



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

18 - 22 November 2024 Geneva (Switzerland)



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

Training Course code: SC234753 From: 18 - 22 November 2024 Venue: Geneva (Switzerland) - Training Course Fees: 5775 

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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