

Fact sheet of the interlaboratory comparison:

Volume – Pipettes calibration 2022/2023

Context and objectives:

In 2022 and 2023, CT2M organizes a european-wide interlaboratory comparison on the calibration of volumetric instruments (pipettes). You are a calibration laboratory (accredited or not) or a test laboratory carrying out their own calibration: this inter-laboratory comparison is organized for you!

The objectives of this proficiency testing are:

- Determine your performance by positioning your laboratory in relation to other laboratories,
- Ensure the quality of your calibration results,
- Meet the normative and accreditation requirements,
- Validate your calibration method.

CT2M commitments:

- Confidentiality of results, protection of anonymity,
- Organization and exploitation of results according to applicable standards (ISO 17043, ISO 13528)
- Support of participating laboratories.

Proficiency testing item:

- 1 automatic pipette with variable volume 5-50 μ l,
- 1 automatic pipette with variable volume 10-100 μ l,
- 1 automatic pipette with variable volume 100-1000 μ l.

It is not mandatory to calibrate the 3 pipettes provided to participate in this proficiency testing. You can only participate on volumes for which you have the appropriate calibration means.

Testing/Calibration Method(s):

The recommended calibration method is the gravimetric method according to ISO 8655-6, with 10 weighings. However, any other method may be used for this interlaboratory comparison (colorimetric method, number of weighings less than 10, etc.). The method used will be indicated by each participant in the results file to complete.

Each pipette will be calibrated on three volumes:

- Calibration at 5, 25 and 50 μ l for the 5-50 μ l variable volume pipette.
- Calibration at 10, 50 and 100 μ l for the 10-100 μ l variable volume pipette.
- Calibration at 100, 500 and 1000 μ l for the 100-1000 μ l variable volume pipette.

A detailed protocol will be provided to each participant at the beginning of the round.

Organization of the proficiency testing:

Each laboratory will have to calibrate the pipettes within a week. The instruments will circulate from one laboratory to another from September 2022.

The CT2M will provide a file in which the following results will be transcribed:

- The delivered volume,
- The standard deviation "S" associated with the delivered volume,
- The calibration uncertainty at $k=2$ (if available)

However, it is not mandatory to give the calibration uncertainty to participate in this interlaboratory comparison.

Final report:

At the end of the round, the results will be treated statistically and a final report will be sent to the participants. It will contain the results of all the participants (with a codification to respect the anonymity), the study of normality and outliers, the performance scores of the participants and all the other information useful for the interpretation of results.

Intermediate reports will also be broadcast during the round if a significant number of participants would lead to a round duration longer than 6 months. **Invoicing will be done when the intermediate report is sent.**

Important dates:

Key steps	Estimated deadline
Deadline for registration	June 30th 2022
Mailing of the detail procedure and the planning of the round	During the ILC
Launching of the round	September 2022
Publication of the final report	Depending on the number of participants (Intermediate report regularly)

Participation fees: 475 € (net total)

This price includes the loan of the instruments to be calibrated and associated tips, the transport costs from the CT2M at the beginning of the round, the supply of the results file to be completed and the final report containing the exploitation of the results.

It should be noted that the transport costs to the following laboratory are the responsibility of the participants, the choice of carrier is free.

The transport of proficiency test item outside the European Union must be organized and paid for by the participating laboratory.