



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

23 - 27 December 2024 Casablanca (Morocco) New Hotel



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

Training Course code: SC234753 From: 23 - 27 December 2024 Venue: Casablanca (Morocco) - New Hotel Training Course Fees: 4675 🛘 Euro

### Introduction

ISO 5725 uses two terms, <code>ltruenessl</code> and <code>lprecisionl</code>, to describe the accuracy of a measurement method. <code>lTruenessl</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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