

Simple Internal Calibration for Laboratories

One Training Day

What?

Estimate and competently propagate the uncertainties associated with the calibration of thermometers, balances and pipettes from laboratory reference instruments to those instruments used for testing. Establish traceability of measurement as defined by the GUM and ILAC P10. Meet accreditation body competence criteria for the desired levels of uncertainty to be propagated.

Note: Not for calibration laboratories – only for the internal calibration efforts of testing laboratories.

Who?

For all laboratory staff who:

- Participate in the operation of the laboratory quality system
- Write procedures
- Conduct tests
- Conduct QA/QC
- Prepare standards
- Purchase calibration services

How?

This 1-day Training Course teaches participants to competently propagate uncertainties for mass, temperature, and volume internal calibrations. Uncertainties in the range parts per ten to parts per thousand are feasible – the smallest uncertainties can be propagated in a testing lab.

Participants use materials related to basic measurement instrument calibration and receive tools to estimate uncertainties during the training and thereafter.

Syllabus (09:00 - 16:30)

Course Aims and Objectives

Defining Calibration and Traceability

- - Break (15 minutes) - -

Components of Accuracy

- Trueness and precision

Effect of calibration on results

- Using the sample spreadsheet

- - Lunch (1 hour) - -

Balances

Thermometers

- - Break (15 minutes) - -

Pipettes

Calibration Certificates

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