English

SOP
0624

Transferpette® single channel

Standard Operating Procedure

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1. Introduction

The test instruction transfers standards relevant to the test into a practical form. It can therefore be used as a basis for test equipment monitoring according to DIN EN ISO 9001, DIN EN ISO 10012, and DIN EN ISO/IEC 17 025.

Basically, we recommend an inspection every 3…12 months. However, the testing interval may be adjusted to your individual requirements. In the case of high frequency of use or the use of aggressive media, it is advisable to check more frequently.

The following instruments can be checked using these test instructions:

Instruments	Types	Relevant standards
Transferpette® Transferpette® S Transferpette® electronic	Fixed volume Variable volume	ISO 8655:2022

For the regular checks according to DIN EN ISO 9001, DIN EN ISO 10 012, and DIN EN ISO/IEC 17 025 as well as the GLP Guidelines, we offer a calibration service (see BRAND Calibration Service). This calibration service saves you time and internal effort, especially if you still have to perform calibrations in addition to ongoing operation.

Legend

In order to simplify the collection of the relevant data, the SOP refers to the respective items in the test report. The following graphics indicate to these positions:

Example:

Position in the test report:

Instrument

In the appendix, you will also find the health clearance form required to send in equipment as well as information about our accredited calibration laboratory and EASYCAL™ 5 calibration software.

2. Preparation

2.1. Instrument type and serial number

1. Determine instrument type and nominal volume. Enter in the test report: 1
2. Read off the serial number. The serial number is located on the Hand grip . Enter in the test report: 1
3. Read customers identification, if available. Enter in the test report: 1

2.2. Minimum required equipment

You will need:

+ Transferpette ®
+ Use suitable pipette tips.
  The best results are achieved with original BRAND pipette tips.

2.3. Cleaning

+ Recommendation:
  Calibrate instrument before cleaning (actual value), and clean afterwards if necessary.
+ Clean the pipette shaft.
  Make sure there are no media residues.
  Wipe the outside with a soft cloth!
+ Clean the housing adequately.
  Minor soiling permissible!
+ Liquid residues in the instrument?
  Disassemble and clean the instrument.
  See instructions for use.

2.4. Visual inspection for damage and leaks

+ Housing: general damage?
+ Pipette shaft tip: scratches on the surface?
+ Ejector unit
+ Piston: scratches or dirt on the surface?
+ Seal: scratches or dirt on the surface?

Enter the result in the test report 2.

Possible errors and the actions that can be taken as a result:

Error	Possible causes	Measures
Pipette tip no longer seals	Scratch on the pipette shaft tip	Procure spare parts; see instructions for use
Instrument is sluggish or leaking	Seal/piston soiled or damaged	Procure spare parts; see instructions for use

2.5. Functional test

1. Attach a new pipette tip.
2. Setting the nominal volume
3. Take up test liquid. Absorption of liquid not possible or very slow: note the information in the following table.
4. Test with BRAND leak tester PLT unit or hold pipette vertically for approx. 10 s and observe whether a drop forms at the pipette tip.
   → If an error appears in the display of the PLT unit or a drop forms at the pipette tip, note the information in the following table.
5. Dispense test liquid. Hold the pipette tip against the vessel wall and wipe it off.
6. The pipetting knob must move smoothly and without jerks.
7. Eject tip Enter the result in the test report 3.

Possible errors and the actions that can be taken as a result:

(Measures for correcting other errors can be found in the respective instructions for use)

Error	Possible cause	Measures
Suction not possible or very slow.	Pipette shaft or pipette shaft tip clogged	Carry out cleaning; see instructions for use
“Error” when testing with PLT unit or droplet forms at pipette tip.	+ Pipette tip not properly attached. + Seal or piston defective.	+ Use new pipette tips, and attach them firmly. + Clean or replace the seal or piston; see instructions for use.

3. Test instruments and accessories

+ A test room with the following features:
  draft-free
  low temporal and spatial temperature fluctuations
  Taking into account the measuring tolerance of the hygrometer, a relative humidity of 45…80% should be reached.
  Ambient temperature of max. 20 ± 3°C

+ Place the instrument to be tested with accessories unpacked in the test room for at least 2 h so that the instrument and accessories can adjust to the ambient temperature.

+ A recipient vessel filled with deionized or distilled water (e. g. Erlenmeyer flask) (water quality in accordance with ISO 3696, at least quality 3) Consider the following aspects:
  Adjust the water and ambient temperature by max. 0.5°C.
  Prevent the water in the vessel from cooling down as a result of evaporation.

+ Provide a weighing vessel (e.g., Erlenmeyer flask). Fill this with a small amount of water.
  Make sure at least the bottom is covered.
  Provide evaporation protection for < 100 µl test volume.

+ Measuring instruments in accordance with DIN ISO 8655-6:

Instrument	**Resolution:**
Thermometer for liquids	0.1°C
Thermometer for ambient temperature	0.1°C
Hygrometer	1% relative air humidity
Barometer	0.1 kPa
Timer	1 s

+ Balance in accordance with DIN EN ISO 8655-6:

Nominal volume of the instrument to be tested	**Resolution of the display**	**Repeatability and linearity** [a]
V	**mg**	**mg**
0.5 ≤ V < 20 µl	0.001 [b]	0.006 [b]
20 µl ≤ V < 200 µl	0.01	0.025
200 µl ≤ V ≤ 10 ml	0.1	0.2

[a] The repeatability in this table applies to the volume determination of a single-channel instrument. If a single-channel balance is used exclusively for the volume determination of multichannel pipettes, the repeatability is twice as high as specified in this table.

[b] single channel balance

+ Accessories (for pipettes with a nominal volume ≤ 50 µl):
  Disposable micropipettes intraEND 100 µl; Order no. 709144
  Pipette holder, Order no. 708605
  Micro-weighing vessel, Order no. 708470

Traceability of test results to the national standard

By using calibrated test equipment (balance and thermometers), the requirement of DIN EN ISO 9001, DIN EN ISO 10 012, and DIN EN ISO/IEC 17 025 for traceability of the test to the national standard is fulfilled. The calibration of the balance can be done by DAkkS calibration, a direct official calibration of the balance, or by calibrating the balance with correspondingly traced weights (corresponding precision). The thermometer can also be calibrated by means of a DAkkS calibration, an official calibration, or by comparison with corresponding traceable thermometers (under defined conditions).

4. Gravimetric testing

The following sections describe how to perform gravimetric testing. If you wish to perform the test, follow the procedure appropriate for your test instrument. As an aid, document their recorded results in the test report. The identifiers (Ex. 1 … 6) refer to the respective location in the test report.

4.1. For Transferpette® with nominal volume > 50 µl

1. Set 10 or 20% of the nominal volume.
2. Determine the temperature of the deionized water. Enter the result in the test report 4.
3. Place the weighing vessel (containing a small amount of deionized water) on the balance and tare the balance.
4. Attach a new pipette tip.
   Perform conditioning:
   Take up and dispense test liquid five times.
   Conditioning increases the precision of the test.
5. Take up the test liquid from the receiving vessel.
   → Press the pipetting button to the first stop (not applicable for Transferpette® electronic), and allow the pipetting button to slide back slowly and evenly. For Transferpette® electronic, press the pipetting button to take up liquid. Observe waiting times and immersion depths depending on the volume range; see table below.
6. Remove the weighing vessel from the balance.
   → not applicable if special pipette calibration balance is used.
7. Dispense the sample into the weighing vessel.
   → Place the pipette tip at an angle of 30…45° to the vessel wall.
   → For the mechanical Transferpette®, press the pipetting button at a steady speed to the first stop, and hold it down.
   For the electronic Transferpette®, press and hold the pipetting key.
   → Empty the pipette tip completely by pressing all the way down (takes place automatically with the Transferpette® electronic).
   → Wipe the pipette tip on the vessel wall over a length of about 10 mm.
   → Allow the pipetting button of the Transferpette® to slide back evenly. Release the pipetting button of the Transferpette® electronic.
8. Place the weighing vessel on the balance, and note the weight value.
   → Enter the result in the test report 5.
9. Re-tare the balance.
10. Perform points 5 through 9 ten times each.
    → Enter the result in the test report 5.
    → During these 10 measurements, change the tip at least once. In this case, pipetting must be started at Point 4.
11. Then pipette analogously at 50% and 100% of the nominal volume.
12. Start at Point 4 in each case.

    → Only for variable and electronic instruments.

    → Enter the result in the test report 5.

    → 30 weight values are determined for the instrument with variable volume adjustment and the electronic instrument. For the instruments with fixed set volume, 10 weight values are determined. Use the report to check whether the test was performed completely

Table: Immersion depth and waiting time

Volume [µl]	Immersion depth [mm]	Wait time [s]
≤ 1	1…2	1
> 1…100	2…3	1
> 100…1,000	2…4	1
> 1,000…20,000	3…6	3

4.2. For Transferpette® with nominal volume ≤ 50 µl

Note on evaporation

For pipettes with a nominal volume ≤ 50 µl, the tolerance limits are usually smaller than 0.5 µl. This low tolerance limit means that the evaporation of water during the test has a relatively high influence on the measurement result. For this reason, a test method that largely prevents evaporation must be used for pipettes ≤ 50 µl. If a special pipette calibration balance with an “evaporation trap” is used, carry out the procedure as in *'For Transferpette® with nominal volume > 50 µl, p. 7'* . BRAND has developed a new test method especially for this purpose. The weighing vessel used is a disposable micropipette or a micro-weighing vessel; these allow almost no evaporation.

1. Set 10 or 20% of the nominal volume.
2. Determine the temperature of the deionized water. Enter the temperature into the test report 4.
3. Attach a new pipette tip. Perform conditioning: Take up and dispense test liquid five times. Conditioning increases the precision of the test.
4. Clamp the disposable micropipette to the pipette holder, place it on the balance, and tare the balance or the micro-weighing vessel.
5. Take up the test liquid from the receiving vessel.
   → Press the pipetting button to the first stop (not applicable for Transferpette® electronic), and allow the pipetting button to slide back slowly and evenly. For Transferpette® electronic, press the pipetting button to take up liquid. Observe waiting times and immersion depths depending on the volume range; see table below.
6. Remove the disposable micropipette or micro-weighing vessel from the balance.
   → The pipette holder facilitates handling.
7. Dispense the sample into the weighing vessel. Dispense the sample into the disposable micropipette or micro-weighing vessel.
   → Attach the disposable micropipette as far as possible to the pipette tip or insert the pipette tip into the cone of the micro-weighing vessel.
   → Press and hold the pipetting button on the Transferpette® at a steady speed until the first stop; press and hold the pipetting button on the Transferpette® electronic.
   → Empty the pipette tip completely by pressing all the way down (takes place automatically with the Transferpette® electronic). An air bubble forms in the disposable micropipette.
   → Remove the disposable micropipette or micro-weighing vessel from the pipette tip while pressing all the way down.
   → Allow the pipetting button of the Transferpette® to slide back evenly. Release the pipetting button of the Transferpette® electronic.
8. Place the disposable micropipette or micro-weighing vessel on the balance; note the weight value.
   → Enter the result in the test report 5.
9. Re-tare the balance.
10. Perform points e) through h) 10 times.
    → Enter the weight values into the test report 5.
11. Then pipette analogously at 50% and 100% of the nominal volume.

12. In each case, start at d).
    - → Only for variable and electronic instruments.
    - → Enter the results in the test report 5.
    - → This results in 30 weight values (variable and electronic instrument) or 10 weight values (fixed instrument).

Table: Immersion depth and waiting time

Volume [µl]	Immersion depth [mm]	Wait time [s]
≤ 1	1…2	1
> 1…100	2…3	1
> 100…1,000	2…4	1
> 1,000…20,000	3…6	3

5. Evaluation of gravimetric test results

The weight values obtained during the gravimetric test are only the mass values of the dispensed volume. In order to obtain the actual volume, an adjustment calculation must be carried out. The following calculations must be carried out:

Step	Calculation	Remark
1.	**Mean weight**: (Example for 10 weight values) $\bar{x} = \frac{x_1 + x_2 + x_3 + x_4 + x_5 + x_6 + x_7 + x_8 + x_9 + x_{10}}{10}$	
2.	**Mean volume**: $\overline{V} = \bar{x} * Z$	Factor Z (see Table 1). Enter the result in the test report 6a.
3.	**Standard deviation**: $s = Z * \sqrt{\frac{\sum(x_i - \bar{x})^2}{n-1}}$	Factor Z (see Table 1). Enter the result in the test report 6b.
4.	**Accuracy**: $A\% = \frac{\overline{V} - V_0}{V_0} * 100$	Enter the result in the test report 6c.
5.	**Coefficient of variation**: $CV\% = \frac{100\ s}{\overline{V}}$	Enter the result in the test report 6d.
	Actual/nominal value comparison: For error limits, see and and the following accuracy tables for the respective instrument, or define your own error limits.	Enter the result in the test report 6e.
	Result:	Enter the result in the test report 6g.

If the calculated values (A% and CV%) are less than or equal to the error limits, the instrument is in good working order.

If the calculated values are greater than the error limits:

+ Check that all instructions have been carried out correctly.
+ Follow the instructions in the “Troubleshooting” section of the instructions for use.
+ Adjust the Transferpette®-8/-12, Transferpette®-8/-12 electronic, or Transferpette® S -8/-12 according to the instructions for use.

If these measures do not lead to success, we recommend that you use the BRAND calibration service (see *'BRAND Calibration Service, p. 17'*).

We recommend using software to help perform the calculation and evaluation. For this purpose, BRAND offers the EASY-CAL™ calibration software (see here). This convenient software runs on Windows and speeds up the calculation considerably.

5.1. Possible volume error

Possible volume errors and the actions that can be taken:

Error	Possible causes	Measures
Volume too small	Pipette tip not properly attached	Use new pipette tip, and attach firmly.
	Seal or piston defective	Clean or replace the seal or piston; see instructions for use
	Pipette shaft tip no longer screwed on tightly; red marking may be visible (not possible with Transferpette® electronic and Transferpette® S)	Retighten pipette shaft tips
Volume too large	Pipetting button pressed too far	Pay close attention to the first stop
Other influencing variables	Instrument incorrectly adjusted	Readjust instrument
	Temperature calibration of instrument, ambient, and water temperature not completed	Perform temperature adjustment

5.2. Temperature and factor Z

Extract from DIN EN ISO 8655

Table refers to 1,013 hPa.

In the validity range from 950 hPa to 1040 hPa.

Temperature: ° C	Factor Z ml/g		Temperature: ° C	Factor Z ml/g
15	1.0020		23	1.0035
15.5	1.0020		23.5	1.0036
16	1.0021		24	1.0038
16.5	1.0022		24.5	1.0039
17	1.0023		25	1.0040
17.5	1.0024		25.5	1.0041
18	1.0025		26	1.0043
18.5	1.0026		26.5	1.0044
19	1.0027		27	1.0045
19.5	1.0028		27.5	1.0047
20	1.0029		28	1.0048
20.5	1.0030		28.5	1.0050
21	1.0031		29	1.0051
21.5	1.0032		29.5	1.0052
22	1.0033		30	1.0054
22.5	1.0034			

5.3. Manufacturer error limits for single-channel pipettes

Transferpette® S, fixed volume

Volume range [µl]	A* ≤ ± %	CV* ≤ %	Recommended tip type [µl]
10	1	0.5	0.5 - 20
20	0.8	0.4	2 - 200
25	0.8	0.4	2 - 200
50	0.8	0.4	2 - 200
100	0.6	0.2	2 - 200
200	0.6	0.2	2 - 200

Volume range [µl]	A* ≤ ± %	CV* ≤ %	Recommended tip type [µl]
500	0.6	0.2	50 - 1000
1000	0.6	0.2	50 - 1000
2000	0.8	0.3	500…5,000

*A = Accuracy, CV = Coefficient of Variation

Transferpette® S, variable volume

Volume range [µl]	Partial volume [µl]	A* ≤ ± %	CV* ≤ %	Sub steps [µl]	Recommended tip type [µl]
0.1 - 1	1 0.5 0.1	2 4 20	1.2 2.4 12	0.001	0.1 - 20
0.1 - 2.5	2.5 1.25 0.25	1.4 2.5 12	0.7 1.5 6	0.002	0.5 - 20
0.5–10	10 5 1	1 1.6 7	0.5 1 4	0.01	0.5 - 20
2 - 20	20 10 2	0.8 1.2 5	0.4 0.7 2	0.02	2 - 200
5 - 50	50 25 5	0.8 1.2 4	0.3 0.5 2	0.05	2 - 200
10 - 100	100 50 10	0.6 0.8 3	0.2 0.4 1	0.1	2 - 200
20 - 200	200 100 20	0.6 0.8 3	0.2 0.3 0.6	0.2	2 - 200
100 - 1000	1000 500 100	0.6 0.8 3	0.2 0.3 0.6	1	50 - 1000
500…5,000	5000 2500 500	0.6 0.8 3	0.2 0.3 0.6	5	500…5,000
1000 - 10,000	10000 5000 1000	0.6 0.8 3	0.2 0.3 0.6	10	1,000…10000

*A = Accuracy, CV = Coefficient of Variation

Transferpette® electronic

Volume range [µl]	Partial volume [µl]	A* ≤± %	CV* ≤%	Sub steps [µl]	Recommended tip type [µl]
0.5–10	10 5 1	1.0 1.5 5.0	0.4 0.8 2.0	0.01	0.5 - 20
2 - 20	20	1.0	0.4	0.02	0.5 - 20

Volume range [µl]	Partial volume [µl]	A* ≤± %	CV* ≤%	Sub steps [µl]	Recommended tip type [µl]
	10 2	1.5 5.0	0.8 2.5		
10 - 200	200 100 20	0.8 1.2 4.0	0.2 0.3 0.6	0.2	2 - 200
50 - 1000	1000 500 100	0.6 1.0 3.0	0.2 0.3 0.6	1.0	50 - 1000
250…5,000	5000 2500 500	0.6 1.0 3.0	0.2 0.3 0.6	5.0	500…5,000

*A = Accuracy, CV = Coefficient of Variation

5.4. ISO error limits for pipettes

Nominal volume	A ≤ ± %	CV ≤ %
1 to 3 µl	2.5	2
> 3 to 5 µl	2.5	1.5
> 5 to 10 µl	1.2	0.8
> 10 to 50 µl	1.0	0.5
> 50 to 5,000 µl	0.8	0.3
> 5,000 to 10,000 µl	0.6	0.3

5.5. Error limits to be defined by the user

For calibration, the applicable error limits must be defined by the user. Different methods can be applied to accomplish this:

If the application requires it and the optimized test conditions exist for measurement, the error limits specified in the can also be expected in the case of used, intact volumetric instruments.

In accordance with the German Calibration Law, however, it is also admissible to apply operational limits. The operational limits equate to double the calibration error limits. This means that the values of the manufacturer's error limits must be doubled. Users may also define their own individual error limits related to their particular application, which their calibrated (adjusted) measuring instrument should adhere to.

This procedure meets the requirements of DIN EN ISO 9001, DIN EN ISO 10 012, and DIN EN ISO/IEC 17 025.

6. Test report for volumetric instruments

1 Instrument

- ☐ Titrette®
- ☐ Burette Digital
- ☐ Dispensette®
- ☐ Transferpette®
- ☐ Transferpette® S
- ☐ Transferpette® electronic
- ☐ Transferpettor

Type

- ☐ fixed
- ☐ variable

- ☐ analog
- ☐ digital

Nominal volume:

Serial number:

Customer's marking:

2 Damage

Nominal volume:

Serial number:

Customer's marking:

3 Operating defects

- ☐ Type of damage
- ☐ Damage remedied
- ☐ none
- ☐ Type of functional defect
- ☐ Functional defect eliminated

4 Environment

Water temperature:

Balance:

Thermometer:

Continued on next page

Relative humidity: (at least 45%):

Correction factor Z:

5 Weight values of the gravimetric test

Weight value No.	At 10% in mg	At 50% in mg	For nominal volume in mg
x_1:			
x_2:			
x_3:			
x_4:			
x_5:			
x_6:			
x_7:			
x_8:			
x_9:			
x_{10}:			

6 Evaluation of the gravimetric test

Calculated value		At 10%	At 50%	For nominal volume
6a	$\overline{V}$			
6b	s			
6c	A [%] actual			
6d	CV [%] actual			
6e	A [%] target			
6e	CV [%] target			
6g	Result			

The test was carried out according to DIN EN ISO 8655 and DIN EN ISO 4787.

Date: Signature:

7. Appendix

7.1. Abbreviations, units, and notations

The following abbreviations are used in this or other test instructions:

Symbol	A < B: A is less than B A ≤ B: A is less than or equal to B
Ranges	Example: 980…1000 hPa Avoids sign confusion: Hyphen as a minus sign
	Example: 20 µl < V < 100 µl The volume V is between 20 µl and 100 µl (V is larger than 20 µl and smaller than 100 µl).
Materials	PFP: Perfluorinated pentacene
	PMP Polymethylpentene
	PFA Perfluoroalkoxy polymer
	Boro 3.3 Borosilicate glass
	AR-GLAS®: A soda-lime glass from SCHOTT AG, 55122 Mainz, Germany
	PUR: Polyurethane
W_1	Tare weight of the weighing vessel
W_2	Weight of the weighing vessel filled with the medium to be weighed.
A	Accuracy
CV	Coefficient of variation:
V	Volume
s	Second
l	Liter
ml	Milliliter(s)
µl	Microliters
g	Gram(s)
mg	Milligrams(s)

7.2. Declaration on the Absence of Health Hazards

Please enclose with the instrument or send as an e-mail to service@brand.de.

BRAND GMBH + CO KG

Otto-Schott-Str. 25
97877 Wertheim

service@brand.de
F +49 9342 808 91290

We are required by law to protect our employees against hazards caused by contaminated instruments. Therefore, we thank you for understanding that we can only perform calibrations| repairs when this declaration is completed, signed and provided to us.

CAUTION! If you are a customer outside of Germany, please contact our local service partner in your country. Please send in instruments from outside Germany only after being requested to do so. Unsolicited instruments cannot be processed.

To the equipment shipment from | To the delivery note number

Instrument | Serial Number

The undersigned hereby declares:

+ That the instruments have been carefully cleaned and decontaminated before shipment.
+ That the instruments pose no danger through bacteriological, viral, chemical, and/or radioactive contamination.

Applications

Media used:

- ☐ Acids
- ☐ Bases
- ☐ Solvents
- ☐ Serum, blood
- ☐ Cell culture media, buffers
- ☐ Other:

Measures for decontamination:

Company / laboratory (official stamp)

Name:

Pos.

Date / legally binding signature:

Tel. / fax / e-mail

_____

7.3. BRAND Calibration Service

BRAND offers a complete service that includes calibration and adjustment of BRAND and third-party instruments as well as any necessary maintenance and repair of BRAND instruments. This saves time and money, with the added benefit of testing by an independent laboratory. Find more information and the order form for the repair and calibration service on brand.de.

7.3.1. Range of instruments

1. Piston-operated pipettes (single- and multi-channel)
2. Bottle-top dispensers
3. Bottle-top burettes
4. Repetitive pipettes

7.3.2. Testing in accordance with DIN EN ISO 8655

A team of qualified staff, working in temperature and humidity controlled rooms and using state-of-the-art balances and calibration software, calibrates Liquid Handling instruments, regardless of their make, in accordance with DIN EN ISO 8655.

Variable volume instruments such as the HandyStep®Touch, HandyStep®Touch S, HandyStep® electronic, Transferpette®, Transferpette®S, Transferpette®electronic, Transferpette®-8/-12, Transferpette®-8/-12 electronic, Transferpette®S -8/-12, Transferpettor, Dispensette®, digital burettes, or Titrette® are checked at nominal volume, 50% of the nominal volume, and at 10% or 20% of the nominal volume.

To document the results, a detailed test report that fully complies with all relevant regulations is compiled.

The BRAND Calibration Service provides:

1. Calibration of Liquid Handling instruments, regardless of their make
2. Detailed calibration certificate
3. Return of instrument within a few working days
4. Cost-efficient implementation

7.4. EASYCAL™ Calibration software – test equipment monitoring made easy

The EASYCAL™ 5 calibration software facilitates the monitoring of liquid handling instruments (piston-stroke instruments such as pipettes, dispensers, burettes, and manual dispensers) as well as volumetric instruments made of glass or plastic according to GLP/GMP and DIN EN ISO 9001. EASYCAL™ 5 can be used not only for BRAND instruments but also for the instruments of all manufacturers.

EASYCAL™ 5 performs all calculations automatically and compares them with the tolerances from the current standards or their individually defined limits. The tolerances of numerous instruments and the interface settings of over 100 test instruments (e.g., balances) are already stored for you.

Choose between a stand-alone version for working on one workstation (recommended for small laboratories where calibration is done by a single person) or a client/server version for parallel, distributed work on multiple workstations (floating licenses are installed on the server).

Functions:

+ Testing of liquid handling instruments and volumetric instruments made of glass and plastic in accordance with ISO 8655, ISO 4787, and others.
+ Open software, suitable for all volumetric instruments – regardless of manufacturer.
+ Extensive library with instrument specifications from well-known manufacturers can be expanded and modified by the user.
+ Scope of testing can be individually defined by the user via test plans. An extensive library of test plans is included to help you get started with EASYCAL™ 5 and minimize data entry time.
+ Instrument management – quickly and easily search and find the owner, test history, and next test date.
+ Continuous control of the current actual state during the test by graphical representations and ad hoc calculation of statistical values.
  Reminder function for upcoming tests with automatic notification of the instrument owner via e-mail.
+ Integration of the address data of your customers and suppliers in a business partner database User administration with user roles (e.g., auditor, supervisor, system administrator) and access restriction to EASYCAL functions.
  Dual-control principle for the release of critical data such as test plans, calibration orders before certificate printing, and instrument specification.

+ Interface connection via RS232 of measuring instruments such as balances, thermometers, barometers, and hygrometers with automatic transmission of the measured values.
+ In the integrated certificate editor, you can customize the certificates, and test reports supplied to your needs and create the design.

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We want to inform and advise our customers through our technical writings. However, the transferability of general empirical values and results under test conditions to the specific application depends on a variety of factors beyond our control. We therefore ask for your understanding that no claims can be derived from our advice. The transferability must therefore be checked very carefully by the user himself in each individual case.

Technical changes, errors and misprints excepted.

At store.brand.de you will find accessories and spare parts, user manuals, test instructions (SOP) and videos for the product.

For more information on products and applications, please visit our Youtube channel mylabBRAND.

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