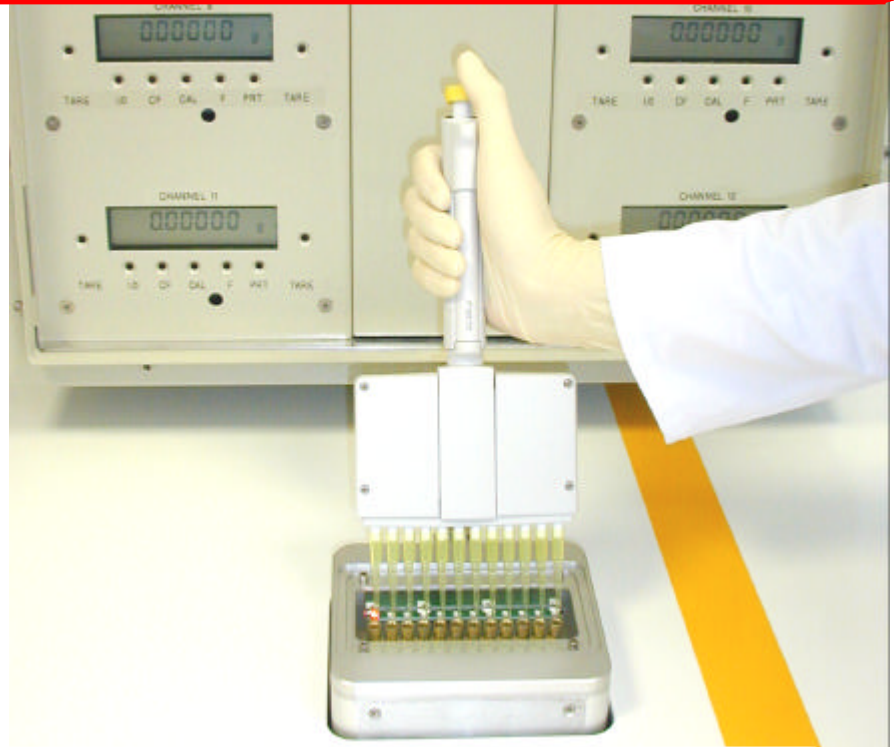


In accordance to EN ISO 8655-6

- Calibration of piston-operated volumetric apparatus, vendor independent
- In accordance to EN ISO 8655-6 or to user specifications
- Single and multi channel pipettes, burettes and dispensers
- Calibration of electronic and mechanical pipettes



Calibration of piston-operated pipettes

- Test report in accordance to EN ISO 8655-6 and to EN ISO/IEC 17025
- Labelling of the calibrated pipette by a calibration sticker
- Calibration within 2 working days
- Accredited testing laboratory in accordance to DIN EN ISO/IEC 17025

If pipettes are used in accredited laboratories or if they are subject to any quality assurance procedures, they have to be calibrated regularly.

Just by a calibration it is possible to find out whether a pipette still meets the specifications, defined by the manufacturer respectively by the user.

A calibration is also a precaution to detect errors in time, which may slip in by wear and tear. An undetected error due to a malfunction may lead to wrong pipetting results which can have serious consequences.

EN ISO 8655-6 is an European standard that has replaced the former standard DIN 12650 and some others. It contains gravimetric methods for the determination of measurement error on piston-operated volumetric apparatus.

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Why ..

pipettes should be calibrated regularly

Each new pipette gets calibrated before delivery. At this time it fulfils the manufacturer specifications in regards to the volume, as well as the according accuracy and precision. In the course of time each pipette is subject to a normal wear and tear. Faults may appear without any notice. Leakages, wears of moving parts, which cannot be recognized with the naked eye may influence the result and lead to considerable inaccuracies. Changing environmental conditions as e.g. temperature, humidity, atmospheric pressure or the different handling of the pipette by various users may lead to deviations as well.

Therefore the goal should be to minimize any source of error in order to get the best results. Just by doing calibrations regularly accuracy and precision can be calculated. If the pipette is out of specification, it has to be adjusted in order to optimize the result.

Eventual damages will be recognized immediately and can be fixed at the same time.

Only by calibrating a pipette regularly, its actual condition can be identified and documented in a traceable way.

What ..

does accuracy and precision mean?

Accuracy is the deviation of a measurement from a standard value or true quantity.

Precision means, if a pipette is put into operation repeatedly without adjustments, the ability to produce the same value or result, given the same input conditions and operating in the same environment.

What ..

should be the scope of calibration?

For calibrations within Europe EN ISO 8655-6 is used. According to this European standard all pipettes with variable adjustable volume have to be calibrated by measuring each channel 10 times at low, middle and high volume each. This means for a single channel pipette a number of 30 single measurements, for a 12-channel pipette even 360 measurements. All measurements have to be done gravimetric by using an according balance. The determined weights have to be converted into the corresponding volume, considering air temperature, liquid temperature, atmospheric pressure etc.

What ..

can biomedis do for you?

biomedis has established a full-air-conditioned laboratory, which is included in the accreditation in accordance to DIN EN ISO/IEC 17025. It is equipped with suitable balances and special test equipment for multi channel pipettes. All calibrations are performed in accordance to DIN EN ISO 8655-6 or user settings by trained and qualified personnel. If a repair becomes necessary, only original spare parts will be used for replacement. Before we will send you unasked a cost estimate. You'll get back your pipette with a testing report, which includes not only the measuring results but also statistic information about accuracy and precision. If your pipette has been out of range before calibration, this information is also going to be recorded.

After calibration the pipette gets labelled with a calibration sticker.

How ..

long does a calibration take?

When we receive your pipette it gets calibrated and, if necessary, repaired within 48 hours. Afterwards the pipette will be returned immediately. You will in any case receive a cost estimate, if either the repair costs are going to be substantial or if desired. We normally dispatch all goods by UPS.

How ..

often a pipette should be calibrated?

It depends on the frequency of use and environmental conditions. Accredited and certified laboratories follow internal standards which are fixed in their quality management guidelines for the inspection of test and measuring equipment. For medical use, special standards and laws have to be followed. If there are no regulations existing, we recommend doing a calibration at least once a year.

Which ..

pipettes can be calibrated by biomedis?

biomedis offers all performances vendor independent. We calibrate all piston-operated apparatus such as pipettes, burettes and dispensers, produced and sold by well-known firms such as Abimed, **Biohit, Brand, Cappelen, Costar, Dunn, Eppendorf, Gilson, Hamilton, Hirschmann, Matrix, Nichiryo, Rainin, Socorex, Thermo Labsystems, etc.**

Please contact us for a quotation without obligation. We will consider your needs.

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