

JJF

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**General Terms in Metrology and Their Definitions
(English Translation)**

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Table of Contents

Introduction...	12
1 Scope...	14
2 Normative references...	14
3 Quantity and unit...	14
4 Measurement...	29
5 Measurement results...	37
6 Measuring instruments...	50
7 Property of measuring instruments...	55
8 Measurement standards...	64
9 Legal metrology and metrological management...	73
Index in English...	84

1 Scope

This specification specifies the commonly used terms and their definitions in metrology.

This specification applies to all tasks in the field of metrology. The related fields can also refer to it.

2 Normative references

This specification refers to the following documents.

ISO/IEC 98-3 Uncertainty of measurement - Part 3. Guide to the expression of uncertainty in measurement

ISO/IEC GUIDE 99.2007 International vocabulary of metrology - Basic and general concepts and associated terms (VIM))

ISO/IEC 80000.2006 Quantity and units

For dated reference documents, only the dated version applies to this specification; for undated reference documents, the latest version (including all amendments) applies to this specification.

3.1 Quantity [VIM1.1]

The property of a phenomenon, object or substance, the size of which can be represented by a number and a reference object.

3.6 Dimension of a quantity [VIM1.7]

A compliance relationship between a given quantity and each base quantity in the system of quantities, which is expressed by the product of the power of the factor corresponding to the base quantity after removing all digital factors.

3.13 International System of Units (SI) [VIM1.16]

The unit system based on the international system of quantities approved by the International Conference on Metrology (CGPM), including unit names and symbols, prefix names and symbols and their usage rules.

4.1 Measurement [VIM2.1]

The process of obtaining one or more values of a certain quantity by experiment.

Note:

4.5 Measurement method [VIM2.5]

A general description of the logical arrangement of operations used in the measurement process.

4.6 Measurement procedure [VIM2.6]

According to one or more measurement principles and given measurement methods, a detailed description of the measurement based on the measurement model and the calculations needed to obtain the measurement results.

4.7 Measurand [VIM2.3]

The quantity to be measured.

4.8 Influence quantity [VIM2.52]

In direct measurement, the quantity which does not affect the actual measured, but will affect the relationship between the displayed value and the measurement result.

4.10 Calibration [VIM2.39]

For a set of operations under specified conditions, the first step is to determine the relationship between the quantity value provided by the measurement standard and the corresponding display value; the second step is to use this information to determine the relationship between the measurement result obtained from the display value. Both the quantity value provided by the measurement standard and the corresponding indication have measurement uncertainty.

5.1 Measurement result, result of measurement [VIM2.9]

A set of measured quantity values which, together with other useful relevant information, are assigned to the measured.

Note:

5.2 Measured quantity value [VIM2.10]

Also known as measured value of a quantity, referred to as measured value

Quantity which represents the measurement result.

5.4 Systematic measurement error, systematic error of

measurement [VIM2.17]

5.16 Measurement reproducibility [VIM2.25]

Referred to as reproducibility

Measurement precision under reproducible measurement conditions.

5.17 Experimental standard deviation

Referred to as experimental standard deviation

When performing n measurements on the same measured, the quantity which characterizes the dispersion of measurement results. It is represented by the symbol s .

6.1 Measuring instrument [VIM3.1]

Measuring instrument

6.2 Measuring system [VIM3.2]

A set of one or more measuring instruments that are assembled and suitable for a specific quantity to give measured value information within a specified interval, usually including other devices, such as reagents and power supplies.

6.3 Indicating measuring instrument [VIM3.3]

A measuring instrument that provides an output signal with information about the measured quantity value.

6.11 Displayer

The part of the measuring instrument that shows the value.

6.12 Recorder

The measuring instrument's components for recording of indicated value.

6.13 Index

The fixed or movable part of the display unit that can determine the indication value according to the position relative to the scale mark.

7.1 Indication [VIM4.1]

The quantity value given by the measuring instrument or measuring system.

Note:

7.2 Blank indication [VIM4.2]

Also known as background indication

The indication as obtained from the phenomenon, object or substance similar to the quantity being studied, assuming that the quantity concerned does not exist or does not contribute to the indication.

7.5 Nominal indication interval [VIM4.4]

Abbreviated as nominal interval

When the measuring instrument or measuring system is adjusted to a specific position, a set of values defined by the rounded or approximate limit value obtained and used to indicate the position.

7.8 Steady state operating condition [VIM4.8]

In order to keep the relationship established by the calibration valid, the working conditions of the measuring instrument or measuring system, even if the measured changes over time.

8.1 Measurement standard, etalon [VIM5.1]

The reference object which has definite quantity value and associated measurement uncertainty, to realize the definition of a given quantity.

Example.