



Training Course: Accuracy (Trueness and Precision) of Measurement Methods and Results

2 - 6 March 2025 Dubai (UAE)



Training Course: Accuracy (Trueness and Precision) of Measurement Methods and Results

Training Course code: SC234753 From: 2 - 6 March 2025 Venue: Dubai (UAE) - Training Course Fees: 4900 🛘 Euro

Introduction

ISO 5725 uses two terms, <code>[trueness[]</code> and <code>[precision[]</code>, to describe the accuracy of a measurement method. <code>[Trueness[]</code> refers to the closeness of agreement between the expectation of a measurement result and a true value. "Precision" refers to the closeness of agreement between independent measurement results obtained under stipulated conditions.

Course Objectives

Participants for this training course will learn:

- specifies basic methods for estimating the bias of a measurement method and the laboratory bias when a measurement method is applied
- provides a practical approach of a basic method for routine use in estimating the bias of measurement methods and laboratory bias
- provides a brief guidance to all personnel concerned with designing, performing or analyzing the results of the measurements for estimating bias.
- measurement methods which yield measurements on a continuous scale and give a single value as the
 measurement result, although the single value can be the outcome of a calculation from a set of
 observations.
- the measurement method has been standardized and all measurements are carried out according to that measurement method.

Target Audience

This training is aimed for anyone looking to expand their knowledge of Accuracy trueness and precision of measurement methods and results.

Course Outlines

Day 1

Introduction

- Scope
- Normative references



- · Terms and definitions
- Symbols

Day 2

Determination of the bias of a standard measurement method by an interlaboratory experiment

- Experimental design considerations
- Objective
- Layout of the experiment
- Cross-references to ISO 5725-1 and ISO 5725-2
- · The statistical model
- Required number of laboratories and measurements

Day 3

Requirements of the accepted reference value

- · Approaches to assigning the accepted reference value
- · Materials used in the experiment
- Requirements of measurement uncertainty of the accepted reference value

Carrying out the experiment

- Evaluation of precision
- · Check of precision
- Estimation of the bias of the standard measurement method
- Example

Day 4

Determination of the laboratory bias of one laboratory using a standard measurement method

- Experimental design considerations
- Objective



- Layout of the experiment
- Cross-references to ISO 5725-1 and ISO 5725-
- The statistical model
- Number of measurement results
- Requirements of the accepted reference values

Day 5

Carrying out the experiment

- Check of the within-laboratory standard deviation
- Estimation of the laboratory bias

Report to the panel and decisions to be taken by the panel

- Cross-reference to ISO 5725-2
- · Report by the statistical expert
- Decisions by the panel



Registration form on the Training Course: Accuracy (Trueness and Precision) of Measurement Methods and Results

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