the “Info” button. You can hide this information again by pressing the button.
- 7 Show print preview. You will be shown a preview that shows the previous test results. You can assign the certificates to the articles via the certificate assignments; see Assigning certificate templates, p. 110.
- 8 Complete test. Ends the test.
- 9 Device evaluation shows the evaluation of the test; see .
- 10 Add another device that you want to test.
- 11 Switch back and forth between the test criteria.
- 12 Switch to the test of the previous device.

7.3 Performing tests

In this dialog, you perform the measurements yourself. The measurement happens on the basis of the test criteria created in the test plan. Tolerances and limit values against which the device is tested during measurements are also entered there.

BRAND - EASYCAL™ 5

2022-01-26-18-10-32-EA / STD-2 - S123456 - EC-704106 BRAND GMBH + CO KG Transferpette® Fixed volume 5µl

PO number: 2022-01-26-18-10-32-EA | Test type: STD - standard values | Status: In progress | Calibration object: EC-704106 - Transferpette® Fixed volume 5 µl

Serial number: S123456 | Device: 1 / 1 | Test characteristic: 1 / 1 | Volume range: 5µl (5 - 5)

Certificate no.: STD-2 | Test plan: EC-STD-ISO-PI(p)-5-fix - V.0 | Accessories:

Display test plan (read-only) | Test notes

Ambient data

20 °C | 20 °C | 40 %rh | 960 mbar

Request ambient data

Target value: 5 µl | Number: 4 / 10

Test equipment > nominal vol.

Number	Time	Measured value	Volume [µl]	Sta
1	1/26/2022 6:16:59 PM	0.005000 g	5.014	
2	1/26/2022 6:17:10 PM	0.005000 g	5.014	
3	1/26/2022 6:17:19 PM	0.005000 g	5.014	
4	1/26/2022 6:17:26 PM	0.005000 g	5.014	

Graph of the measured values

Statistics of device

Accuracy: 0.3 % / 2.5 % ✓

Coefficient of variation: 0 % / 1.5 % ✓

Mean: 5.01 µl

Standard deviation: 0 µl

Measurement uncertainty: 0 µl

Statistics of order

Accuracy: 0.3 %

Mean: 5.01 µl

Standard deviation of the mean: 0 µl

Coefficient of variation of accuracy: 0 %

Mean value CV: 0 %

Back | Previous device | Previous characteristic | Next characteristic | Additional device | Device evaluation | Complete test | Print preview

Connected to: Local database v.5.0.17.218

Prerequisite:

- ✓ The test equipment was selected.
- a. Enter the measured weight value [g] at *New measurement*: . Example: 0.01 g
- ➔ By means of a Conversion factor , the volume [here µl] is converted from the weight [g], taking into account various physical parameters (see DIN EN ISO 8655-6 – correction factor Z).
- b. Click “Apply measurement” to create a new entry in the measurement value table.
- ➔ If the test equipment is to be entered manually, the Enter measured values

Enter measured values

Temperature difference: 0.00 °C | 0.5 °C

Weight: 5 g

Air temperature: 20 °C | (20°C - 25°C)

Temperature of the medium: 20 °C | (20°C - 25°C)

Relative humidity: 40 %rh | (40%rh - 60%rh)

Air pressure: 960 mbar | (960mbar - 1025mbar)

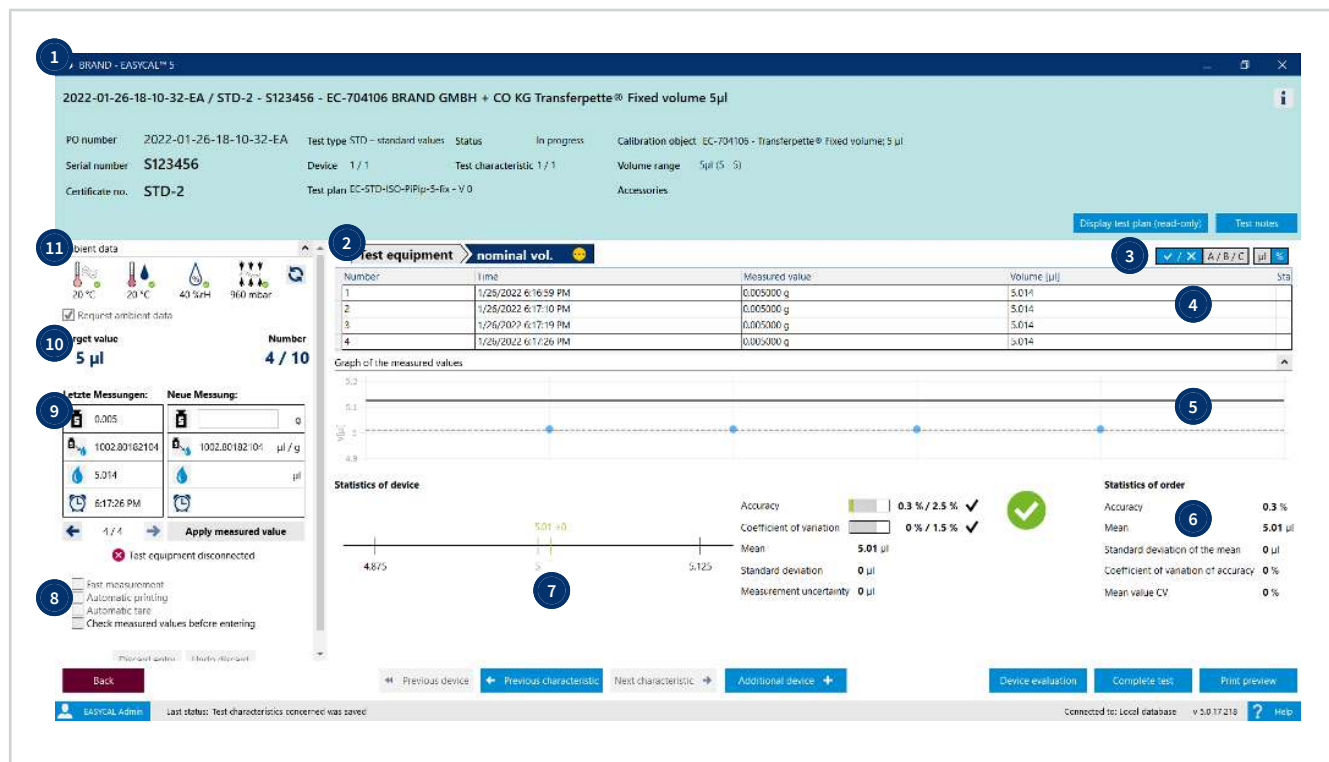
Manual entry checkboxes: [x] Manual, [x] Manual, [x] Manual, [x] Manual, [x] Manual

Cancel | Apply

dialog opens. You can adjust the test equipment values manually here. The value is marked in red if it is not in the allowed range.

- c. Enter the required number of measured values one after the other.
- d. After you have completed the measurement series, click on Next criterion and work through the test criteria one after the other.

The measurement in detail



- 1 Via the “Info sign”, you expand the view and now see order-specific information. The Show test plan (read-only) shows you the test plan.
- 2 Overview of the test criteria from the test plan. You can select these individually in order to jump to the relevant section of the test. If a test criterion has been successfully tested, a green tick ✓ is displayed on the test criterion. The yellow circle indicates pending tests.



- 3 Here you change the views for the error limits:
 - Passed/failed
 - Evaluation criterion A/B/C
 - Display A and CV in absolute values or relative values.
- 4 Overview of the measurements made so far. The success/non-success of the measurement is displayed in the “Status” column. Discarded measurement series are also displayed in this view.
 - ✓: The measurement was successful. The measured values are within the permitted deviation.
 - ⊖: The measurement series was discarded.
 - ✗: The measurement was not successful. The measured values are outside the permitted deviation.

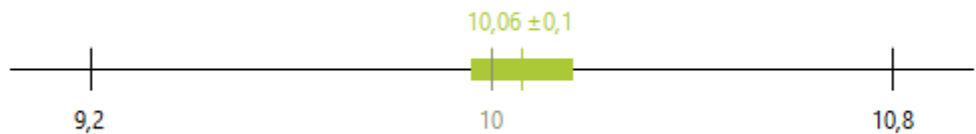
5 The graph shows the dispersion of the measured values around the calculated mean of the measured values. The mean value can be seen as a thin dashed line. The measured values are displayed as blue dots and indicate whether they are within the error limits. The error limits can be seen as a solid line in the graph. The bold dashed line indicates the measurement uncertainty of test procedure – it is visible only if the user specifies a value in the “Measurement uncertainty” section in Test plan > Test criterion.



6 In the “Order statistics” section, you will find mean values for the previous test. For accuracy and coefficient of variation, the previous values are compared to the permissible error limits.

		Statistics of order	
Accuracy	0 % / 10 %	Accuracy	0 %
Coefficient of variation	0 % / 4 %	Mean	0 µl
Mean	0 µl	Standard deviation of the mean	0 µl
Standard deviation	0 µl	Coefficient of variation of accuracy	0 %
Expanded measurement uncertainty	0 µl	Mean value CV	0 %

7 In the “Device statistics” section, you can see in which area the measured points are distributed. In this example, the required set point is more likely to be exceeded than not reached.



The green vertical line shows the mean value of all measurements made so far.
The green bar shows the measurement uncertainty of the test procedure in relation to the mean value.

8 In this section, you can set some parameters for the measurement or also discard the current measured value in the measured value table. The discarded measured values are not deleted from the table but rather grayed out.

☐ Fast measurement
☐ Automatic printing
☒ Automatic tare
☐ Allow all measured values
☐ Check measured values before entering

Discard reason identified as outlier.

Discard entry
Undo discard

Fast measurement:

(This is only available if the balance is connected via an interface.)

Automatic change of the test criterion as soon as the number of required valid measurements has been reached. Measurements that would invalidate the result are discarded automatically. Once all criteria have been fully tested, the software automatically switches to the next device/calibration certificate. In doing so, the creation of a new certificate is offered.

Automatic printing:

In conjunction with fast measurement, the corresponding certificate is printed automatically when the device is finished.

Auto tare:

If a balance is connected to the computer, the balance is automatically tared.

Check measured values before entering:

Placing a check mark on “Check measured values before entering” causes the “Enter measured values” dialog to appear during a test with a balance and fully automatic transfer of environmental data. The user can check their measured values again manually and make changes. One application in particular is volumetric flask testing, in which the volume or weight is determined before the temperature of the media is measured in its interior.

9 In this section, you start the individual measurements. You enter your weighing result in the weight field. This value is then converted into a volume via the conversion factor (correction factor Z, relevant parameters). In addition, the time of the measurement itself is also recorded.

If a balance is connected, the weighing result is entered automatically for each new weighing.

	 0,0002 g
	 1002.80182104 µl / g
	 2005.6 µl
	
← 0 / 0 →	Apply measured value

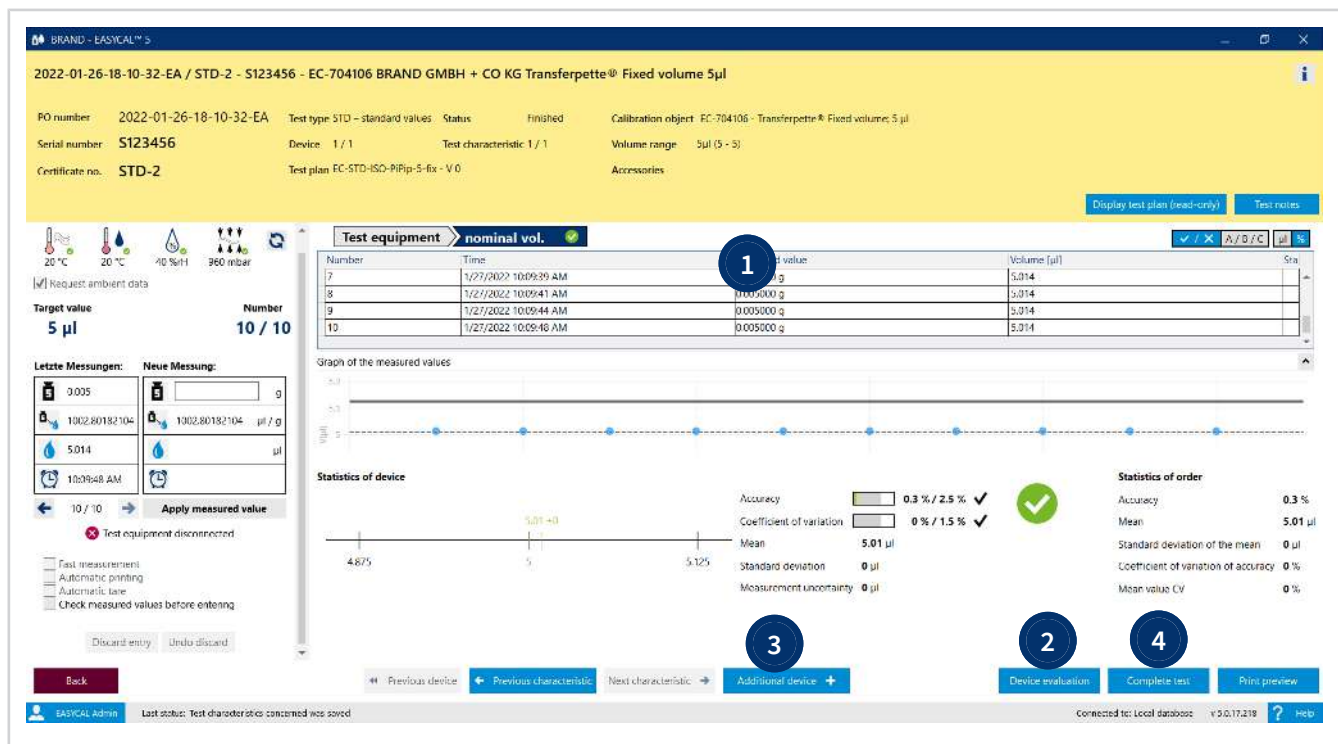
10 This section displays the set point and the required number of tests.

- 11 The ambient data is displayed. If the test equipment is connected to the computer, you can update the values via the button. If the test equipment is within the permitted value range, it is marked green.

See also

→ Faulty measurements in the test (p. 55)

7.4 Finishing a test



- 1 The section always has the color of the respective status (same colors as in the order overview). When all test criteria are completed, the status is set to “Complete” and the color changed.
- 2 In “Device evaluation,” you can view the test details or place the individual measurement series on top of one another in order to see the deviations between the individual target values.
- 3 Test several devices during a batch test or during an individual test; in the next step, switch to test the next device by clicking the Next device button.
- 4 Finish test: The opened order appears. Tests that are still open or already completed are listed in the device/calibration certificate overview, see Order details, p. 52.

7.5 Order details

>> Main menu > Orders and calibration certificates > Select order

BRAND - EASYCAL™ 5

Order 2021-10-08-12-39-47-EA

Test type: STD – standard values Article: EC-704172 - Transferpette® Variabel; 5 - 50 µl
Order no.: 2021-10-08-12-39-47-EA Test plan: 1848.0 - EC-STD-ISO-Pip-50-var-HBw
Order type: Individual test Tester:
Lot size: 1
Random sample size: 1 / 1 Order no.: Customer:
Status: Created OC-Number: End customer:

Notes on the order

Communication with the customer

Test characteristic

Test characteristic	Description	Target va	Mean	Tol target	Tol OK	A% target	A% OK	CV% target	CV% OK	CV%	CV% OK
1	2. TV	5µl	µl			10 %	%	4 %	%	%	%
2	1. TV	25µl	µl			2 %	%	0.8 %	%	%	%
3	NV	50µl	µl			1 %	%	0.4 %	%	%	%

Device/calibration slip overview

Calibration slip type	Internal no.	Calibration slip no.	Serial number	Article code	Conducted tests	Status	Device status	Tester	Linked calibration slip
Individual test	3	STD-3		EC-704172	0	Created			

11

1 2 3 4 5 6 7 8

Evaluation/release Print internal log Print certificates New calibration slip

Back Back to the order overview Save

1

Edit calibration certificate: The dialog to edit the calibration certificate opens; see Creating an order, p. 43.

2

View/continue test: Continue or view the test; see Performing tests, p. 48. .

3

Individual evaluation: Open the individual evaluation.

4

Export certificate: The print preview will be opened. Print the certificate or save it.

5

Add new linked calibration certificate: You create a linked calibration certificate. This appears in the device/calibration certificate overview.

6

Call up device history: If the device has been tested at least once, call up the device history. Otherwise, the button remains inactive.

7

Create new reminder: The device will be added to the list of reminders. An e-mail can be sent automatically to a business partner; see Business partner management, p. 124.

8

Calibration certificate - details: Details of the calibration certificate are output.
Example:

Calibration slip – details

Internal no.

3

Calibration slip no.

STD-3

Article code

EC-704172

Serial number

Date of calibration

1/1/0001

Calibration mark date

0001-01

Client version

5.0.13.210

Server version

5.0.13.130

Close

9

Show test plan (read-only): Displays the test plan in read-only view. To edit the test plan, see Test plan overview, p. 112

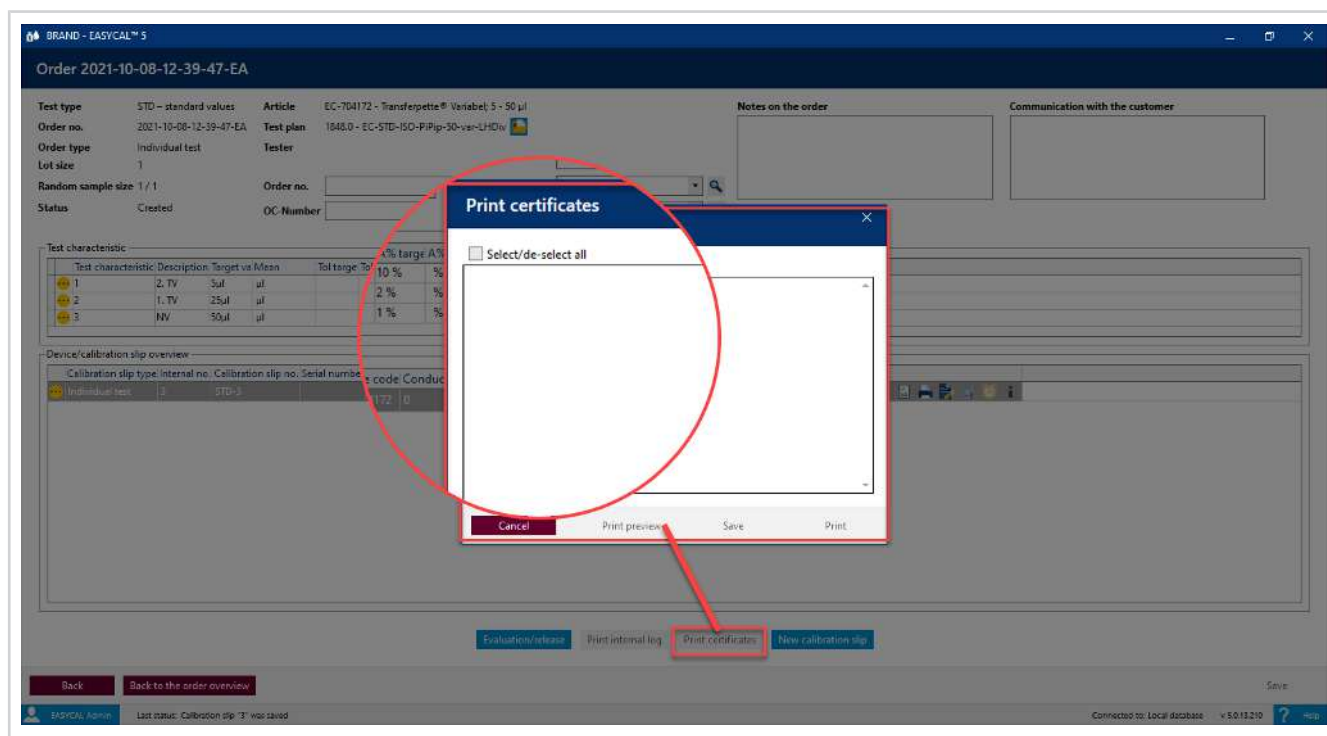
- 10 Test criteria: In this section, the statistical evaluation of the test criteria is shown over the entire order and the respective evaluation of values displayed.
- 11 Device/calibration certificate overview: The devices to be tested in this order are listed. Here, a device is assigned to one calibration certificate at a time.

In the case of a batch test, the further random samples are located here. In the course of the further test, a calibration certificate is also issued to each device of the random samples.

Device/calibration slip overview

Calibration slip type	Internal no.	Calibration slip no.	Serial number	Article code	Conducted tests	Status	Device status	Tester	Linked calibration slip
 Individual test	3	STD-3		EC-704172	0	Created			     

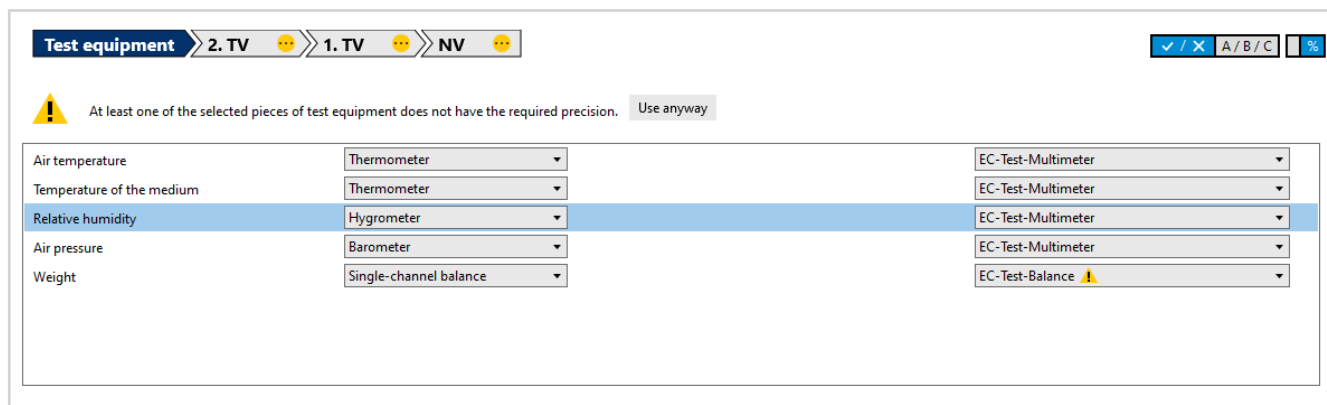
7.6 Printing/saving a certificate



- You can print or save one or several certificates by placing a checkmark next to the required certificates.
- Select print preview. Choose from the following options in the print preview. Print the certificate, save as PDF only and save and print.

7.7 Faulty measurements in the test

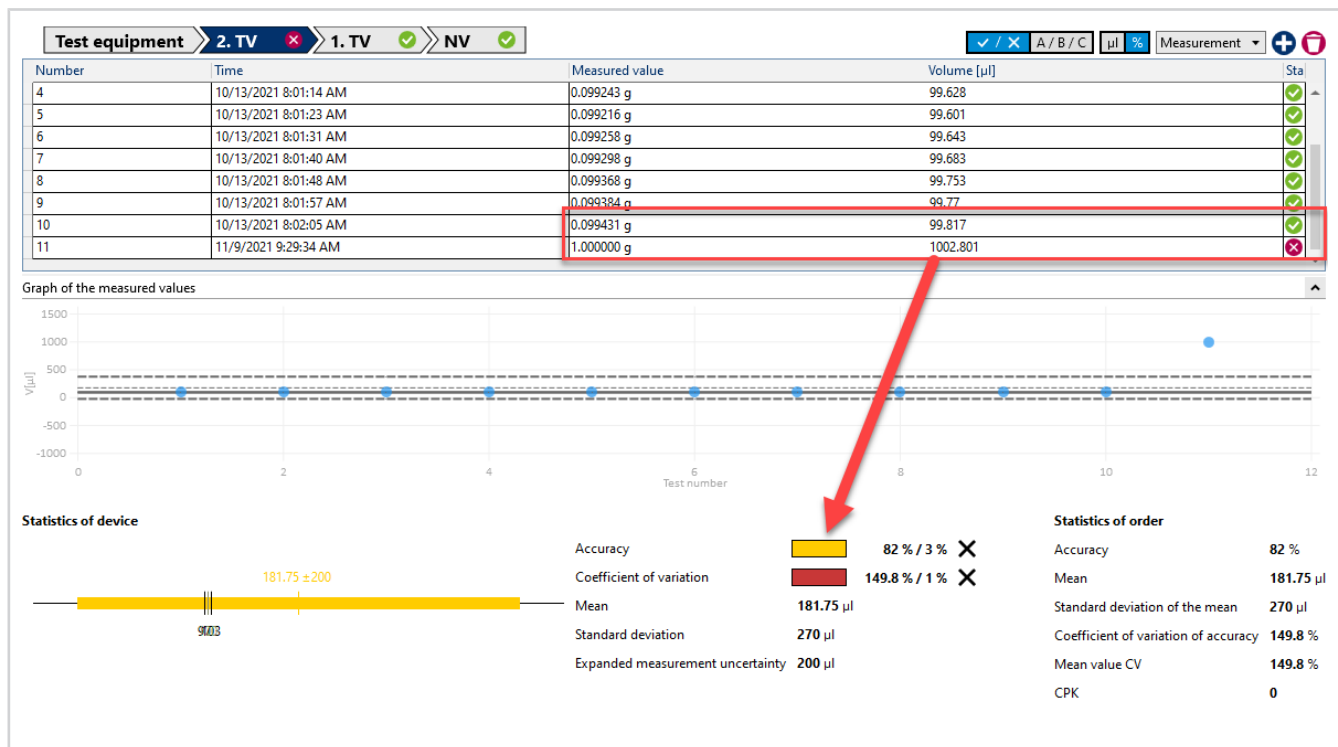
Test equipment imprecise



If test equipment is used which does not have the required precision, the warning triangle is displayed. Use a different piece of test equipment.

Statistical deviation

If a measured value exceeds or falls short of a statistical limit, the entire measurement can no longer be successful.



Example:

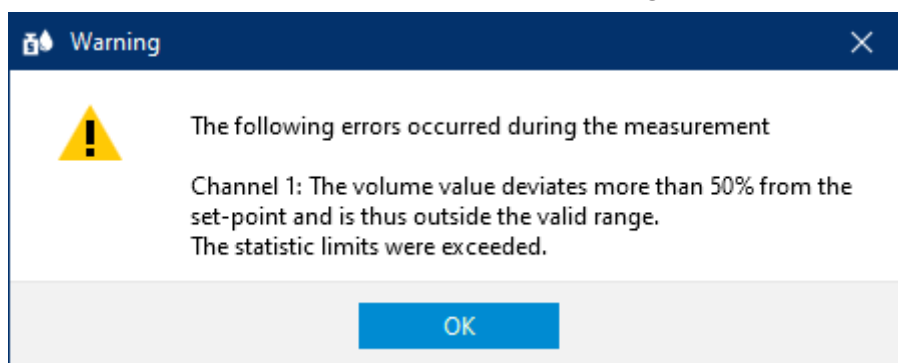
For a target volume of 100 μl, the coefficient of variation is 0.3 μl [0.3 %] and the accuracy is 0.8 μl [0.8 %]. A measurement now produces a result of 99.3 μl; this means a large target volume deviation of the measuring point in relation to the other measuring points, so that the required coefficient of variation can no longer be achieved. Since the coefficient of variation expresses how much the individual measuring points vary, the required precision can no longer be met (i.e. the reproducibility of doses) despite good accuracy.

Solution:

Discard the measurement in question as a possible outlier and repeat it.

High percentage deviation from the target volume

There was a large deviation from the target volume. The measured value exceeds the maximum target volume limit, see Parameters and limits, p. 131 Max. target volume difference



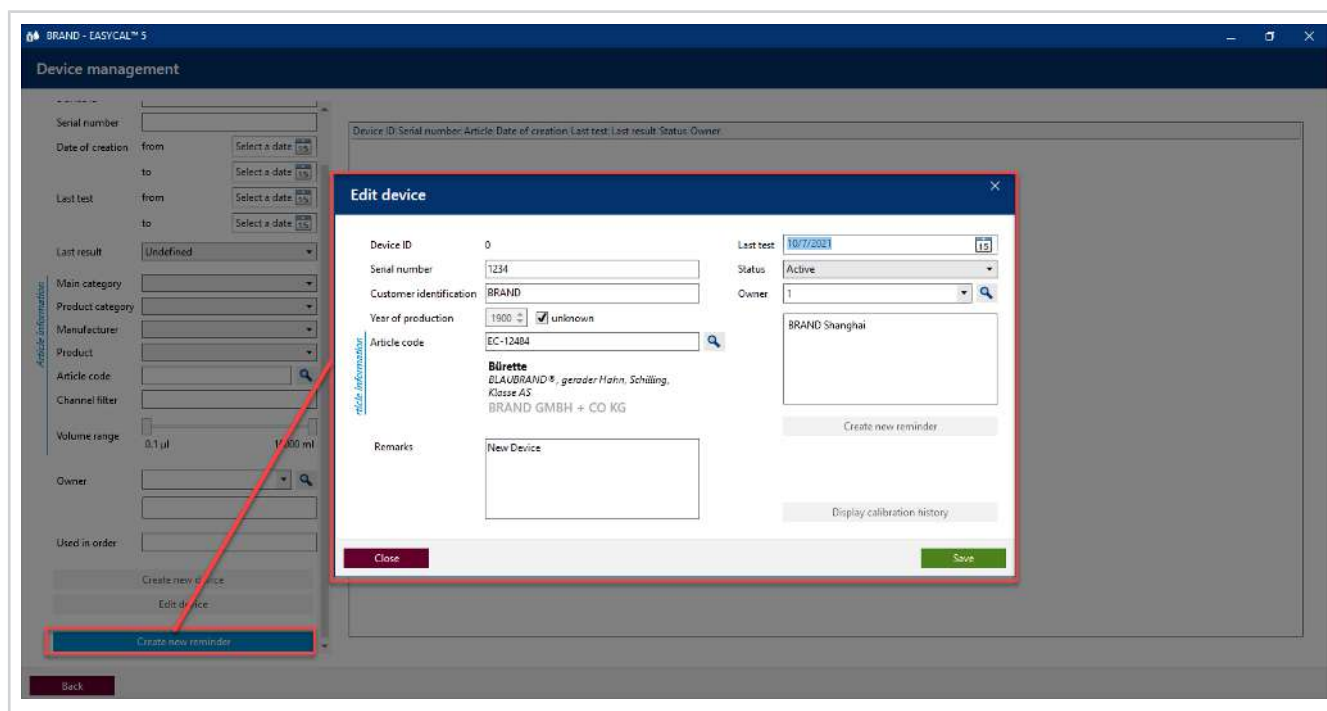
Solution:

Discard the measurement in question as a possible outlier and repeat it.

8 Device management

>> Main menu > Device management

8.1 Creating a new device



In this dialog, you can create a new device data set, assign it to an article, and specify who owns the device.

Field	Description
Device ID	The Device ID ID is automatically assigned when you click “Save.”
Serial number	Enter the serial number printed on the device.
Customer identification	Enter the designation with which you describe the device (e.g., Lab 1, Pipette 3).
Production year	Enter the year of production or check “unknown” if you cannot determine it.
Volume range	If only one volume range is possible, this is selected directly. In the case of several possible volume ranges, the selection remains empty. You then select the correct volume range for the device to be tested.
Remarks	Enter remarks, possibly describing the optical condition or discolorations in the case of an older device.
Last test	Enter the date when the device was last tested.
Status	Enter the status of the device. You can use it to track device usage. The following statuses are available to you Not specified Active Defective Sorted out
Owner	Select the owner of the device. See Business partner management, p. 124

8.2 Searching for devices

Filter

Status:

Device ID:

Serial number:

Date of creation: from to

Last test: from to

Last result:

Main category:

Product category:

Manufacturer:

Product:

Article code:

Channel filter:

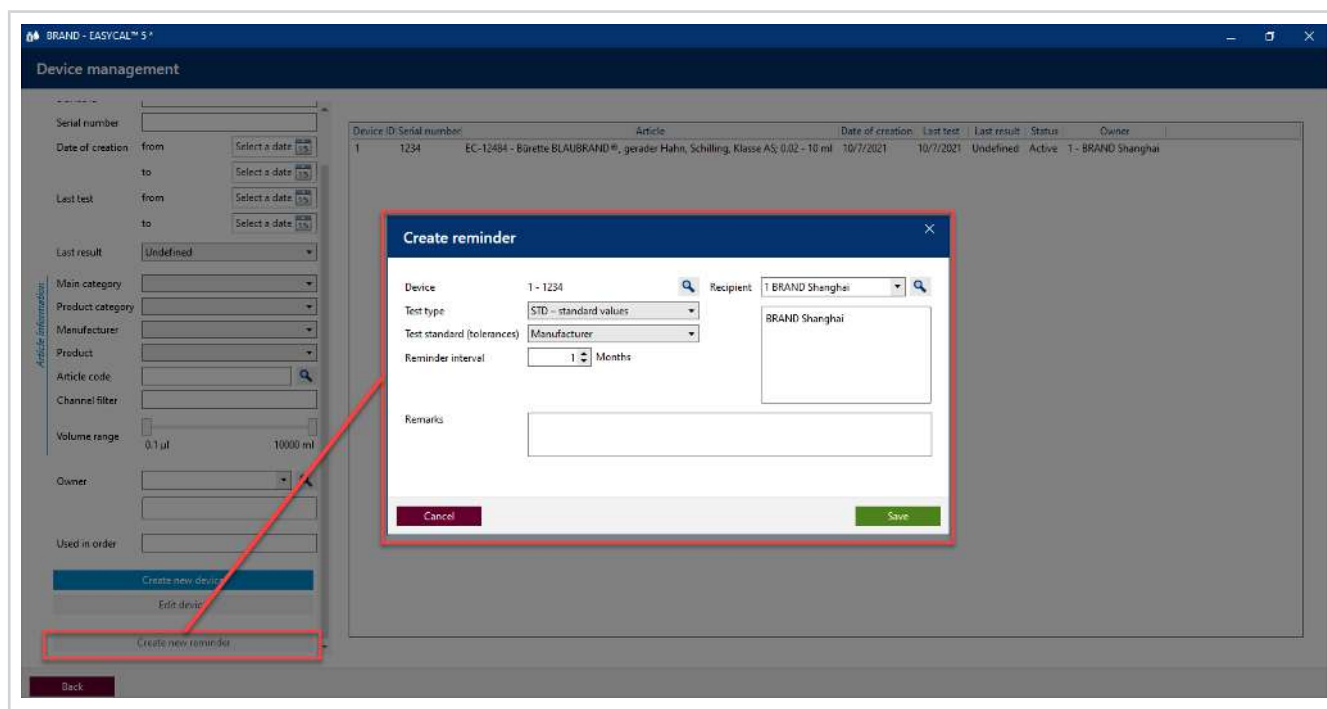
Volume range:

Owner:

Used in order:

Search for devices via the filter section. There you can search by device ID, serial number, time periods, product categories, channels or volume ranges. The search result list is further narrowed down for each criterion entered.

8.3 Creating a new reminder



In this menu, you can also create a new test reminder. If you have marked a device in the list, the device number is applied automatically. You still then define the test type, test standard, reminder interval and recipient. See Reminder service, p. 140 and the settings under Automatic reminder, p. 134.

9 Administration

>> Main menu > Administration

In this menu, you manage the fundamentally required information:

- User
- Master data maintenance
- Create company
- Certificate templates
- Test planning
- Data import and export
- Business partner management

9.1 User

>> Administration > Manage users

In this menu, you create users and user groups and manage the user authorizations.

9.1.1 Test types (user authorizations)

A test type describes which requirements are placed on a test. Test types are intended to assist in the organization of test plans and certificate templates.

Via the test type and user management, a user can be allowed or forbidden access to certain test types.

The list of test types cannot be changed.

Test type	Meaning
Standard values (STD)	This test type applies to test plans with values as specified in the standard of the corresponding article (e.g., ISO or USP).
Manufacturer values (MANU)	This test type applies to test plans with values as specified by the device manufacturer (insofar as they deviate from the standard).
Customer-specific	This test type applies to test plans that do not follow any particular logic. No corresponding test plans are supplied. The EASYCAL™ 5 software often provides both a test plan based on standard values and manufacturer values for liquid handling equipment. The user must decide in this case.

9.1.2 Notifying users

(Only in server installations)

Notify user(s)

☒ Notify all logged in users
 ☐ Notify certain user(s)

Dear all, please log out from noon to 1 pm for program maintenance. Thanks

Warning: Messages sent via this system can theoretically be read by all logged-in users. Please do not send confidential information via this system.

Back
Send

You can send messages to individual users or all logged in users. This is intended primarily for administrative purposes. These messages appear in a window. The recipient cannot reply to the message directly.

9.1.3 Managing user groups

BRAND - EASYCAL™ 5

Manage user groups

Search

Type to search

User groups ID

Group name

1	global admin
2	system admin
3	data manager
4	testing staff
5	supervisor

Delete group

Back

New group

Edit group

User groups ID

0

Group name

Rights

Members

Test type	Right

Test type

Right

+

-

Save

In this menu, you can create, edit and delete user groups. You define which permissions are assigned to test types and which members belong to the user groups.

9.1.3.1 Creating user groups

BRAND - EASYCAL™ 5

Manage user groups

Search

User groups ID	Group name
1	global admin
2	system admin
3	data manager
4	testing staff
5	supervisor

User groups ID

Group name

Test type	Right
-----------	-------

Test type Right

In this menu, you create user groups. After you create the group and assign permissions to it, assign users to the group. Users can be assigned to multiple groups.

- Click on New group.
- Assign a group name. The User groups ID ID is filled in automatically.
- Select the desired test type from the Test type list and the desired authorization from the Permissions list.
- By clicking on the “+” sign, you add the pair of test type and authorization. According to this scheme – select Test type and Permissions – add more permissions.

9.1.3.2 Assigning permissions to users

The screenshot shows the 'Manage user groups' window. On the left, there's a search bar and a list of user groups with IDs 1 through 5 and names like 'global admin', 'system admin', 'data manager', 'testing staff', and 'supervisor'. On the right, there's a form for 'New group' or 'Edit group'. The 'User groups ID' is 0 and the 'Group name' is 'Order processing'. Below this, there are tabs for 'Rights' and 'Members'. The 'Members' tab is active, showing a table with 'Test type' and 'Right' columns. The 'Test type' is 'GEN - General' and the 'Right' is 'Create/edit device'. A '+' button is next to the right dropdown. At the bottom, there are 'Back' and 'Save' buttons.

In this menu, you can assign additional members to the user group by clicking the “+” symbol. In the members list, all users assigned to the selected user group are listed. All users of this group have the same permissions. A user can also be assigned to several groups.

9.1.3.3 Suggestions for user groups

The software provides various user groups as suggestions. Of course, you can also create your own user groups or change the existing ones. An explanation of these suggestions can be found below.

User group suggestion	Description
Global Admin	Users of this group can change or configure all parameters of this program. Accordingly, only employees of an IT department should be assigned this permission since it deals with developing the infrastructure.
System Admin	Users of this group can change and configure the parameters of this program, which are required for normal operations. Example: Creating certificate templates that are used by all.
Data Manager	Users of this group are concerned with data maintenance. Example: Creating customer or supplier data. Creating device data.
Supervisor	Users of this group release tests and calibration certificates.
Test staff	Users of this group perform the actual tests.

9.1.3.4 Available permissions

The following permissions are available to you per test type. The permissions are not cascading; that means a user with the permission “Release article master data” does not automatically have permission to create master data as well. Therefore, the required permissions must be selected precisely.

Permission	Description
Create/edit device	With this permission, the user can add new devices in device management or edit existing data sets. See Device management, p. 57.
Create/edit article master data	With this permission, the user can add new articles in the article master data or edit existing data sets. This also applies to expanded article master data. See Master data maintenance, p. 69.
Release article master data	With this permission, the user can release article master data. See Master data maintenance, p. 69.
Create/edit users	With this permission, the user can create or edit new users. This involves setting passwords or assigning permissions. See Managing users, p. 68.
Create/edit user group	With this permission, the user can create user groups or edit existing user groups. See Managing user groups, p. 61.
Create/edit customer	With this permission, the user can create new customers or edit existing data sets. See Business partner management, p. 124.
Create/edit supplier	With this permission, the user can create suppliers or edit existing data sets. See Business partner management, p. 124.
Create/edit test equipment	With this permission, the user can create new test equipment or edit existing data sets. See Test equipment, p. 88.
Edit workstation settings	With this permission, the user can edit their own workstation settings or those of other employees. See Workstation settings, p. 126.
Create/edit company data	With this permission, the user can edit the company data. See Create company, p. 96.
Create/edit reminders	With this permission, the user can create new reminders or edit existing data sets. See Reminder service, p. 140.
Create/edit general data	With this permission, the user can create general master data or edit existing data sets. See Master data maintenance, p. 69.
Import/export of data	With this permission, the user can import or export master data, orders and certificates from group data. See Data import and export, p. 124.
Notify user	With this permission, the user can send messages to other users. Example: An administrator asks other users to log out due to an update. See Notifying users, p. 60.
Edit global settings	With this permission, the user can make global settings for all users. Example: Adjusting limits.

Permission	Description
	See Global settings, p. 130.

9.1.4 Configuring users

9.1.4.1 Initial password

When creating new users, assign an initial password for each user, which the user subsequently changes. The user you use to create the other users is named the default user.

NOTICE

Change default user

After completing the configuration work, change the default user (user: admin | password: start) to avoid unauthorized access to the system!

9.1.4.2 Logging in

Logging in

When the EASYCAL™ 5 program is started, a login dialog appears. The user logs in here with their user name and password.

Reassign password

- Select user from the search list.
- When creating a new user: Loginname assigned. Otherwise, this is formed from first and last name in the scheme `last name-first name`.
- Enter Password, and repeat password.

Reset password

Reset the password of a user via this dialog.

- a. Select user from the search list.
- b. Click on Edit user.
- c. Click “Reset password”.
- d. If you have assigned a new password, share the password with the user. This person logs in with the password and gives themselves a new password.

9.1.4.3 User groups



User groups ID	Group name
1	global admin

User groups

global admin + -

Assign the selected user to a user group by selecting a group under “User Groups” and pressing the “+” button to add. You remove the user from a group by marking the group from the list and pressing the “-” button. To create a user group, see Managing user groups, p. 61.

9.1.4.4 Permissions

Rights

Inherited group rights

Test type	Right	Inherited from
SPEC – Customer specific	Create/edit certificate template	Global admin

Specific rights

Test type	Right
-----------	-------

Test type

GEN – General

Right

Edit workstation settings

+

-

Inherited group permissions are shown in the upper section. If several groups are assigned to the user, this overview shows all permissions of all groups.

Specific permissions are displayed in the lower section. These can be given to the user via the “+” button or removed via the “-” button.

9.1.4.5 Tester

Tester

Inspector identification

File path for signature file

...

Enter here the verifier identifier (any characters) and the path to the signature file (in .jpg, .bmp, .png, .gif format). This can be inserted on certificates.

NOTICE

Paths to files.

If the file (e.g. signature file or logo) is to be available to several users, it is better to store it in a network drive. Because the files are linked only by paths, a locally stored file may then not be usable by all users.

9.1.5 Managing users

BRAND - EASYCAL™ 5

Manage users

Search

User ID	Last name	First name
1	Admin	EASYCAL

New user **Edit user**

User ID

Title

First name

Last name

E-mail

Login **User groups** **Rights** **Tester**

Log-in name

Password

Repeat password

User management allows you to create individual users, edit their data and assign permissions to users. This section is divided into the user overview, an input form for entering basic data and a section that permits further configuration.

9.1.5.1 Searching users

BRAND - EASYCAL™ 5

Manage users

Search

User ID	Last name	First name
1	Admin	EASYCAL

a. Enter the ID or a part of the name into the search form.

➔ The search result changes right after entry.

9.1.5.2 Creating users

New user	Edit user
User ID	0
Title	
First name	
Last name	
E-mail	

- Click on New user.
- Enter the user data. The User ID is assigned automatically. Fields marked with an asterisk (*) must be filled out.
- Assign a Loginname and password.
- On the bottom right, click on Save.
- Make additional settings.

9.1.5.3 Editing users

New user	Edit user
User ID	2
Title	
First name	Karl
Last name	Example
E-mail	

- From the search section, select the user that you want to edit.
- Click on Edit user
- Edit the user, their password and other data.
- On the bottom right, click on Save.
- Make additional settings.

9.2 Master data maintenance

>> Main menu > Administration > Master data maintenance

In the broadest sense, the [>>master data<<](#) describes items and associated device data as well as general master data such as management functions in the laboratory. The aim of master data maintenance and its implementation is also to define uniform terms and minimize redundant data sets.

Master data ranges	Description
Article data (Relevant for tests)	In the item data, you describe the master data of an item, whereby an item can also always stand for a series of similar devices.
Expanded article data (Relevant for tests)	In this area, you define item data that defines how to handle the item during the test. Here you can define the required accessories, requirements from standards, materials, or how to clean the items.
Random sample scheduling (Relevant for tests)	In this area, you define the parameters for the relative or absolute random sample test. They describe test procedures and specify temperature differences.
Test equipment (Relevant for tests)	In this area, you define the available test equipment. Test equipment is a tool used to calibrate a device such as a micropipette. Example: Thermometers, balances, measuring devices.
General (Possibly relevant for tests)	In this area, you make general settings in the master data, including positions within a company.

9.2.1 Article data

In this section, both new article data sets and product data sets can be created, and those that already exist can be edited. First and foremost, data sets are articles. These describe the products to be tested. However, products can also be created without assignment to an article. These product data sets can be used for later articles.

9.2.1.1 Articles

The screenshot shows the 'Articles' management interface. At the top, there is a search bar and a status dropdown set to 'Not specified'. Below this is a table of existing articles:

Article code	Manufacturer	Volume range	Status
EC-10002	0		
EC-10004	0		
EC-10012	0		
EC-10014	0		
EC-100210	0		

Below the table are buttons: 'New article', 'Copy article', 'Generate art. code', 'Edit', and 'Show previous versions'. The 'Status' is set to 'Change release status'. The form below includes fields for:

- Base article
- Article code
- Main category
- Product category
- Manufacturer
- Product
- Design norm
- Alternative art. code
- Supplier

There are also sections for 'Product variations available' and 'Selected product variations'. A red message states: 'At least one volume must be selected'.

An article data set describes several identical products. Create a new article here.

Field	Description
Base article	By clicking on the  button, select a Model on which you would like to base the article.
Article code	 You can either enter the article number manually or generate an article code using the Generate article code key. Article with the prefix “EC-” cannot be changed. However, you can copy these articles and then edit the article under new article code. The article code must be unique. If this is not unique (if, as in this example, the number 10 occurs more than once), the field is marked red. A version number is displayed at the right edge of the field; unsaved new articles have version number 0, and all further versions are incremented by 1.
Main category	The main categories describe the principle technology. These are fixed. Selection: Liquid handling Temperature and density measurement Volumetric instruments
Product category	The “Product categories” selection field describes groups of products. These can be created in the “Product categories” tab.
Manufacturer	Manufacturer of the >>instrument<<
Model	Name of the instrument
Available variations	Select specific characteristics to distinguish from other >>instruments<< . These can be created in the “Variations” tab and selected here from the selection box.
Adjustment type	Select calibration type Selection: >>EX<< >>IN<< For volumetric instruments, a basic distinction is made between calibration to ‘In’ and calibration to ‘Ex.’
Material	Selection of the material if relevant for the test.
Volume ranges	Specify volume range to be tested. With the “+” sign, you can open a menu. You can narrow down the selection in the opened menu using the slider bar and select volume ranges from the list.
Design standard	Which standard to apply for the design.
Alternative art. code	Add one or more article codes to the article. With the “+” sign, you can open a menu. Use the “Meaning” selection field to classify the article code and add it.
Supplier	Enter the supplier of the article (e.g., if the test is carried out for an external company)
Channels	Enter the number of channels for multichannel piston-stroke pipettes.
Default accessories	Enter specific accessories here (e.g., the pipette tips recommended by the manufacturer). The information can be displayed in the certificate.

Field	Description
Date modified	Date of the last change as well as the name of the person who made the change.

Creating a new article

- a. Click on New article.

↪ The input form is emptied.

- b. Using drop-down menus and “+” buttons, you can define the article.
- c. If you need a unique article identifier, you can generate it using the “Generate article code” button.
- d. Click on Save.

Copying an article

- a. Select an article from the search list in the upper section.
- b. Click on Copy article.
- c. Edit the article as desired.
- d. Click on Save.

9.2.1.2 Product

BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Article

Product

Product variation

Manufacturer

Product category

Volume range

Search

Product	Vol	Product category	Manufacturer
Bürette	0	Bürette	BRAND GMBH + CO KG
Varispenser® plus	0	Einzelhubdispenser	Eppendorf AG
VITLAB® genius	0	Einzelhubdispenser	VITLAB GmbH
VITLAB® piccolo 1	0	Einzelhubdispenser	VITLAB GmbH
VITLAB® piccolo 2	0	Einzelhubdispenser	VITLAB GmbH
Varispenser® 2	0	Einzelhubdispenser	Eppendorf AG

New product

Edit

Product category

Manufacturer

Product designation

Product variations

A product describes a laboratory device. Use this dialog to create new devices or edit devices that have already been created.

Field	Description
Find method	Enter part of the name you are looking for. The selection list is reduced. Example an This search finds Transferpette, HandyStep etc.
Search list	Overview of all models.
Product category	Select the appropriate product category.
Manufacturer	Select the manufacturer of the model.
Product name	Enter a product name.

Field	Description
	By clicking on the “Language” button you can enter the localized product name.
Variations	Select characteristics of the model.

Create new model

a. Click on New model.

➤ The input form will be opened for editing.

b. You can define the model using the drop-down menus.

c. Click on Save.

Edit model

a. Click Model in the search list.

➤ Click on Edit.

b. Edit the data set.

c. Click on Save.

9.2.1.3 Product variation

 BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Article

Product

Product variation

Manufacturer

Product category

Volume range

Search

Product variation	Vol
inkl. Ladeständer	0
braun	0
Schilling:Klasse AS	0
seitlicher Hahn	0
12-Channel	0
Ersatzbürette	0

New product variation

Product variation name

Edit

A product variation is a characteristic that can be used to distinguish product variants from one another (e.g., variable or fixed volume of a Transferpette® S). The product variation entered can then be selected in the Article tab.

9.2.1.4 Manufacturer

 BRAND - EASYCAL™ 5

Master data maintenance

Article data
Additional article data
Random sample plans
Test equipment
General

Article

Product

Product variation

Manufacturer

Product category

Volume range

Search

Manufacturer	Ver
BRAND GMBH + CO KG	0
Th. Geyer GmbH & Co. KG.	0
Human Gesellschaft für Biochemica und Diagnostica mbH	0
Eppendorf AG	0
STARLAB International GmbH	0
Human GmbH	0

New manufacturer

Edit

Manufacturer name

Add a new manufacturer for article selection.

9.2.1.5 Product category

 BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Article

Product

Product variation

Manufacturer

Product category

Volume range

Search

Main category	Product category	Vel
Liquid handling	Mikroliterspritze	0
Volumetric instruments	Bürette	0
Temperature and density measurement	ASTM-Zentrifugenglas	0
Volumetric instruments	Kippautomat	0
Volumetric instruments	Mischzylinder	0
Volumetric instruments	Ersatzbüettenrohr	0

New category

Edit

Description

Main category

Create a new product category or edit those that already exist. In the Main category field, you then specify which higher-level group this product category should belong to.

9.2.1.6 Volume range

🔧 BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Article

Product

Product variation

Manufacturer

Product category

Volume range

Search

0.1 µl

10000 ml

Volume range	Ver
1µl (0.1 - 1)	0
1µl (1 - 1)	0
2µl (2 - 2)	0
2µl (0.1 - 2)	0

New volume range

Edit

Nominal volume

0

▼

Min. volume

0

Max. volume

0

Use the Volume range tab to add additional volume ranges that you can select for the item. You can narrow your search using the slider bar and define the volume range using Nominal volume, Min. volume and Max. volume. The selected unit then applies to all volume ranges.

9.2.2 Expanded article data

In this area, you specify item data that defines how to handle the item during the test. Here you can define the required accessories, requirements from standards, materials, or how to clean the items.

9.2.2.1 Standard

BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Standard

Material

Quality grade

Cleaning type

Accessories

Search

Standard

ASTM E 287

ASTM E 288

ASTM E 969

Customer specification

DIN 12681

DIN 12680

New standard

Edit

Description

ASTM E 969

Section

Title

Enter the name, section and title of a standard relevant for the test, or edit one.

9.2.2.2 Material

BRAND - EASYCAL™ 5

Master data maintenance

Article data
Additional article data
Random sample plans
Test equipment
General

Standard

Material

Quality grade

Cleaning type

Accessories

Search

Material	Vel
AR-Glas®	0
Boro 3.3	0
Liquid handling	0
Manufacturer's specification	0
Perfluoroalkoxy polymers (PFA)	0
Polymethylpentene (PMP)	0

New material

Edit

Description

Short designation

Thermal expansion coeffi

Specify a material that is relevant to the test. Enter the long name of the material in “Designation” and a possibly more familiar designation of the material as well as the coefficient of thermal, cubic expansion in “Short designation.” The coefficient of expansion enters the calculation of the volume via the correction factor.

Example

Designation	Borosilicate glass 3.3
Short designation	Boro 3.3
Coefficient of expansion	0.0000099

9.2.2.3 Quality grades

🔧 BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Standard

Material

Quality grade

Cleaning type

Accessories

Search

Quality gra

Klasse A

Klasse AS

Klasse B

New grade

Edit

Class name

Enter the quality grades as quality-distinguishing attributes.

EasyCal™ 5 708410 V2

Operating manual English

81

9.2.2.4 Cleaning type

 BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Standard

Material

Quality grade

Cleaning type

Accessories

Search

Cleaning type

Autoclave at 2 bar, 121°C

Clean in ultrasonic bath

Cleaning in immersion bath with potassium permanganate

Cleaning in the dishwasher

Manual cleaning with brush, water, and surfactant

Rinse with 2-propanol

New cleaning type

Edit

Name of cleaning type

Specify a standard cleaning here that is to be performed during the test.

9.2.2.5 Accessories

🔧 BRAND - EASYCAL™ 5

Master data maintenance

Article data

Additional article data

Random sample plans

Test equipment

General

Standard

Material

Quality grade

Cleaning type

Accessories

Search

Accessories
149794 VITLAB® Pipettenspitzen 0,5-20µl
149994 VITLAB® Pipettenspitzen 2-200µl
150194 VITLAB® Pipettenspitzen 50-1000µl
150294 VITLAB® Pipettenspitzen 0,5-5ml
150394 VITLAB® Pipettenspitzen 1-10ml
702605 BRAND Pipettenspitzen 0,5-5ml

New accessory

Edit

Name of accessory

Name accessories for the article. The accessory can be selected during order processing and displayed on the calibration certificate.

Select accessories in order processing, see Creating an order, p. 43, “Creating a calibration certificate.”

Output on the calibration certificate, see Using value fields, p. 102 Category calibration certificate data > Accessories used.

9.2.3 Random sample scheduling

In this area, you define the parameters for the relative or absolute random sample test. They describe test procedures and specify temperature differences.

9.2.3.1 Plan for absolute random sample

BRAND - EASYCAL™ 5

Master data maintenance

Article data | Additional article data | Random sample plans | Test equipment | General

Plan for absolute random sample

Plan for relative random sample

Test method

Temperature difference

Search

Plan for absolute random sample

ISO 2859 - Level G I - AQL 0.4

ISO 2859 - Level G II - AQL 0.4

New plan Edit

Plan designation ISO 2859 - Level G I - AQL 0.4

Absolute random sample ranges

Start	End	Number	C value
2	8	32	0
9	15	32	0
16	25	32	0
26	50	32	0
51	90	32	0
91	150	32	0
151	280	32	0
281	500	32	0
501	1200	32	0
1201	3200	32	0
3201	10000	125	1
10001	35000	125	1
35001	150000	200	2
150001	500000	315	3
500001	999999	500	5

Back

EASYCAL Admin Last status: User group "Order processing" was saved

Connected to: Local database v 5.0.13.210 ? Help

Field	Description
New plan	Create a new plan for the absolute random sample .
Edit	Edit an existing plan. Additionally, a new row will be opened at the bottom of the table. Values can be entered here.
Plan name	Name the plan.
Absolute random sample ranges	You define the random sample areas. Depending on the size of the area, more or less devices are required as a random sample to be tested. Start: Start of the range End: End of range. Number: Corresponds to the random sample size related to the defined range from start and end. C value: Corresponds to the number of defective parts allowed in the random sample.

9.2.3.2 Plan for relative random sample planning

BRAND - EASYCAL™ 5

Master data maintenance

Article data | Additional article data | Random sample plans | Test equipment | General

Plan for absolute random sample

Plan for relative random sample

Search

Test method

Temperature difference

Plan for rel

100% test

New plan Edit

Plan designation 100% test

N value 100

Discard Save

Back

EASYCAL Admin Last status: User group "Order processing" was saved

Connected to: Local database v 5.0.13.210 ? Help

Field	Description
New plan	Create a new plan for the relative random sample .
Edit	Edit an existing plan.
Plan name	Name the plan.
N value	Indicates the random sample size in percent. The number 100 means that all devices in the random sample are tested.

9.2.3.3 Test method

BRAND - EASYCAL™ 5

Master data maintenance

Article data | Additional article data | Random sample plans | **Test equipment** | General

Plan for absolute random sample

Plan for relative random sample

Test method

Temperature difference

Search

Test method

The calibration was performed according to the gravimetric procedure according to DIN EN ISO 4787:2011.

The calibration was performed according to the gravimetric procedure according to DIN EN ISO 8655-6:2002.

The calibration was performed according to the gravimetric procedure according to DKD-R 8-1:2011 (taking into consideration the relevant sections of DIN EN ISO 8655-6:2002).

The calibration was performed according to the gravimetric procedure according to SOP 1087:2017.

Calibration was performed by the gravimetric method using the immersion method under isothermal conditions according to SOP 1088:2017.

The calibration was performed according to the gravimetric procedure according to SOP 1086:2017.

New procedure Edit

Description

Discard Save

Back

EASYCAL Admin Last status: User group "Order processing" was saved

Connected to: Local database v 5.0.13.210 ? Help

Briefly describe a new test method in one line. The texts are used in the test plan, see Create test plan.

9.2.3.4 Temperature difference

The screenshot shows the 'Master data maintenance' window for 'BRAND - EASYCAL™ 5'. The 'Random sample plans' tab is active. On the left, a sidebar lists options: 'Plan for absolute random sample', 'Plan for relative random sample', 'Test method', and 'Temperature difference' (which is selected). The main area has a search bar with the placeholder 'Type to search'. Below it, a table lists temperature differences: 'Tem', '0.3' (highlighted in blue), and '0.5'. At the bottom, there are two buttons: 'New difference category' and 'Edit'. Below these buttons, the 'Delta' value is shown as '0.3' with a small up/down arrow icon.

The value Delta refers to the maximum allowed temperature difference between the test medium temperature (normally deionized water “Quality 3” in accordance with ISO 3696) and the ambient air.

Example:

For DAkkS tests, this value can only be 0.3 °C; for other tests, it can be 0.5 °C.

The value Delta is selected during test planning and should be used for the corresponding test plan.

9.2.4 Test equipment

The software EASYCAL™ 5 requires that the test equipment must be entered before the test; otherwise, the test cannot be performed. In this area, you define the available test equipment. Test equipment tested is a tool used to calibrate or test a device such as a micropipette.

Example:

Thermometers, balances, measuring devices.

9.2.4.1 Test equipment

 BRAND - EASYCAL™ 5

Master data maintenance

Article data
Additional article data
Random sample plans
Test equipment
General

Test equipment

Location for test equipment

Test equipment device type

Manufacturer

Search

Test equipment	Manufactu	Test equipment devic	S
EC-Test-Balance	EASYCAL	EC-Test-Balance	
EC-Test-Multimeter	EASYCAL	EC-Test-Multimeter	

New test equipment

Edit

Test equipment device type

Test equipment number

Serial number

Linked test equipment

Location for test equipment

Can be used for calibration ☐

Out of order ☐

Discard

Field	Description
Test equipment device type	Select the test equipment device type. You can define this in the Test equipment device type tab.
Test equipment no.	Select an internal test equipment number that you use to identify the test equipment in your quality management system.

Field	Description
Serial number	Enter the serial number of the test equipment as assigned by the test equipment manufacturer.
Location for test equipment	Select the test equipment location. You can name this in the “Location for test equipment” tab.
Can be used for calibration	Specify whether the test equipment can be used for a calibration of other test equipment. If selected, assign the target volume for the calibration in % or another unit of measure. The selection is determined by the Test equipment device type.
Out of order	Place a check mark if the test equipment is no longer used or is currently not to be used.

9.2.4.2 Location for test equipment

The screenshot shows the 'Master data maintenance' window with the 'Test equipment' tab selected. The left sidebar contains a tree view with 'Test equipment' expanded, showing sub-items: 'Location for test equipment', 'Test equipment device type', and 'Manufacturer'. The main area has a search bar and a list of locations. Below the list are buttons for 'New location' and 'Edit'. The 'New location' button is highlighted. The form for adding a new location is visible, with fields for 'Name', 'Test equipment device type' (with a sun icon), 'Measurement unit', 'Test equipment that can be used for calibration', 'Test notes', 'Set-point for calibration', 'Comparison type', and 'Tolerance for calibration'. There are 'Discard' and 'Save' buttons at the bottom.

This section describes the properties of a room, in which tests are conducted — i.e. a ‘measuring room.’ These properties must be inspected once per interval and per measuring room; e.g., the preparation of deionized water in the measuring room, in which the conductivity of the water must be checked daily against a limit value.

In Value to be measured, select one of the properties searched for and specify this in the menu.

Field	Description
New location	Define a measuring room. If you click on the “New location” button, the dialog opens for input.
Edit	Edit a location that has already been created
Test equipment device type	Click the  button to add a new measurement function to the location.

Field	Description
Test equipment that can be used for calibration	In order to calibrate the measuring room yourself, you can define test equipment to be used for calibration.
Target value for calibration	Enter the value to be checked during calibration here. Because no units are output, if air pressure is selected, the air pressure set point would apply.
Comparison type	Select how you want to compare set point and measured value. Selection: Measured value is smaller than the set point Measured value is less than or equal to the set point Measured value is greater than the set point Measured value is greater than or equal to the set point Measured value is set point $\pm$ tolerance
Tolerance for calibration	Enter the allowed tolerance for the calibration of the test equipment type. Example: Set point for calibration: 20°C Comparison type: Measured value is set point $\pm$ tolerance Tolerance 1°C If the measured value is 19.5°C, the calibration was successful.

9.2.4.3 Test equipment device type

 BRAND - EASYCAL™ 5

Master data maintenance

Article data
Additional article data
Random sample plans
Test equipment
General

Test equipment

Location for test equipment

Test equipment device type

Manufacturer

Search

Test equipment d
1712 004
20210616-RZ-01
20210616-RZ-02
20210616-RZ-03
20210616-RZ-04
20210708-RZ-01

New device type
Edit
Copy device type

Manufacturer

Type name

Measurement functions
Communication data

	Type of test equipment	
	Value to be measured	
	Measurement unit	
	Precision/measuring range	
	Number of decimal places	0
	Measuring channel	
		☐ Calibration required
	Tolerance for calibration	0
	Number of channels	1
	Test equipment that can be used for calibration	☐ 20210708-RZ-03-W

[Back](#)

In this section, you define a test equipment device type. The device type can be any arbitrary device (e.g. a scale) or a calibration weight. In the “Measurement functions” tab, you define the data that is relevant for the measurement. In the “Communication data” tab, you define the data necessary for the communication between the test equipment and the PC.

9.2.4.3.1 Measurement function

Ill. 5:

Field	Description
Test equipment type	Select the test equipment to be configured from the list (e.g., balance, hygrometer, or barometer).
Value to be measured	Select the value to be measured in the drop-down menu. Example: Air pressure
Measurement unit	Select the unit of measurement. Example: hPa, l, °C
Precision/measuring range	Enter the precision or the required measuring range. The data does not effect the program and is for information purposes only.
Number of decimal places	Enter the number of decimal places with which the measured value is output by the test equipment. Note that the test plans marked with the prefix “EC-” assume that the weight values are output in the unit grams and that the number of decimal places refers to this unit.
Measuring channel	There are measuring devices with several channels to which different sensors are connected (e.g., channel for temperature, pressure, or humidity). Enter the names of the available measuring channels here.
Calibration required	Place a check mark in the box if the measuring function must be calibrated.
Tolerance for calibration	Enter the required calibration tolerance.
Test equipment that can be used for calibration	Enter which test equipment can be used to calibrate the test equipment.

New device type

- Click on New device type.
- Via the Manufacturer selection field and the Type name field, you create the device.

- c. Click on *.
- d. Configure device, setting at least Test equipment type, Value to be measured and Measurement unit .

9.2.4.3.2 Communication

The screenshot shows the 'Communication data' configuration window. At the top, there are buttons for 'New device type', 'Edit', and 'Copy device type'. Below these are fields for 'Manufacturer' (Precisa) and 'Type name' (320 XB). The 'Communication data' tab is selected, showing a list of measurement functions on the left and configuration fields on the right. The fields on the right include Baud rate (9600), Data bits (7), Stop bits (1), Parity (None), Tare command (ZERO[CR][LF]), and Print command (P1[CR][LF]).

In the Communication data tab, you configure the communication between the test equipment and the PC.

- a. Click the New device type button or edit Edit.

→ The values can be edited.

- b. Drag a point from the field on the left to the field on the right.
- c. Enter the corresponding values (without units) that the application of the test equipment requires.

To remove a point from the field on the right, drag it to the field on the left.

9.2.4.4 Manufacturer

BRAND - EASYCAL™ 5

Master data maintenance

Article data
 Additional article data
 Random sample plans
 Test equipment
 General

Test equipment
 Location for test equipment
 Test equipment device type
 Manufacturer

Search
 Type to search

Manufacturer
 A&D
 Ahlborn
 Amarell
 EASYCAL
 Kern
 Mettler Toledo

New manufacturer
 Edit

Manufacturer *
 EASYCAL

Enter a new manufacturer for test equipment or edit an existing data set.

9.2.5 General

In this area, you make general settings in the master data, including positions within a company.

9.2.5.1 Function designations

BRAND - EASYCAL™ 5

Master data maintenance

Article data | Additional article data | Random sample plans | Test equipment | General

Function designation

Selection text

Search

Function designation |
Head of department
Deputy

New function Edit

Function designation

Enter new function designations. You can use it to map out a departmental hierarchy, for example.

9.2.5.2 Selection text

BRAND - EASYCAL™ 5

Master data maintenance

Article data | Additional article data | Random sample plans | Test equipment | General

Function designation

Selection text

Search

Selection text	Area of use
Value superfluous. Deleted at the beginning or end of the measurement series.	Discard measurement or measurement series
Value deleted, measurement series repeated.	Discard measurement or measurement series
Identified as outlier.	Discard measurement or measurement series
Device adjusted, values deleted.	Discard measurement or measurement series
New tin or device has been used. Value deleted.	Discard measurement or measurement series

New selection text Edit

Selection text

Area of use

Enter a selection text or edit existing texts. The selection text can be used during the test and is intended to provide a reason for incidents.

You also enter the field of application where the selection test is to be used.

Field of application	Description
Selection text	Enter the text you would like to use in the tests.
Field of application	Discard measurement or measurement series: Texts assigned here are used to provide a reason. Remarks on the device condition: Texts assigned here are used in the test order or calibration certificate. Text block: Text blocks are used for the device status descriptions, in order to use the standardized descriptions there. See Creating an order, p. 43 >

9.3 Create company

>> Administration > Company data

Company data

Company name

Address

Country

Zip code/City

Company logo



Remove logo

Departments

+

-

Back

Save

In the company data, you enter your address data and as well as the data of departments involved in the testing process. This information as well as the company logo can be printed on certificates.

Create company

- a. Enter address data.
- b. Insert logo by clicking on the graphic under company logo (.bmp, .jpg, .gif, .png, .svg).

NOTICE

Paths to files.

If the file (e.g. signature file or logo) is to be available to several users, it is better to store it in a network drive. Because the files are linked only by paths, a locally stored file may then not be usable by all users.

Create departments

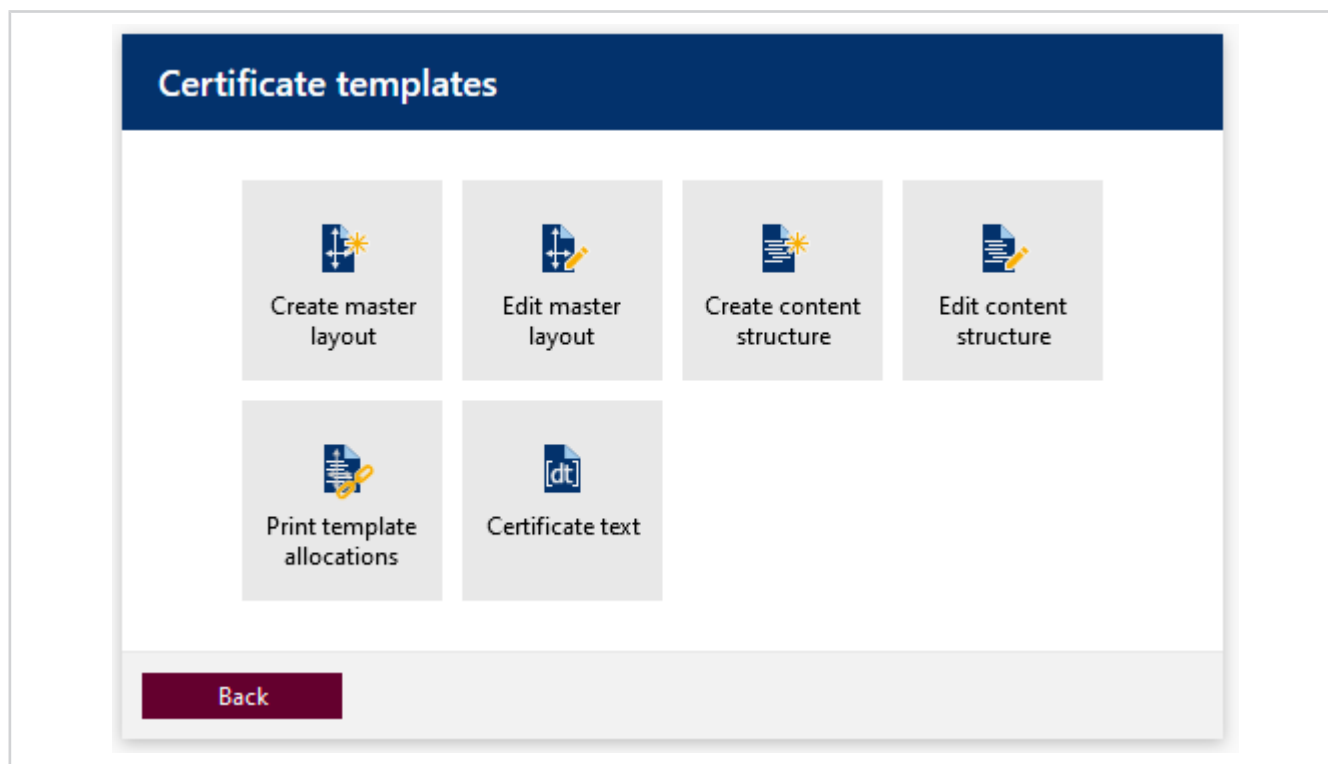
- a. In the Company data window, click on the “+” sign. With the “-” key, remove a department or with the “Pencil” key, edit the department.

➔ The Create department window opens.

- b. Select one or more responsible persons from the drop-down menu. Each selected person can have only one role.
- c. In addition, assign a registration number (e.g., identification number of the DAkkS laboratory).
- d. To exit and save, press the OK key.

9.4 Certificate templates

>> Administration > Certificate templates



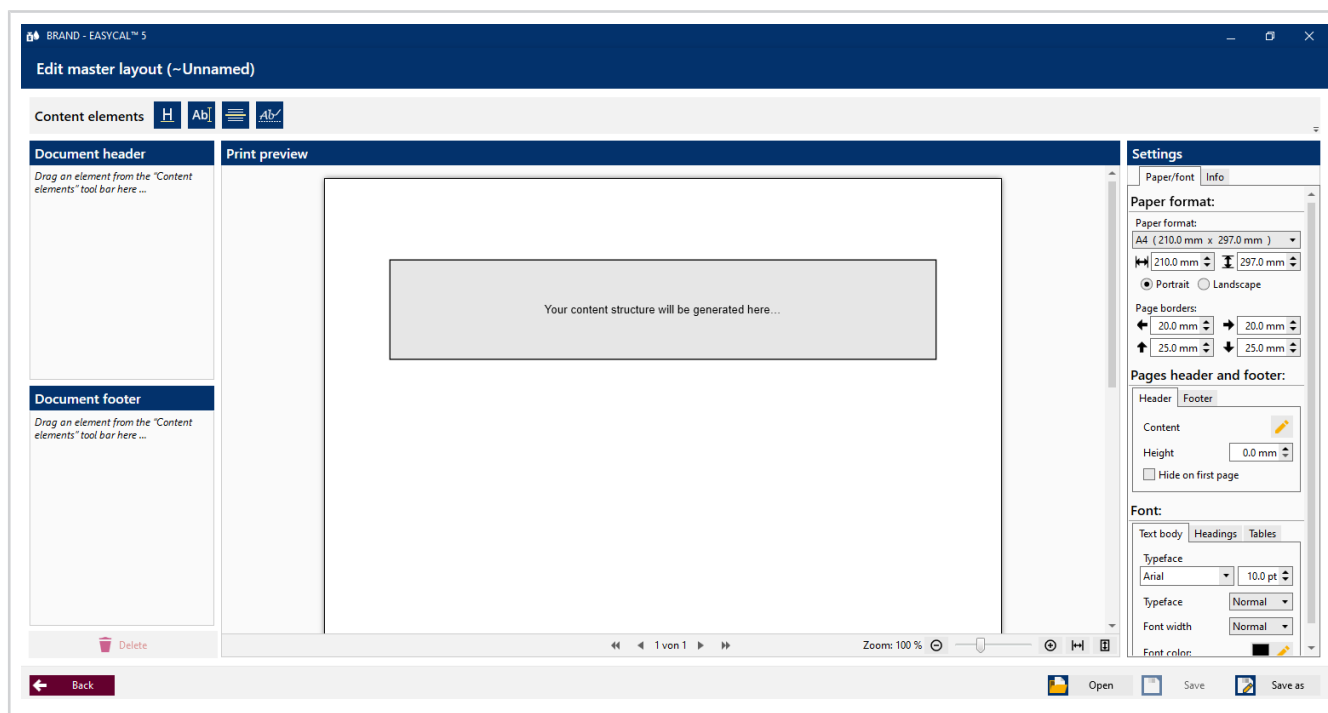
Use this menu to create and manage layouts and templates from which certificates are generated and certificate creation is triggered.

Menu	Meaning
Create master layout	Create a new master layout.
Edit master layout	Here you can edit an already existing master layout.
Create content structure	Create a new content structure
Print template assignment	Assign a master layout of the content structure to one or more articles. Both the master layout and the content structure must have been released for this purpose.
Certificate texts	Create and edit text modules. You can reuse them for all content structures.

A distinction is made between master layout and content structure. The two areas can be customized. The master layout is subdivided into the certificate header and footer as well as general settings for the page layout (e.g., page margins, font size, and font style). The content structure comprises all the elements between the report header and footer (i.e., the actual content of the report). If you wish to adapt the layout to a company-specific format, it is recommended to do this using the master layout.

9.4.1 Master layout

The [Master layout](#) defines the area where the content of certificates can be displayed.



Print preview

The gray area in the center shows where the content structure is inserted. This is variable, which means that the master layout can be used for different content structures. Above and below it, content elements are inserted over the sections Document header and Document footer.

Content elements

Use the content elements Free text, Heading, Horizontal Line and Signature line to adjust the content of the document footer and header.

Drag the content elements to the document footer and document header sections and adjust these in the settings.

Within these sections you can move content elements via drag and drop or delete them from the areas by clicking on .

See also Content elements, p. 101.

Settings

Paper/font tab

Specify all basic settings for the format, page borders and formatting in this section. By clicking on the pen you open further dialogs.

In the “Tables” tab, you can adjust the table formatting as well as the visual appearance of errors.

Tab info

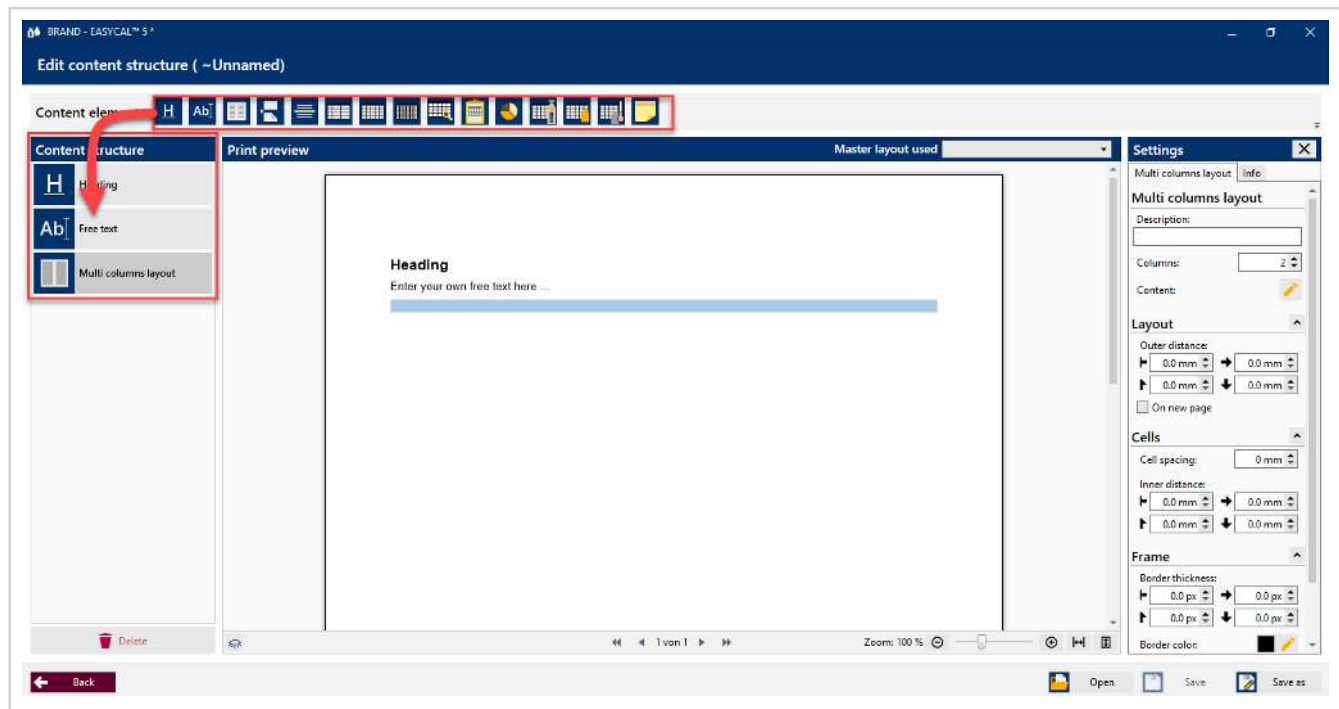
Release

Change the release status. You can only assign content structures and master layouts to articles when these have been released beforehand. You change the status in this tab. Similar to the release of other program elements, the following applies: If the 4-eyes principle has been activated, the layout creator cannot release by themselves.

Test export

Activate a test export to view the master layout with real data. You can save the test export as a PDF and print it.

9.4.2 Content structure



Print preview

The selected content elements are displayed in the print preview. You can select a different master layout from the drop-down menu of the master layout in use. Via "Save As" you can apply the same content structure to multiple master layouts.

Content elements

Use the content elements multi columns layout, Free text, Heading, Horizontal Line, page break and the following to define the content of the content structure. These include measured value tables, diagrams, device tables and articles.

Drag the content elements to the content structure section and adjust these in the settings.

Within these sections you can move content elements via drag and drop or delete them from the areas by clicking on .

See also Content elements, p. 101.

Settings

Info tab

In this tab, you release the content structure after you have saved it.

You can also activate a test export, in order to view your certificate template, see also Master layout, p. 98, Test export

Tab with name of the content element

Configure the display via the provided menu points, see the following sections.

9.4.3 Content elements

9.4.3.1 Free text

Inserts a text field in which you can enter a free text or a figure (e.g. company logo) via a text editor.

Drag the content element to the content structure area.

Settings [X]

Free text Info

Free text

Description:

Content: [Pencil icon]

Layout

Outer distance

← 0.0 mm → 0.0 mm

↑ 0.0 mm ↓ 0.0 mm

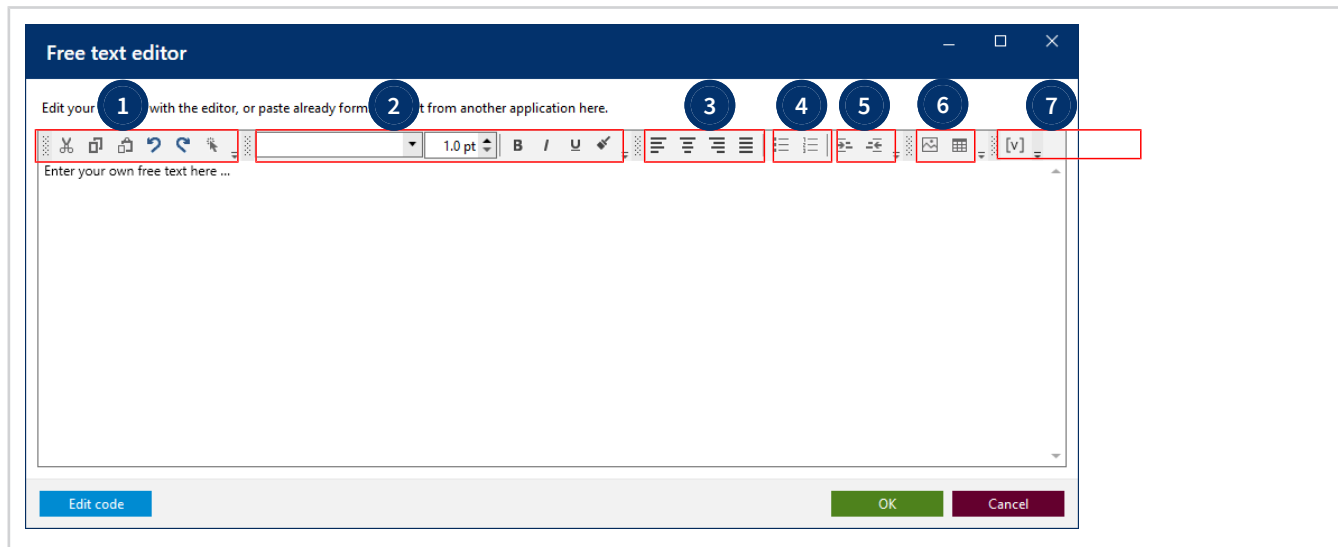
Background color: [Color box] [Pencil icon]

Hide elements

☐ Hide background

☐ Hide content

Click [Pencil icon] to go to the text editor. In the text editor, you can insert a free text or figure and format it. The following actions are available in the text editor for formatting a text:



1 Functions such as cut, copy, and paste text or elements.

3 Paragraph alignments

5 Indentations

7 Illustration, signature and value fields (text modules); see also Using value fields, p. 102

2 Font and formatting

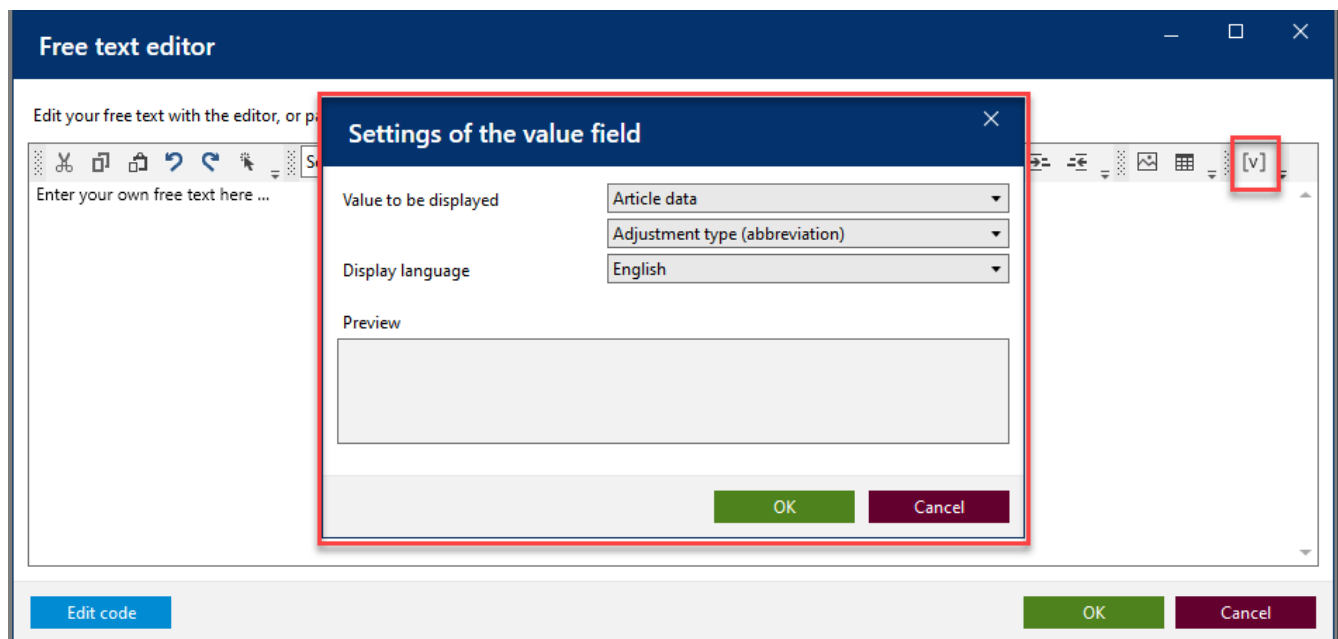
4 List formatting

6 Create figures and tables. These can be filled either with free text or also by modules (illustrations, value fields (text modules)).

— —

Optional: In Settings, adjust the settings for the description and the layout of the text field.

9.4.3.1.1 Using value fields



Variable data and measurements are inserted into the certificate via value fields. Example: the measured air temperature, the status of an order (completed, released, etc.) or the serial number of the tested device.

a. Click on [v].

➤ The dialog “Value field settings” opens.

b. You select the desired value from the drop-down lists.

c. Click on OK.

➤ This value field is inserted at the corresponding cursor position in the free text field; also in tables, for example.

Example:

AdTypeShort-Item:1-en
AdTypeLong-Item:1-en
CAddressB-en
ChargNo-en

Value fields can be static or dynamic.

Static value fields contain text whose statement is always the same depending on the test; however, translations into other languages can be stored there. These static texts are created and managed in the “Certificate texts” section.

Dynamic value fields cannot be created by users; they can only be selected. An example of a dynamic value field is the order number, which is printed on the certificate but assigned in the course of creating the test order. Dynamic value fields are placeholders for values that can differ from test to test.

9.4.3.2 Heading

Drag the content element to the content structure area.

Settings [X]

Heading Info

Heading

Description:

Text:

Heading

Layout

Outer distance:

← 0.0 mm → 0.0 mm

↑ 0.0 mm ↓ 0.0 mm

☐ On new page

Hide elements

☐ Hide background

☐ Hide content

Enter a head line text into the *Text:* field.

Optional: Make settings for the description and the position.

9.4.3.3 Horizontal Line

Inserts a horizontal line into the content structure (e.g., as a separator).

Drag the content element to the content structure area.

Settings [X]

Horizontal line Info

Horizontal line

Description:

Layout

Line thickness: 1.00 pt

Line color: [Black color swatch]

Hide elements

☐ Hide content

- a.** Optional: In the “Settings”, make settings for the description, line thickness, and line color.

9.4.3.4 Page break

Inserts a page break.

Drag the content element to the content structure area.

9.4.3.5 Value tables

The tables described below are predefined and cannot be changed. If you need your own tables, these can be created via the element Free text field > Tables and filled with value fields.

The values of tables are populated when the content structure and master layout are associated with an item and the certificate is issued. However, you can view the output beforehand under Properties > Preview

Simple table of measured values

Inserts a simple, reduced table of measured values.

Prüfvolumen Test volume Volumen de control Volume de contrôle	10%	50%	100%
Richtigkeit (R) Accuracy (A) Exactitud (E) Exactitude (E)	0%	0.09500%	0.02100%
Variationskoeffizient (VK) Coefficient of variation (CV) Coeficiente de variación (CV) Coefficient de variation (CV)	0%	0%	0%

Table of measured values

Inserts a table of measured values.



Expanded table of measured values

Inserts an expanded table of measured values. This adds data to the table of measured values from the test plan.

Result of calibration		Test volume 100µl	Test volume 500µl	Test volume 1000µl
1:	[g]	0	0	0
2:	[g]	0	0	0
3:	[g]	0	0	0
4:	[g]	0	0	0
5:	[g]	0	0	0
6:	[g]	0	0	0
7:	[g]	0	0	0
8:	[g]	0	0	0
9:	[g]	0	0	0
10:	[g]	0	0	0
Result obtained*:	[µl]	99.95	500.48	1000.21
Reference temperature:	[°C]	20.0	20.0	20.0
Measurement uncertainty <i>U</i> :	[µl]	0.71	1.66	1.50
Accuracy/Trueness <i>A</i> (related to the test volume):	[%]	0	0.09500	0.02100
Systematic error (absolute volume):	[µl]	0.00	0.00	0.00
Maximum permissible systematic error ± according to DIN EN ISO 8655:	[µl]	0.8	0.45	0.020
Conformity assessment:		A	A	A
Coefficient of variation <i>CV</i> (related to test volume):	[%]	0	0	0
Random error (absolute volume):	[µl]	0	0	0
Maximum permissible random error according to DIN EN ISO 8655:	[µl]	0.30	0.13	0.43
Conformity assessment beyond scope of accreditation (<i>U_{cv}</i> = 0µl):		A	A	A

Detailed table of measured values

Inserts a table of measured values. This table breaks down the measurement results per device.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
---	---	---	---	---	---	---	---	---	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----	-----

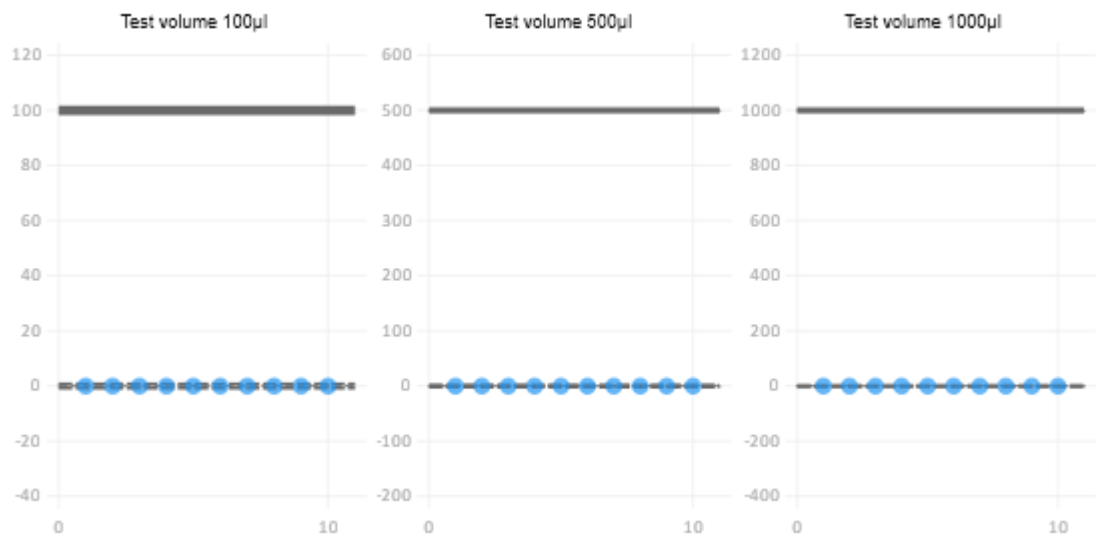
Order statistics

Inserts a detailed order statistics table. This table breaks down the measurement results per device.

Test characteri stic	n	Target value	MEAN	STDEV	A	CV
-------------------------	---	--------------	------	-------	---	----

Test criteria diagram

Inserts a diagram that shows the distribution of test criteria.



Device table

Inserts a device table. This table provides information about the devices used in the test and the identification.

Test equipment table

Inserts a test equipment table. This table provides information about the test equipment used. The test equipment is identified by test equipment numbers and displayed in the empty column.

Waage Balance	Nr. "Wägewert-1", 1 - 3 / 0.001
Gewichte Weights	Nr. "Richtigkeit der Waage-6", 1 - 3 / 0.001
Thermometer Thermometer	Nr. "Temperatur des Mediums-3", 1 - 3 / 0.001

Measurement information

Inserts a table with measurement information.

Inserting a content element

In the example, the settings show the settings of the simple table of measured values. Other settings behave in a similar way.

Drag the content element to the content structure area.

The screenshot shows a 'Settings' dialog box with a close button (X) in the top right corner. The dialog is titled 'Simple measurement table' and has an 'Info' tab. The main content area is divided into several sections:

- Description:** A text input field.
- Output:** A section with a dropdown menu labeled 'Output texts in (language):' set to 'English'.
- Layout:** A section with four spinners for 'Outer distance:' (left, right, up, down) all set to '0.0 mm'. Below them is a 'Background color:' section with a color picker icon.
- Hide elements:** A section with two checkboxes: 'Hide background' and 'Hide content', both of which are unchecked.
- Preview:** A section with two radio buttons: 'Multi-channel' (unchecked) and 'Single channel' (checked). Below them is a 'Preview:' dropdown menu set to 'Liquid handling'.

Description

Describe the displayed table values.

Output

Select the language in which the content element should be output. When you select an export language, e.g. "English," the text is always displayed in English - a subsequent change in the printing process is not possible. Using the   buttons, you sort the order of the language-dependent texts in the table.

If "Placeholder" is selected, you can select the language in the certificate printing process. The language stored for the customer in customer management is offered by default.

Layout

Select the spacing between content elements or the background color of tables and content elements.

Preview

Specify how the tables are presented in the print preview. The layout of this table changes depending on which section is selected.

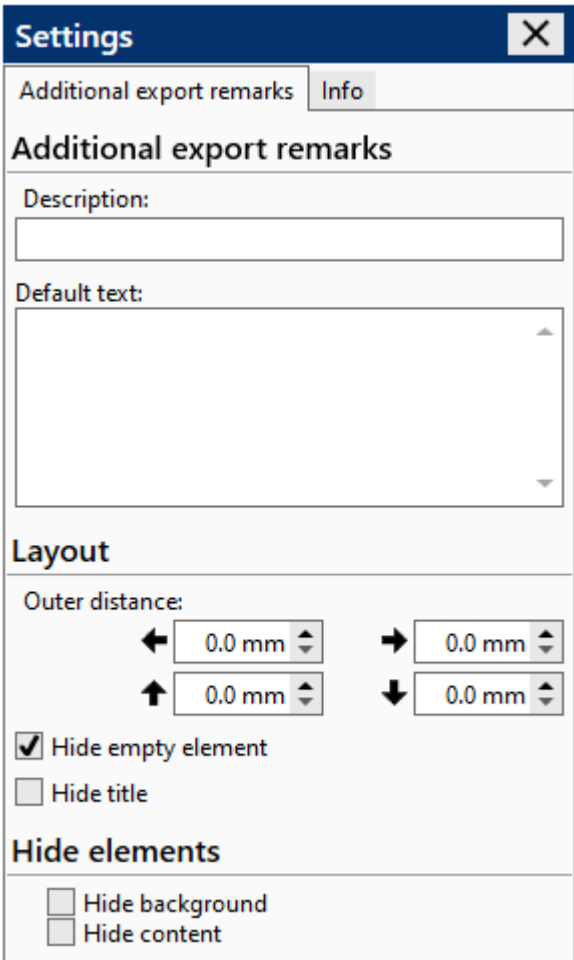
Hidden content

Specify which content is shown in the print preview.

9.4.3.6 Additional export remarks

Inserts a Additional export remarks text field that you can use to specify additional information or notes. You can use only one Additional export remarks text field per content structure. This text field appears only if a text has been entered under “Settings”.

Drag the content element to the content structure area.



The screenshot shows a 'Settings' dialog box with a close button (X) in the top right corner. The dialog has two tabs: 'Additional export remarks' (selected) and 'Info'. The 'Additional export remarks' tab contains the following sections:

- Additional export remarks**
 - Description: A single-line text input field.
 - Default text: A multi-line text input field with a vertical scrollbar.
- Layout**
 - Outer distance: Four spinner controls for adjusting distances. The top row has left (←) and right (→) arrows, both set to 0.0 mm. The bottom row has up (↑) and down (↓) arrows, both set to 0.0 mm.
 - ☒ Hide empty element
 - ☐ Hide title
- Hide elements**
 - ☐ Hide background
 - ☐ Hide content

Note

Insert the desired information. After that, the Additional export remarks becomes visible.

9.4.4 Assigning certificate templates

Certificate template allocations

Filter

Test type: Not specified

Release status: Not specified

Certificate type: any

Main category:

Manufacturer:

Article code:

Master layout:

Content structure:

New allocation

Edit

Release

Delete

ID	Test type	Certificate type	Main category	Manufacturer	Article code	Channel filter	Master layout	Content structure	Status	
1	STD	Individual certificate			≈1		DINA4-hochkant	EC-Kalibrierzertifikat_Einkanal	Released	🔒
2	STD	Individual certificate			>1		DINA4-hochkant	EC-Kalibrierzertifikat_Mehrkant	Released	🔒
3	STD	Individual certificate					DINA4-hochkant	EC-Kalibrierschein mit Grafik	Released	🔒
4	ST	Batch certificate					DINA4-hochkant	EC-Internes_Chargenzertifikat	Released	🔒
5	ST	Individual certificate					DINA4-hochkant	EC-Kurzprüfung	Released	🔒
6	GEN	Reminder letter					DINA4-hochkant	EC-Erinnerungsservice	Released	🔒
7	GEN	Internal log					DINA4-hochkant	EC-Internes_Auftragsprotokoll	Released	🔒

Back

In this menu, you assign certificate templates and articles to one another so that they can be used in order verification. You can find available assignments in the Filter section. Using the buttons, you create new assignments as well as edit, release or delete assignments.

9.4.4.1 Creating a new reminder

In this menu, you assign certificate templates (master layout, content structure) to individual articles.

×

New certificate template allocation

ID

Not specified

Certificate type

Individual certificate

Test type

GEN – General

Main category

Liquid handling

Manufacturer

BRAND GMBH + CO KG

Article code filter

Channel filter

Master layout

DINA4-hochkant

Content structure

-Kalibrierzertifikat_Einkanal

Required form

Release status

Created/edited

Articles concerned

EC-4600100 - Dispensette® S Analog, ohne Rückdosierventil; 0.

EC-4600101 - Dispensette® S Analog, mit Rückdosierventil; 0.1

EC-4600120 - Dispensette® S Analog, ohne Rückdosierventil; 0.

EC-4600121 - Dispensette® S Analog, mit Rückdosierventil; 0.2

EC-4600130 - Dispensette® S Analog, ohne Rückdosierventil; 0.

EC-4600131 - Dispensette® S Analog, mit Rückdosierventil; 0.5

EC-4600140 - Dispensette® S Analog, ohne Rückdosierventil; 1

EC-4600141 - Dispensette® S Analog, mit Rückdosierventil; 1 -

EC-4600150 - Dispensette® S Analog, ohne Rückdosierventil; 2.

EC-4600151 - Dispensette® S Analog, mit Rückdosierventil; 2.5

EC-4600160 - Dispensette® S Analog, ohne Rückdosierventil; 5

EC-4600161 - Dispensette® S Analog, mit Rückdosierventil; 5 -

EC-4600170 - Dispensette® S Analog, ohne Rückdosierventil; 10

EC-4600171 - Dispensette® S Analog, mit Rückdosierventil; 10 -

EC-4600210 - Dispensette® S Fix, ohne Rückdosierventil; 1 ml

EC-4600211 - Dispensette® S Fix, mit Rückdosierventil; 1 ml

EC-4600220 - Dispensette® S Fix, ohne Rückdosierventil; 2 ml

Article information

Last change: n.n.

Cancel

Save

Field	Description
ID	Is generated automatically
Certificate type	Select the certificate type, e.g. individual certificate.
Test type	Select the test type.
Main category	Select the main category for a basic filter of articles.
Manufacturer	Select the article manufacturer.
Article code filter	Enter an article code.
Channel filter	Filter by channel (for micropipettes).
Create master layout	Select the master layout.
Create content structure	Select the content structure to be used.
Required form	Enter here whether specific stationary should be used for printing.

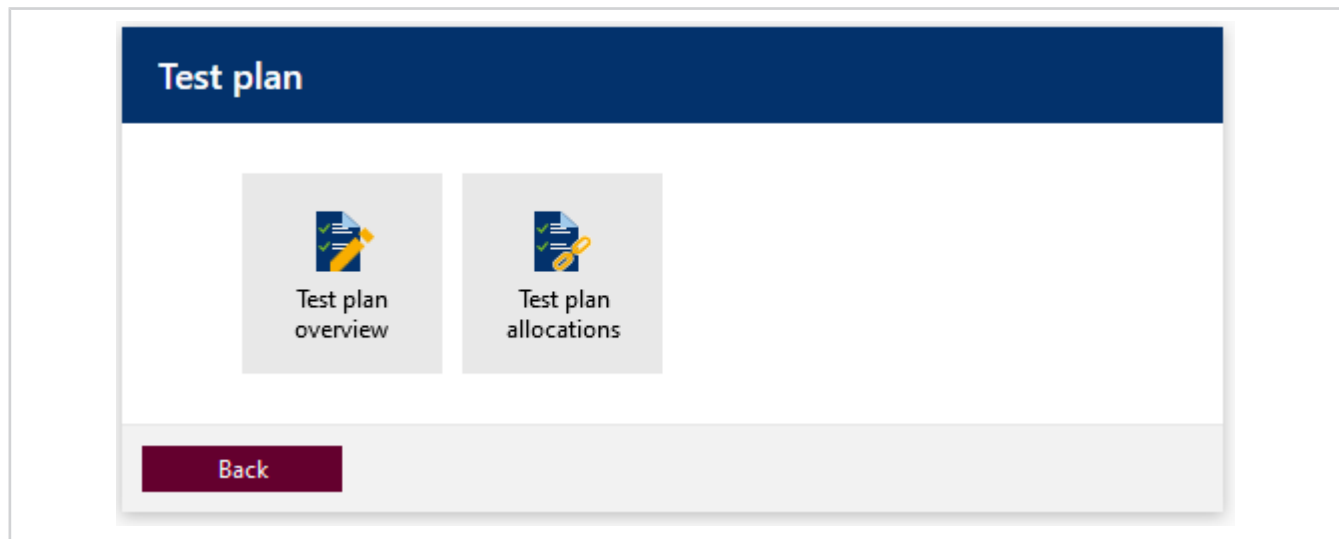
Creating a new assignment

- Select the master layout, content structure and article.
- Click on Save.

➤ The assignment is created.

9.5 Test planning

>> Main menu > Administration > Test planning



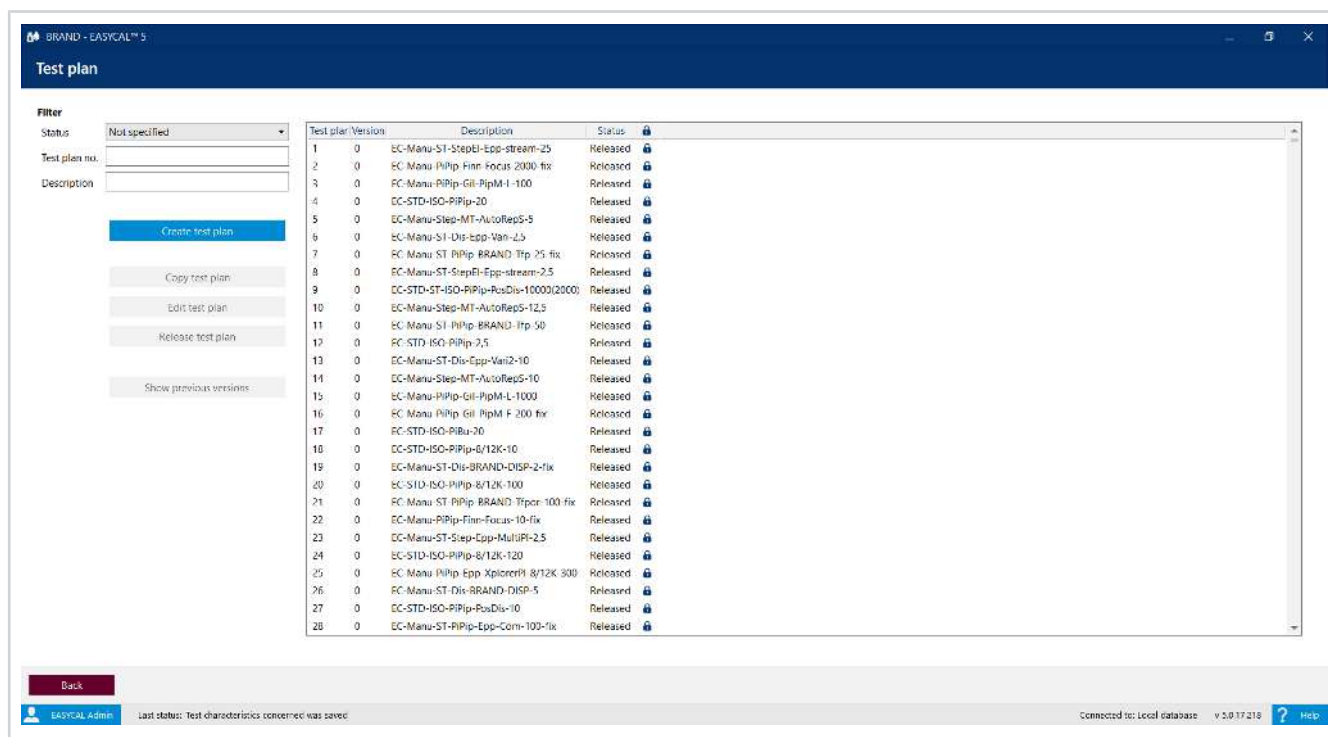
In test planning, you create individual test plans. You assign individual test criteria to these test plans. Criteria include, for example, the nominal volume of an article.

Target values for volume and error limits of articles are not stored in the master data of the articles; instead, they are organized via test plans. This enables you to use a test plan (e.g. with standard values) for many different articles. Test plans and article are linked to one another in the Test plan assignments section

9.5.1 Test plan overview

>> Administration > Test planning

In this menu, you create test plans that can be used for device testing.



You filter the test plans via the selection field Status and the search fields Test plan no. and Name.

This input narrows down the search result list. When you search in the Name field for a character string, e.g. “100,” the search finds exactly the string in the entered order within the description.

When you mark a test plan, you activate the buttons below the “Create test plan” button.

Abbreviations in the test plan designation

EC	Test plan has been delivered with EASYCAL™ 5
STD	Test plan based on standard values
Manu	This test plan is based on manufacturer error limits
ST	Short test with reduced scope of testing
BC	Bulk test plan (Bulk Check)
ISO	Test plan based on ISO error limits
ASTM	Test plan based on ASTM error limits
G/P	Volume measurement instruments made of glass/plastic
BP	Bulb pipettes
grP	Graduated pipette
Bur	Burette
vF	Volumetric flasks
grC	Graduated cylinders
PYK	Pycnometers

Dis	Bottle-top dispensers
PiBu	Bottle-top burette (piston burette)
Step	Repetitive pipettes/steppers
PiPip	Piston pipette

An abbreviation of the manufacturer, model series, nominal volume as well as abbreviations for model variants can also follow.

If test plans of a manufacturer also apply to other manufacturers (same error limits), the test plans entered first are used for all appropriate articles.

9.5.1.1 Create test plan

Create test plan

Status

Created/edited

Main category

Description

0.0

Test method

Test standard (tolerances)

No error limits

Reference temperature

Not specified °C

Testing instructions

Temperature difference

Limits for ambient data

Specific

Water temp.

20 °C

25 °C

Air temp.

20 °C

25 °C

Relative humidity

40 %rh

65 %rh

Air pressure

960 mbar

1,025 mbar

Random sample plan

absolute relative

Number of measurement

1

Test characteristic

No test characteristic selected

Item

Description

Type

Nominal value

Number of tests

Max

Remarks for test planer

Last change n.n.

Cancel

Discard

Save

Field/range	Description
Status	The status is grayed out. Depending on their authorization level, the user can change the status here.
Main category	Select the main category you want to assign the test plan to.

Field/range	Description
Name	Provide a test plan designation that is as unique as possible.
Test method	Select the test method to be used.
Testing standard (tolerances)	If there are standard-based tolerances, select the appropriate standard.
Reference temperature	Enter a temperature value, to which a recalculation to this reference temperature is to be made. This generally takes place only in glass volumetric instruments or in the BRAND Titrette® bottle-top burette. The temperature value is included with the coefficient of volume expansion in calculating the Z-factor. The resulting volume values are thus recalculated to a target temperature of e.g. 20 °C. 20°C for temperate climates. 27°C for warmer climates. If this is not needed or there is no coefficient of volume expansion for the relevant articles, select Not specified
Testing instructions	Click the + symbol to add a test plan. Please note: The test instructions are only linked. If you select a file on your desktop, another user might not be able to open this test plan. Instead, use network paths or a URL to make the test instructions available to users.
Temperature difference	Enter here the permissible temperature deviation between air and test medium temperature (normally deionized water).
Limits for ambient data	Enter here the limit in which a measurement is permitted. This helps you maintain the conventional standards for the measurements. Data entry is only required if the values deviate from the environmental data defined in the global settings.
Random sample plan	Select here if you want to perform a relative or absolute random sample test. In the selection field you then select the desired scope.
Test criteria	Click the + symbol to add one or more test criteria, see Test criteria, p. 115. ▲▼: Sort test criteria
Remarks for test planer	Points out to you peculiarities.
Last change	Information about the last change.

9.5.1.2 Test criteria

Test criteria are criteria that you want to have processed in the test plan. On one hand, they can be determined by set points to be achieved or by a range of values. They can also name a criterion for testing as an attribute.

Create test characteristic

Test characteristic type

☒ Target value ☐ Value range ☐ Attribute

Description

+

-

Testing instructions

Remarks for tester

Settings for variable characteristics

Number of tests

0

Value to be measured

Type of test equipment

☐ Barometer☐ Conductivity measuring device☐ Hygrometer☐ Leak tester☐ Multi-channel balance

Number of decimal places

0

☐ Ambient data query after each measurement

☐ Check measured values before entering

Parameters for variable characteristics

Nominal value

Nominal value

0

Limit values

Limit value type

☐ A / CV ☒ Error limit

Measurement unit

SOP value

+

0

Test area

Test value

--

Error limit

☒ =

100

%

-

0

--

Measurement uncertainty

Measurement uncertainty

±

0

Cancel

Save

Field/range	Description
Test criterion type	Target value: Test for set points. Value range: Test for value ranges. Attributive: Test for specific attributes of the test object.
Testing instructions	Here you have the possibility to link the test criterion with further test instructions.
Remarks for tester	Text field for further comments on the test criterion.
Parameters for variable criterion	Range that is displayed for the test criterion type “set point” and “value range”.

Test criterion type “set point”



Test criterion type “set point”	Description
Nominal volume	Enter the nominal value of the criterion to be inspected and select the unit.
Limits section	
Limit type:	Check box A/CV: The >>limit value<< is determined by the accuracy and the coefficient of variation; see Standard Operating Procedure (SOP) of the device being tested. Check box Error limit: The limit value is determined by the entered error limits.
Measurement unit	Select unit.
Accuracy	The >>accuracy<< in terms of statistical quality control corresponds to the mean deviation.
Coefficient of variation	The >>coefficient of variation<< shows the dispersion of the individual measured values in relation to the mean value of the measured values.
Measurement uncertainty	The measurement uncertainty is the uncertainty of the measurement procedure as used by you in your laboratory. If the field is not filled in (factory setting), this has no effect on the measurement result. If you enter a value here, the Measurement uncertainty will be taken into account when evaluating the measurement series. Usually, this value $\frac{1}{3}$ corresponds to the error limit. This value must be calculated by the user and entered in the Measurement uncertainty field for the present test criterion. Error limit for glass devices: See corresponding standard. Error limit (EL) for liquid handling devices: $EL = accuracy + 2 \times \text{coefficient of variation}$.

Settings for variable criteria	Description
Number of tests	Specify how frequently the test of the criterion should be carried out.
Value to be measured	Select the value to be measured from the list; e.g., air temperature, conductivity or air pressure
Test equipment	Select the test equipment type to be used; e.g., thermometer.
Number of decimal places	Select the required number of decimal places and thereby how accurate the result must be.
Ambient data query after each measurement	When the box is checked, the environmental data will also be queried after every measurement.

Settings for variable criteria	Description
Check measured values before entering.	When the box is checked, the measured values are checked directly against the target value before saving.

Test criterion type value range



Parameters for variable criteria	Description
Max. value, Min. value	Define the range of values that you want to test using the test criterion. Max. value and min. value each have the same unit.

Test criterion attribute



Describe the criterion to be tested (e.g., an expected color change as a result of chemical exposure, labels with appropriate statements, warning signs).

9.5.1.3 Releasing a test plan

Test plan (release)

Status: Released

Test standard (tolerances): Manufacturer

Limits for ambient data

Item	Description	Type	Nominal value	Number of
1				
2				
3				

Buttons: Cancel, Discard, Save

Prerequisite:

- ✓ Depending on your authorization level, you can release test plans. In particular, if the four-eyes principle is activated, the person who created the test plan is not allowed to release it themselves, see Parameters and limits, p. 131, Options section

Example:

An employee assigned to the laboratory group creates the test plan, another employee releases it.

- In Test planning click on the Release test plan button.
- The Test plan (release) window opens.
- From the “Status” selection field, select the Released value.
- Click on “Save” to release the test plan, or on “Discard” if you do not want to release the test plan. The moment you selected Released the other values became read-only.

Available status of the test plan

Created/edited	A test plan was created or is currently being edited. Example: A laboratory employee is drafting the test plan.
Released	A test plan is released and can be used. Example: The laboratory manager releases the drafted plan.
Locked/resubmission	A test plan must be corrected.
Discarded	A test plan outdated.

9.5.1.4 Displaying previous versions of a test plan

Show previous versions

Version 0 [Withdraw release](#) Version 0 [Withdraw release](#)

Compare

Test plan 1
Allocation no. 0
Release status Released

Test plan 2
Allocation no. 0
Release status Released

Description	EC-Manu-PiPip-HTLDisCom-5000-var
Version	0
Test method	The calibration was performed according to the gravimetric procedure according to DIN EN ISO 8655-6:2002.
Test standard (tolerances)	Manufacturer
Remarks	
Reference temperature	°C
Temperature difference	0.5 °C
Water temp. Min	°C
Water temp. Max	°C
Air temp. Min	°C
Air temp. Max	°C
Relative humidity Min	40 %rh
Relative humidity Max	60 %rh
Air pressure Min	mbar
Air pressure Max	mbar
Number of measurement series	1
Plan for relative random sample	100% test
Plan for absolute random sample	
Test characteristic	3

2. TV - V 0	1. TV - V 0	NV - V 0
Type	Target value	
Number of tests	10	
Type of test equipment	Single-channel balance	
Value to be measured	Weight	

[Close](#)

In the “Test plan” window, mark the desired test plan in the list and click on Show previous versions .

In the drop-down list, you can select the different versions. Differences between versions are highlighted.

Example:

Version 1: 0.3 °C to Version 0: 0.5°C

9.5.2 Test plan assignments

BRAND - EASYCAL™ 5

Test plan allocations

Filter

Test type

Not specified

Release status

Not specified

ID

Main category

Product category

Manufacturer

Product

Article code

Volume range

0.1 µl

10000 ml

Test plan no.

Test plan Description

Create allocation

Edit allocation

Allocation as default

Release

View

Existing allocations

Test plans without allocation

ID	Test type	Article codes
1	STD – standard values	EC-29501
2	STD – standard values	EC-36943;EC-36973;EC-37462;EC-37482
3	STD – standard values	EC-36945;EC-36975;EC-37463;EC-37483
4	STD – standard values	EC-37464;EC-37484;EC-36977;EC-36947
5	STD – standard values	EC-36949;EC-36979;EC-37467;EC-37487
6	STD – standard values	EC-36950;EC-36980;EC-37468;EC-37488
7	STD – standard values	EC-36951;EC-36981;EC-37469;EC-37489
8	STD – standard values	EC-36952;EC-36982;EC-37470;EC-37490
9	STD – standard values	EC-37481;EC-37461;EC-36968;EC-36938
10	STD – standard values	EC-36953;EC-36983;EC-37471;EC-37491
11	STD – standard values	EC-38204
12	STD – standard values	EC-38206
13	STD – standard values	EC-38208
14	STD – standard values	EC-38210
15	STD – standard values	EC-36170
16	STD – standard values	EC-36172
17	STD – standard values	EC-36174
18	STD – standard values	EC-36954;EC-36984
19	STD – standard values	EC-36176
20	STD – standard values	EC-37266;EC-37255
21	STD – standard values	EC-36854;EC-37254;EC-37265
22	STD – standard values	EC-36407
23	STD – standard values	EC-36408
24	STD – standard values	EC-36838;EC-37238;EC-37256;EC-37401;EC-37438
25	STD – standard values	EC-36404;EC-36843;EC-37045;EC-37243;EC-37267;EC-37402;EC-37403
26	STD – standard values	EC-37446;EC-37403;EC-37257;EC-36406;EC-36845;EC-37046;EC-37047
27	STD – standard values	EC-36946;EC-36976;EC-37465;EC-37485

Back

Use this menu to link the articles to the test plans. Please note that the error limits of an article or device are not stored in the article master data but rather in the test plans. Only in the test plan assignment are the permissible tolerances assigned to the article within which the test is considered successful. This organization of data makes it possible to assign the same test plan with standard values to all piston-stroke pipettes of a particular design. If the standard changes, only the corresponding test plan needs to be adjusted and not each individual article.

View

You can influence the general view using the following fields:

Field	Description
Available assignments	Filter by test plan assignments to which articles have already been assigned.

Field	Description
Test plans without assignment	Filter by the test plans to which no articles have been assigned.

Filter

Filter the test plans using the following fields:

Field	Description
Test type	Select the appropriate test type. The search results list is reduced accordingly.
Approval status	Search for a specific status Created/edited , Released , Locked/resubmission , Discarded.
ID	Search for a test plan assignment (ID). You can also enter parts the of ID; searching for “1” will thus find ID 1, 10, 11, 100, etc. Alternatively, you can scroll all the way down because the last test plan assignment you created has been added to the bottom of the list.
Main category	Search all products of a main category. In order reset the filter, select No selection from the drop-down menu. After that, you can filter again for more categories.
Product category	Search all products in a product category. In order reset the filter, select No selection from the drop-down menu. After that, you can filter again for more categories.
Manufacturer	Search for a specific manufacturer.
Product	Search for a product name you know.
Article code	You can either enter the article code directly here or search in a new window using the  button. You can also enter parts of the article code; a search for “1” will thus find the article code 1, 10, 11, 100 etc.
Volume range	Use both sliders to narrow the volume range.
Test plan no.	Search for the Test plan no..
Test plan designation	Search for the test plan designation.

Test types

Test type	Meaning
Standard values (STD)	This test type applies to test plans with values as specified in the standard of the corresponding article (e.g., ISO or USP).
Manufacturer values (MANU)	This test type applies to test plans with values as specified by the device manufacturer (insofar as they deviate from the standard).
Customer-specific	This test type applies to test plans that do not follow any particular logic. No corresponding test plans are supplied. The EASYCAL™ 5 software often provides both a test plan based on standard values and manufacturer values for liquid handling equipment. The user must decide in this case.

Button

Button	Description
Create assignment	See Creating a new assignment, p. 123
Edit assignment	The same dialog opens as under “Create assignment”. You can now release the test plan assignment .
Assignment as default	The assignment is marked with a check mark
Release	Select a test plan assignment in the overview, and release the test plan via the dialog that opens, or withdraw the release,

9.5.2.1 Creating a new assignment

In this menu, you assign test plans to individual articles. You can use the filter on the left side to find the corresponding articles and then assign a test plan to them in the Assigned articles and Articles available sections.

New allocation of a test plan

Settings

ID: Not specified

Test type: SPEC – Customer specific

Test plan: [Dropdown menu]

Release status: Created/edited

Release button

Article filter

Main category: [Dropdown menu]

Product category: [Dropdown menu]

Manufacturer: [Dropdown menu]

Product: [Dropdown menu]

Article code: [Input field]

Channel filter: [Input field]

Product variations: [Input field]

Volume ranges: [Input field]

Assigned articles

Select/de-select all, Up arrow, Down arrow, De-select all

Specific volume range: [Input field]

Articles available

- EC-10002 - Bürette SILBERBRAND, ohne Hahn, Klasse B, Economy; 0.1 - 25 ml
- EC-10004 - Bürette SILBERBRAND, ohne Hahn, Klasse B, Economy; 0.1 - 50 ml
- EC-10012 - Kompakt-Bürette SILBERBRAND, Klasse B, Economy; 0.1 - 25 ml
- EC-10014 - Kompakt-Bürette SILBERBRAND, Klasse B, Economy; 0.1 - 50 ml
- EC-100210 - Research® plus Fix; 10 µl
- EC-100211 - Research® plus Fix; 20 µl
- EC-100212 - Research® plus Fix; 10 µl
- EC-100213 - Research® plus Fix; 20 µl
- EC-100214 - Research® plus Fix; 25 µl

Last change: n.n.

Cancel Save

Settings

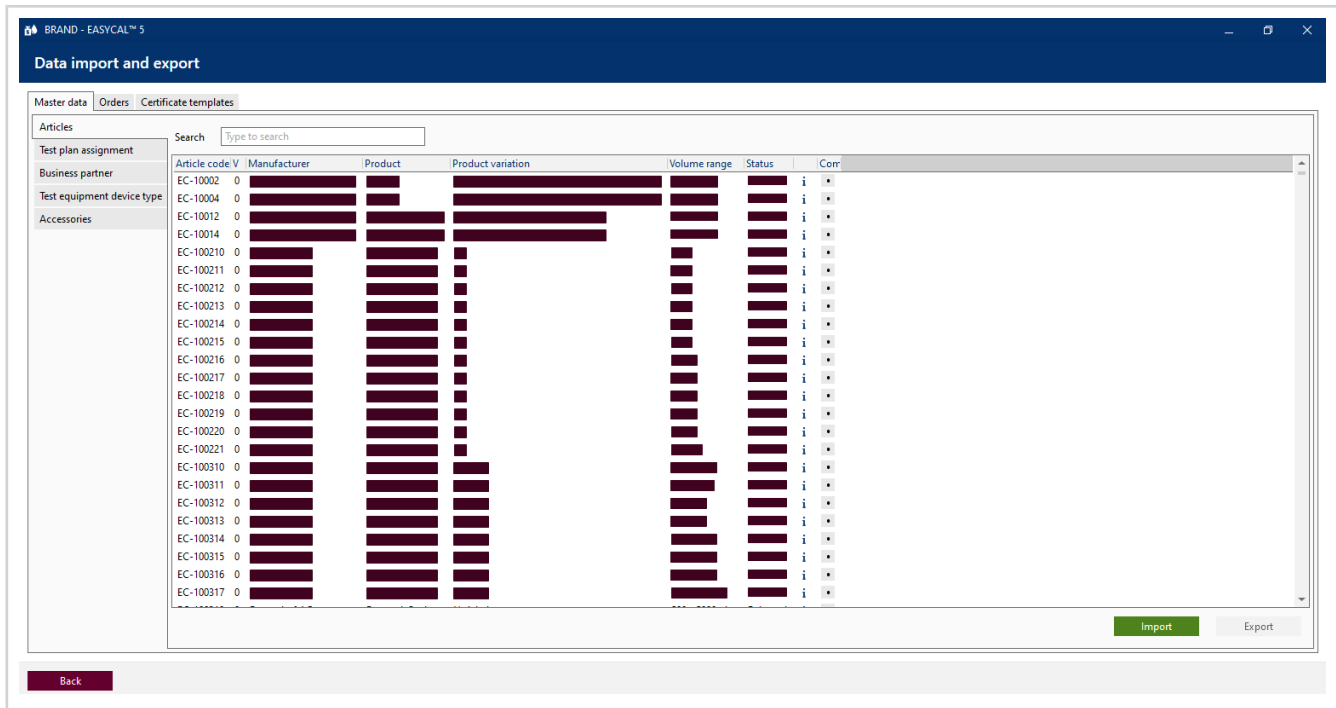
In this section you specify the test plan assignment. This element has its own ID, consisting of information about the test type, test plan and the status of the test plan assignment.

Field	Description
ID	ID of the test plan assignment. The ID corresponds to neither an article number nor a test plan ID.
Test type	Select the appropriate test type.
Test plan	Select the desired test plan. You can either select this in the drop-down menu or search for it via the  button.

Field	Description
Release status	Filter the test plans according to the release status.

9.6 Data import and export

>> Main menu > Administration > Data import and export



Import and export master data, orders, and certificate templates via .XML, .CSV, and .JSON file formats.

- Master data: Articles, test plan assignment, business partners, test equipment device types
- Orders
- Certificate templates

Comparing data sets

In the Compare column, select two data sets. These are opened in a pop-up window for comparison.

9.7 Business partner management

>> Main menu > Administration > Business partner management

Business partner management

Search

New partner

Edit partner

Partner no.	Name
1	BRAND Shanghai

☒ Customer
☐ Supplier

Partner no.

Name

Address 1

Address 2

Address 3

Country

ZIP CODE, Location

Telephone

Fax

E-mail

☐ Reminder via e-mail

Export languages

Primary language
German

Secondary language
English

Contact person

Last name	First name

Remarks

Back

Discard

Save

In “Business partner management,” you manage the contact information for your customers and suppliers. In addition, you specify other characteristics about your customers or suppliers, e.g. which languages are spoken.

Field	Description
Check box Customer Supplier	You specify whether the contact is a customer or a supplier.
Partner no.	Assign a number or number-letter combination in order to identify the supplier or customer.
Name	Give the customer or supplier a name.

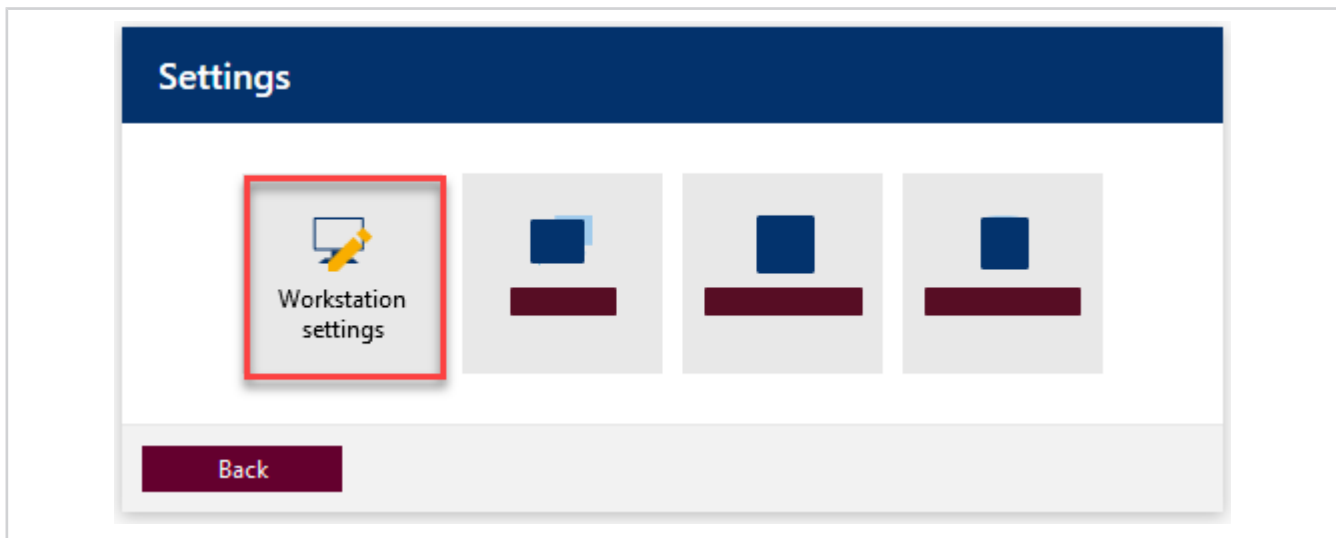
10 Settings

>> Main menu > Settings

In Settings you make basic program settings. You configure language, workstation and server information and make global program settings.

10.1 Workstation settings

>> Main menu > Settings > Workstation settings



In this menu item, you make specific settings for each workstation, e.g. which printers or test equipment are available at this workstation.

10.1.1 Test equipment

Workstation settings

Workstation designation
EASYCAL - Arbeitsplatz

Test equipment
Paths
Default printer

Test equipment at workstation (last used)

Test equipment no.	Test equipment name	Connection	Address	Test
EC-Test-Balance	EC-Test-Balance	COM	COM1	

Test equipment no.
EC-Test-Balance
+
-

The selected value is already assigned!

Back
Save

Determine the [test equipment](#) available to you at this workstation.

The test equipment is defined via the test equipment no.; see test equipment number.

- Select the test equipment from the list under “Test equipment no.”
 - Click on the “+” sign to apply the test equipment. Click on the “-” sign to remove the test equipment.
- The test equipment is listed.
- If this is electronic or network-capable test equipment, configure the connection to the test equipment.
 - Test the connection by clicking on the icons in the “Test” column after configuration.

Drop-down menu from “Connection” column	Description
No selection	—
COM	Communication via COM interface. Select the corresponding COM port 1 ... 9 from the “Addressing” column.
File server	Enter the path to a directory containing files describing the test equipment.

Drop-down menu from “Connection” column	Description
TCP/IP	Communication via TCP/IP. Enter the corresponding addressing in the “Addressing” column. Example: 192.168.0.1

Icons from “Test” column	Description
	Connection not yet configured
	Check connection
	Connection is established.
	Connection exists.
	Error

10.1.2 Paths for certificate export

Workstation settings

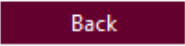
Workstation designation

Test equipment Paths Default printer

Default paths for certificate export. Use <year> as a specification in the path to automatically insert the year of certificate creation.

Test type	Target path
GEN – General	C:\Users\User\Documents 

Test type
  

Specify the default paths for exporting certificates.

Prerequisite:

- ✓ The directory must already exist.

✓ The user who saves the certificates must have write permissions on the directory.

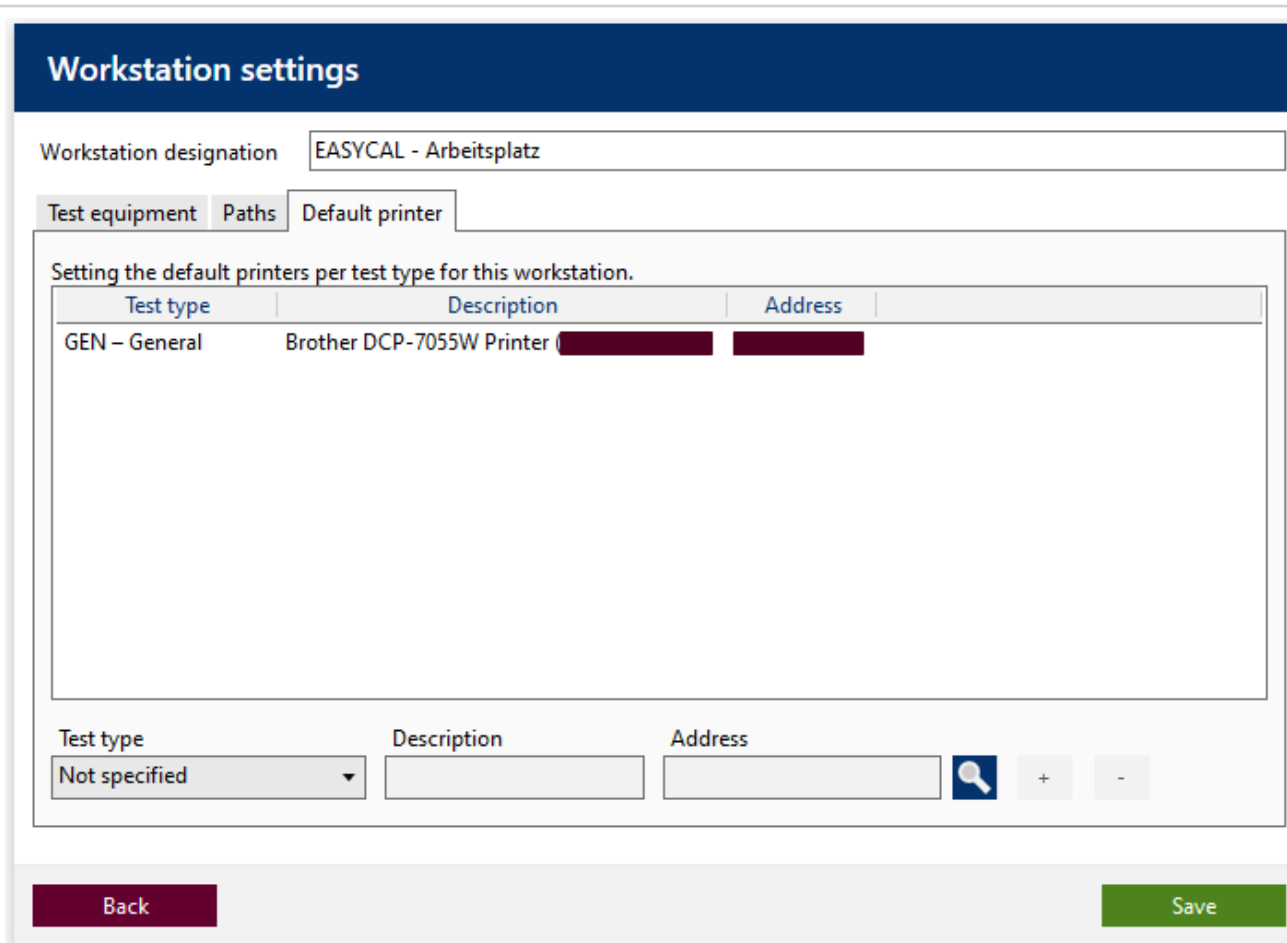
- a. Select Test type.
 - b. Click on the “+” symbol to open the input line.
 - c. Click on . Select folder.
- The path appears in the input line.

With <year> you insert a year into the file name.

Example:

C:\Users\Name\Desktop\<year>

10.1.3 Standard printer



Workstation settings

Workstation designation: EASYCAL - Arbeitsplatz

Test equipment | Paths | **Default printer**

Setting the default printers per test type for this workstation.

Test type	Description	Address
GEN – General	Brother DCP-7055W Printer	

Test type: Not specified | Description: | Address: |  + -

Back **Save**

Set the default printers to be used for this workstation.

Field	Value
Test type	Select the appropriate test type. For test types, see Test types (user authorizations), p. 60
Name	The original designation is adopted.

Field	Value
Address	Shows the network address of the printer.

Prerequisite:

- ✓ The desired printer must be set up at the workstation.

a. Click on  . Select printer from the list.

b. Click on Apply.

→ The printer appears in the fields.

c. Click on the “+” sign to apply the printer for this workstation. Click on the “–” sign to remove the printer for this workstation.

To set up the printer, see Printer configuration, p. 137.

10.2 Language

>> Main menu > Settings > Language

Select the desired interface language.

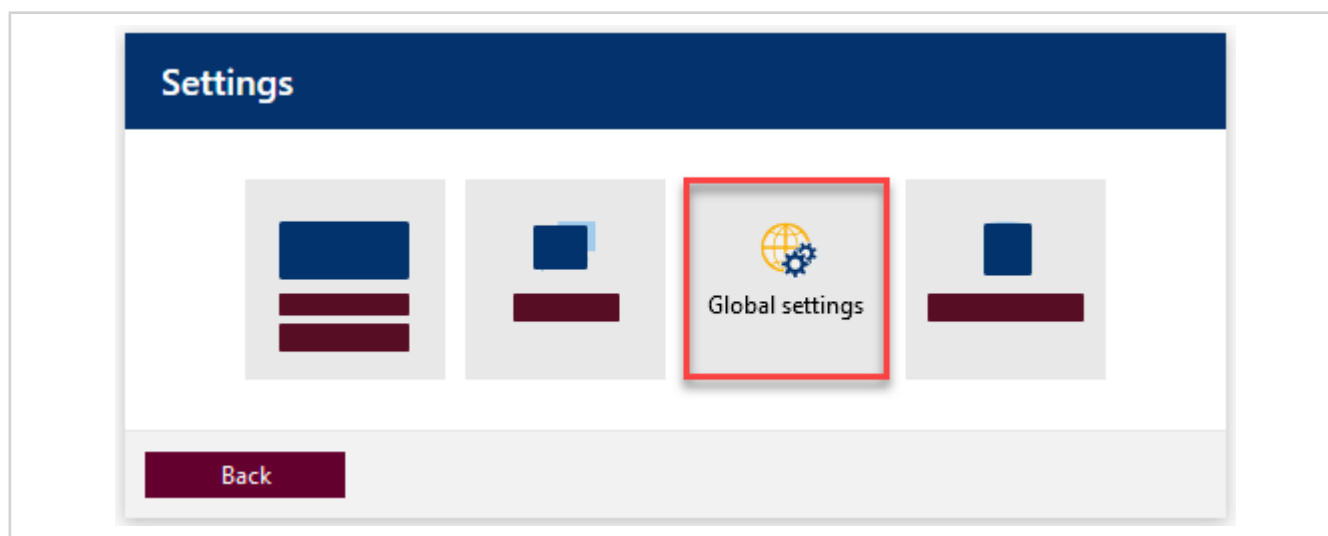
The following languages are available:

German, English, Spanish, French, Chinese

The interface language is independent of the language output on the certificates.

10.3 Global settings

>> Main menu > Settings > Global settings



The global settings apply to all EASYCAL™ 5 clients on the network or only to the individual standalone installation.

Example:

Set ambient conditions, SMTP, and printer settings

10.3.1 Parameters and limits

Ambient data

Set the ambient data in which a test typically occurs. These limits define a validity range between minimum and maximum value. The ambient data must lie in this for a measurement to be valid. The standard values must then be adjusted if the ambient conditions or specified limit values (e.g., according to accreditation) deviate.

Example:

Laboratory is located at high altitude in humid, warm, or cold areas.

The global limits can be overridden by specific limits defined in the test plan; see Test planning, p. 112.

Parameter	Default value
Air temperature (max.)	35.00 °C
Air temperature (min.)	20.00 °C
Air pressure (max.)	1,025 mbar
Air pressure (min.)	960 mbar
Water temperature (max.)	25.00 °C
Water temperature (min.)	20.00 °C
Relative humidity(max.)	65.00%
Relative humidity(min.)	40.00 %

Measurement

Set the range parameters that directly affect the measurement.

Max. target volume difference is the maximum deviation from the set point. If the value from Max. target volume difference is exceeded, a message is output, and the measurement is marked as invalid. This value therefore represents the maximum set point deviation.

Parameter	Default value
Max. target volume difference	50.00 %

General values

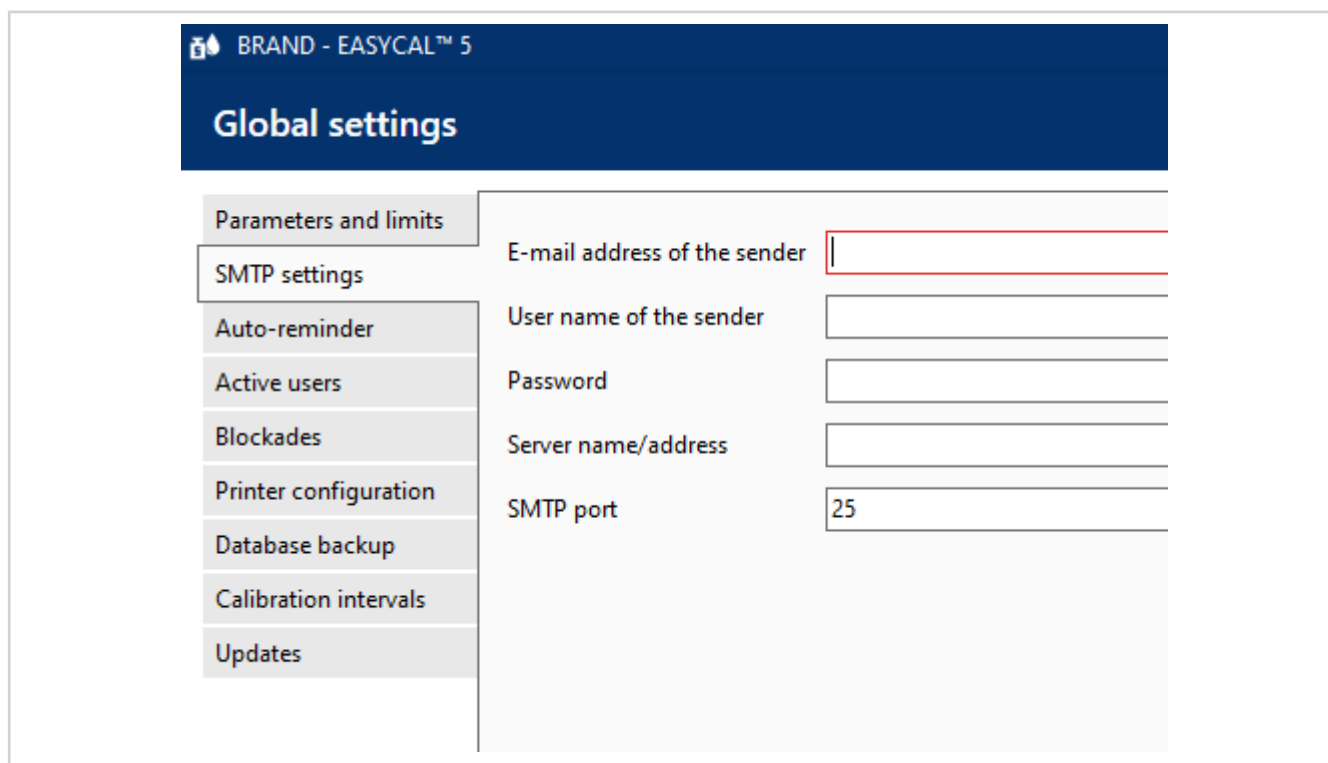
Set parameters of the order processing. Order preview duration specifies the time span of the entries displayed in the menu item Orders and calibration certificates .

Parameter	Default value
Order preview duration	10 T

Options

Option	Default value
Activate continuous reading	Trigger a measurement when you press the “Print” key on your balance. This setting applies to all balances connected to the EASYCAL™ 5 software (if EASYCAL™ 5 is operated as a server application) or to the individual workstation.
Remember test equipment last used	Test equipment that was used during the measurement (even if it was not defined as a connected device in the working configuration) is saved and automatically selected again for the next calibration certificate.
Request manual entry of climate data only once per device	When activated and if the climate or ambient data have to be entered manually, they are requested only during the first measurement. For all other measurements, the values from the first measurement are applied.
Disable 4-eyes principle for release process	Disables the requirement for another user to approve items, test plans, test plan assignments, certificate templates, and assignments. The release can thus also be carried out by the creator or processor.
Single user mode	This option is active for standalone installation. When enabled, user management is disabled, and log on is always via a default user.

10.3.2 SMTP settings



BRAND - EASYCAL™ 5

Global settings

- Parameters and limits
- SMTP settings**
- Auto-reminder
- Active users
- Blockades
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E-mail address of the sender

User name of the sender

Password

Server name/address

SMTP port

Enter the address settings of your SMTP server. You receive this information from your IT administrator.

Field	Value
Sender's e-mail address	Enter the e-mail address to be specified as the sender in the e-mail. This can be an alias e-mail address. Example: <code>noreply.easycal@firma.domain</code>
Sender's user name	Enter user name for sending e-mail. This user must be configured on the e-mail server outside of EASYCAL™ 5 . Example: <code>easycal</code>
Password	Password for sending e-mails of the created user.
Server name/address	Enter the name or IP address of the SMTP server.
SMTP port	Enter the port number of the SMTP server.

10.3.3 Automatic reminder

[illegible]

Set the automatic reminder e-mail here. The e-mail recipient is addressed when you create a new reminder via the reminder service; see *Reminder service*, p. 140.

Field	Description
Activate auto-reminder	If this check box is set, a reminder is sent for each newly tested device after the test interval and the test range have elapsed.
Test interval	This specification defines how frequently EASYCAL checks the device list for due reminders. The interval in each case is specified in whole weeks. Entering 1 week means: EASYCAL checks the device list weekly for any due reminders.
Test range	This specification defines how far into the future EASYCAL looks for due reminders when checking the device list. The range in each case is specified in whole weeks. Entering 1 week means: EASYCAL checks which devices are due for testing in the coming week. Entering 4 week means: EASYCAL checks which devices are due for testing in the next 4 weeks, in the upcoming month.
Include overdue devices	This specification defines whether the devices whose due date lies in the past and which have not appeared for testing since should also be included in the results list. It is important to ensure that the SMTP settings for sending reminders are correct.

The reminder can contain any text. In addition, the following information can be inserted automatically via the placeholder  [v] .

Place holder	Scope
Device list (reduced)	Serial number/customer-specific marking
Device list (complete)	Serial number/customer specific marking/article code/manufacture name.

10.3.4 Active users

BRAND - EASYCAL™ 5

Global settings

- Parameters and limits
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- Active users**
- Blockades
- Printer configuration
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All users can log in **Allow only administrators**

Active users

Name	Workstations
EASYCAL Admin	-

Field	Description
Allow only administrators	If you click on the button, only users of the “Administrators” group will be able to log in (maintenance function).
Active users	All active users are displayed in the list. By clicking on the column headers, they can be sorted in either ascending or descending order.

10.3.5 Blockades

 BRAND - EASYCAL™ 5

Global settings

Parameters and limits

SMTP settings

Auto-reminder

Active users

Blockades

Printer configuration

Database backup

Calibration intervals

Updates

Sessions with active locks

User name	Session token	Action

Locked orders

User name	ID	Order no.	Action

Locked calibration slips

User name	ID	Serial number	Action

Back

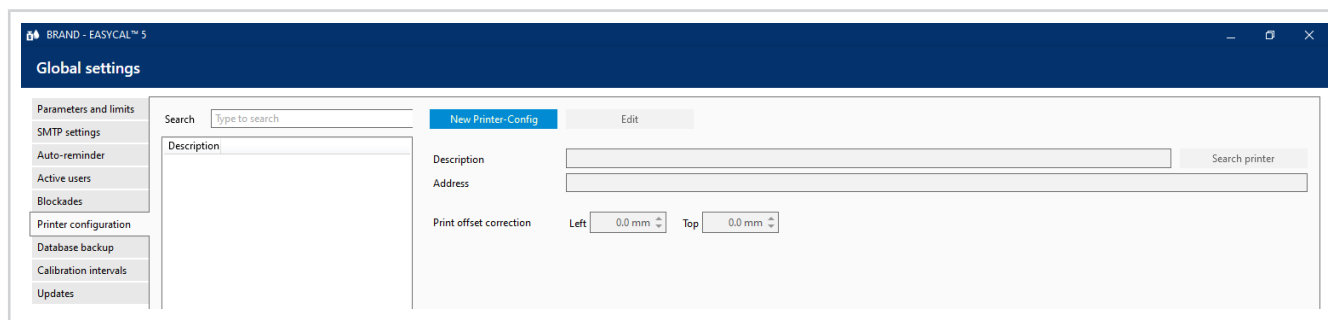
 EASYCAL Admin

Last status: Test plan "1.0 - EC-Manu-PiPip-HTLDisCom-5000-var" was updated

To avoid simultaneous processing of the same order or calibration certificate, it is locked for further processing. The currently locked orders or calibration certificates are shown in this view. These locks can be re-

moved if they have remained in place during a program or computer crash. The locks of the complete user can be removed here or only the lock of an order or calibration certificate can be removed.

10.3.6 Printer configuration



Create new printers or edit already created ones. Offset correction needs to be performed only if preprinted paper is used.

Prerequisite:

- ✓ Set up the printer on the computer beforehand. Otherwise, the printer cannot be selected.
- a. Select a new printer via Search printer . This printer is then available for all users.
- b. Define an offset via Printer offset correction (e.g., 3 mm from the left page margin and 3 mm from the top page margin). This determines where on the paper in the upper left corner the certificate printing starts. Other page options are set in the certificate editor; see Certificate templates, p. 97.

10.3.7 Database backup (only standalone/demo license)



In this menu, you can perform a backup of the database and restore data from the database. With the backup, you overwrite changes made to the database after saving.

10.3.8 Calibration intervals

 BRAND - EASYCAL™ 5 *

Global settings

Parameters and limits
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Calibration intervals ●
Updates

Test type	Calibration required	Calibration interval in days
STD – standard values	☒	1
ST – Short test	☐	0
SPEC – Customer specific	☒	3
MANU – Manufacturer values	☐	0

Specify whether a calibration of the test equipment is required for the Test type and set the calibration intervals.

10.3.9 Updates

 BRAND - EASYCAL™ 5 *

Global settings

Parameters and limits
SMTP settings
Auto-reminder
Active users
Blockades
Printer configuration
Database backup
Calibration intervals ●
Updates

☒ Automatically check for updates for EASYCAL
Test interval: Every day
Last test: 10/7/2021 4:58:49 PM
Check now

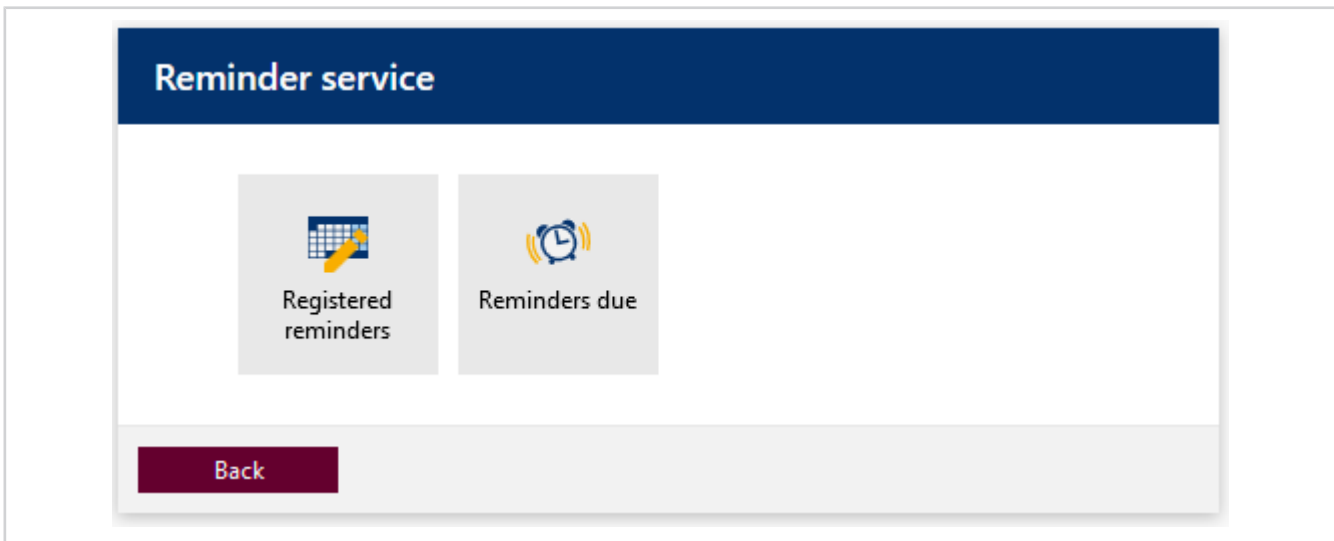
In this section, set whether EASYCAL™ 5 should automatically check for available updates and the interval at which this should happen. Bug fixes are provided to each customer free of charge.

Update available



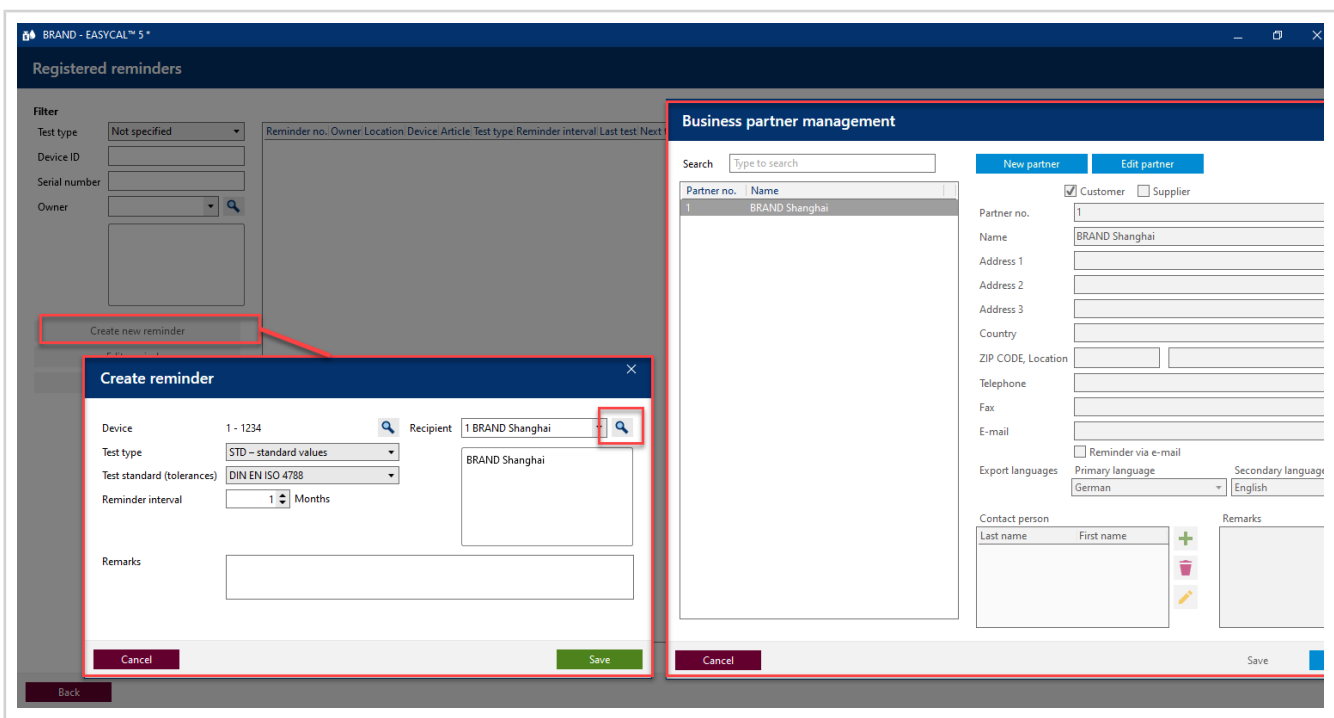
If an update is detected, the symbol appears in the bar at the bottom. The update can be downloaded and installed here.

11 Reminder service



In this section, you define the reminders, which are intended to remind laboratory customers or laboratory suppliers of device testing.

11.1 Registered reminder



Search for existing reminders or create new reminders.

In order for an automatic reminder to work, the reminder interval must first be entered in the Create reminder window and then the E-mail and Reminder via e-mail field must be filled out in the Business partner management window. In addition, in Global settings the Activate auto-reminder function must be activated, see Automatic reminder, p. 134.

11.2 Reminders due

Reminders due

Start date

10/3/2021

15

End date

11/26/2021

15

☒ Include overdue

Owner	Test type	Number	
1 BRAND Shanghai	STD – standard values	1	

Back

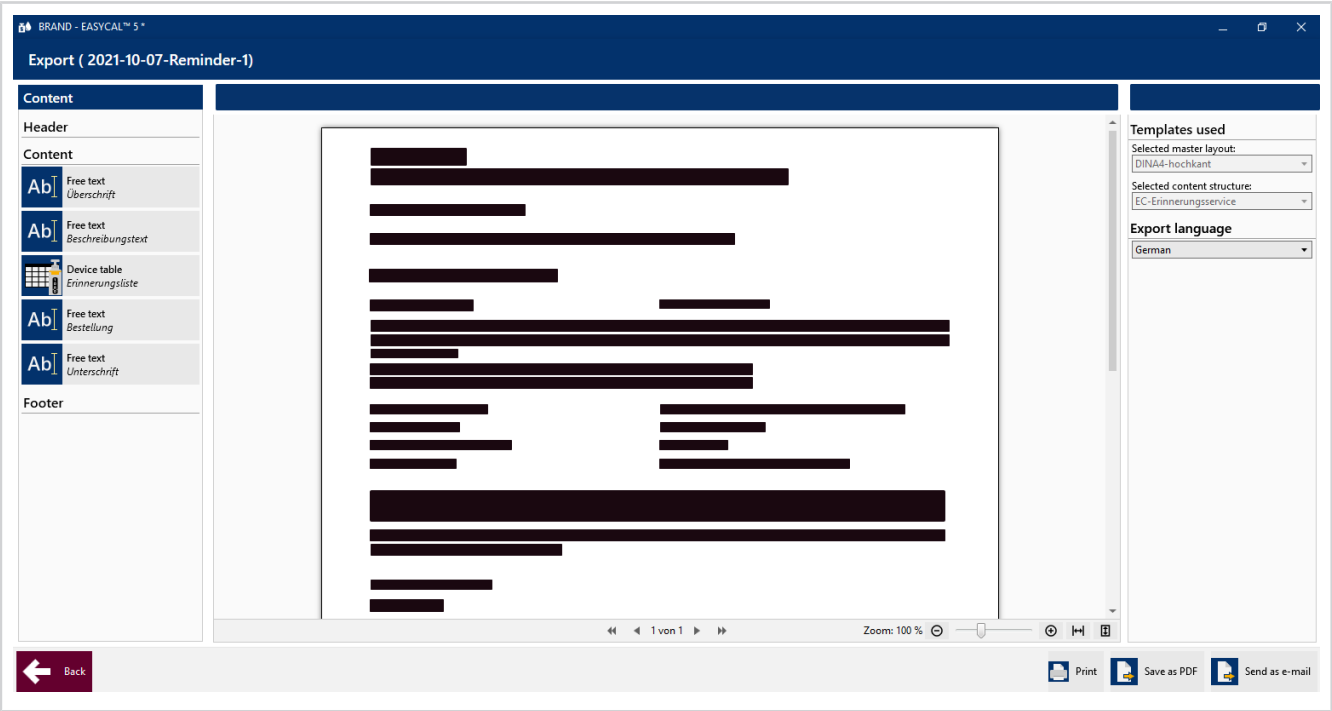
Look for reminders that are due and send reminders by mail or e-mail.

Field	Description
Include overdue	Include overdue reminders in the search.
	Refresh the list of results.
	The devices due for reminder are listed and displayed with the total number of each.
	Opens the print preview and allows to send individual reminders by e-mail.

The reminder letter (sample application)

You can also create reminder letters with the certificate templates in addition to the automatic reminder by e-mail (see Registered reminder). You can print this, save it as a PDF, or send it as an attachment by e-mail (your e-mail client will open). If no e-mail has been stored in the customer data, you will be asked beforehand whether you still want to send an e-mail.

Example:



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Glossary

“Ex” adjustment

The volume of liquid dispensed corresponds to the volume specification printed on it. The liquid residue remaining in the measuring device as a result of wetting was taken into account during adjustment. These measuring devices include graduated pipettes, volumetric pipettes, and burettes.

“In” adjustment

The amount of liquid taken up corresponds to the volume specification printed on the device. These measuring devices include graduated cylinders, volumetric flasks, and capillary pipettes up to 200 µl.

Accuracy

The accuracy (A) indicates how close the mean volume is to the target volume, i.e. the systematic measurement error. The ac-

curacy (A) is the difference between the mean volume (V_{mean}) and the target volume (V_{target}), expressed as a percentage in relation to the target volume.

C value

Corresponds to the number of defective parts allowed in the random sample.

Coefficient of variation

The coefficient of variation (CV) indicates how close the individual measured values are to one another, i.e. random measurement error. The coefficient of variation is defined as the standard deviation, expressed as a percentage in relation to the mean.

Error limit

The error limit (FG) specified in the relevant standards indicates the maximum permissible deviation of the de-

vice from the set-point.

Instrument

In terms of the EASYCAL 5, an instrument is an object that has not yet been described, e.g., the specimen. See also: Device

Lot

A lot is a compiled, fixed amount of units. A test lot can consist of several batches or parts of batches (ISO 2859-1).

Master data

Master data is a term for data that contains basic information about objects. This information is required for ongoing processing.

Master layout

Template for a certificate page

Random sample, absolute

Specifies the exact number of devices belonging to the random sample.

Test equipment

Test equipment is any measuring device used to verify assured product properties.

Test plan

The test plan stipulates the test criteria that must be met for the device to be tested. The device is then tested according to the test plan and its test criteria.

Test type

A test type describes the conditions of the test and the basic measures that must be met. The test type is a sorting criterion for grouping tests of the same kind.



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