

## **Fact sheet of the interlaboratory comparison:**

### **ILC – Scale calibration 2024**

#### **1. Context and objectives:**

CT2M organizes in 2023 a European-wide inter-laboratory comparison on scale calibration.

You are a calibration laboratory or a testing laboratory performing its own calibrations: this inter-laboratory comparison is organized for you.

The objectives of this proficiency testing are to:

- Evaluate the performance of the participants to achieve mass calibration,
- Improve client confidence of participants,
- Identify differences between participants.

#### **2. Proficiency testing item:**

The comparison is based on the calibration of a RADWAG scale type AS220/X2 PLUS with the following characteristics:

- Maximum capacity: 220 g
- Resolution: 0,1 mg

#### **3. Calibration Method:**

The calibration method used is the calibration method described in the NF EN 45 501 standard and the Cofrac LAB GTA 95 document:

- ✓ A trueness test covering the range of use: 100 mg, 500 mg, 2 g, 10 g, 50 g, 100 g, 200 g, 220 g,
- ✓ Two repeatability tests: 100 g and 200 g,
- ✓ An eccentricity test :50 g.

Each participant will carry out the calibration with their own standard weights. Carrying out all the tests requested above is strongly recommended but is not compulsory (if you do not have all the standard weights requested, for example).

A detailed protocol will be provided to each participant at the start of the campaign.

**IMPORTANT: Calculation of calibration uncertainties  $U(E_i)$  on indication errors is an essential prerequisite for registration.**

Participants who estimate the uncertainties on the indication errors  $U(E_i)$  and the uncertainty of the weighing instrument  $U(IP)$  as defined in the Cofrac document LAB GTA 95 will be invited to provide them as well.

#### **4. Organization of the proficiency testing:**

The balance, subject of this inter-laboratory comparison, will be made available in the CT2M premises in Saint-Chamas (13 - France) according to a schedule and on a previously defined time slot.

Participants will therefore be called to the CT2M site for the calibration to be carried out in **week 24 (2024)**. Other days may be scheduled depending on the number of participants.

The CT2M will provide participants with an Excel form in which their results must be transcribed. Participants must indicate the following results:

- ✓ The errors of indication and the associated expanded uncertainty  $U(E_i)$  ( $k=2$ )
- ✓ The raw values of the precision and eccentricity test,
- ✓ The uncertainty on the weighing instrument  $U(IP)$ , if estimated.

#### **5. Assigned values and evaluation of performance:**

The objective of the evaluation of the performance of this inter-laboratory comparison are:

##### For trueness and eccentricity tests:

- To evaluate the ability of each participant to obtain results close to the assigned value within the limits of the claimed extended uncertainty ( $E_n$ )

The assigned values will be established from the robust average of the results of the participants, determined from the algorithm A defined in ISO 13528.

The standard deviation for the proficiency assessment as well as the uncertainties associated with the assigned values will be determined to establish the performance scores of each of the participants for each test.

##### For repeatability tests:

- To evaluate the consistency of the laboratory repeatability with the repeatability results of all participants (Variance Homogeneity Test – Cochran Test)

#### **6. Report(s):**

At the end of the circuit, a statistical analysis will be carried out and a report will be written. This will contain the results of all the participants (with a coding to respect anonymity), the detection of outliers, the assigned values and their associated uncertainties, the performance scores of the participants and all the other elements useful for interpretation.

The final report will be distributed to all participants.

#### **7. Participation fee: €590 excl. VAT**

(\*) This fee includes the provision of the instrument to be calibrated, the provision of the results file to be completed, the participation protocol and the final report containing the evaluation of the results and the evaluation of the performance.

## 8. Provisional schedule:

Key steps	Estimated deadline
Closing of registrations	April 19, 2024
Sending of the schedule for carrying out the calibrations	April 29, 2024
Sending of the detailed protocol and the results file to be completed	May 15, 2024
Performing calibrations at CT2M	Week 24 (June 11 to 14, 2024)
Sending the report	July 31, 2024

## 9. Reciprocal commitments:

### CT2M commitments:

The CT2M undertakes to:

- guarantee the confidentiality of participants results and respect their anonymity (\*),
- carrying out the performance evaluation in complete impartiality,
- organize and process the results in accordance with the reference applicable documents (ISO 17043, ISO 13528).

(\*). The data obtained and generated during the inter-laboratory comparison may be consulted during internal or external audits. Auditors are systematically subject to a confidentiality agreement. For communication purposes (conferences, articles, etc.), the results may be used but in a totally anonymous manner.

### Participant commitments:

The participants in this inter-laboratory comparison undertake to:

- respect the protocol provided for carrying out the calibrations,
- provide their results within the deadlines defined by the organizer,
- not to communicate with any other participant who may be known in order to avoid any risk of collusion,
- transmit all the necessary information of the successful completion of the inter-laboratory comparison to all the persons concerned within their laboratory,
- inform the CT2M of any malfunction.

## 10. Registration and contact:

If you are interested in participating in this inter-laboratory comparison, you simply have to complete registration form by clicking on the following link (<https://forms.office.com/e/jw6HErmhre>).

NB: if the link does not work, do not hesitate to contact us so that we can send you the registration form "Registration form – ILC Scale calibration 2024\_v1 calibration" which you can return to us by email at [cilbalance@ct2m.fr](mailto:cilbalance@ct2m.fr).

For more information, do not hesitate to contact us:

- Email: [cilbalance@ct2m.fr](mailto:cilbalance@ct2m.fr)
- Phone: +33 (0)4 90 50 90 14

## Appendix: Terms of sale

### 1. Invoicing

Invoicing is carried out after sending the final report or an intermediate report of the proficiency testing. **The settlement is 30 days end of month of the invoice date.**

Every registration fee is due when the campaign is started and won't be cancelled or refund.

### 2. Loss, degradation or elimination of the test item

In case of loss, damage or elimination of the proficiency test item by a participant, the CT2M reserves the right to claim its amount or purchase and new shipment.

The CT2M cannot be held responsible for loss, disposal or non-receipt of the proficiency test item.

### 3. Number of participants

In case of insufficient number of participants for an appropriate statistical treatment, the CT2M reserves the right to cancel this inter-laboratory comparison.

### 4. Management and storage of personal data

The CT2M will use the data of the participants in order to communicate with the participant during the the ILC. These datas are also used to send them intermediate and/or final reports. The data may be used for commercial purposes: communication of new features on the website, communication on new ILC or on ILC in which a participant have already participated. The data will be kept for 5 years after the last communication. (The data listed in the quotes and reports are kept for 10 years.)

The provisions governing the management of personal data under the RGPD are available on our website in the "RGPD Policy" document: <https://ct2m.fr/presentation-ct2m/politique-rgpd/>

In the event of refusal, an email should be sent to [ct2m@ct2m.fr](mailto:ct2m@ct2m.fr).