

18.8.2 Terms related to measurement and testing

Certified value

For a CRM, the value that appears in the certificate accompanying the material.

Uncertified (information) value

Value of a quantity, included in the certificate of a CRM or otherwise supplied, which is provided for information only but is not certified by the producer or the certifying body.

Consensus value (of a given quantity)

For a reference material, the value of a quantity obtained by interlaboratory testing, or by agreement between appropriate bodies or experts.

Note: A consensus value could, through appropriate action by a certifying body become a certified value.

Uncertainty of a certified value

Estimate attached to a certified value of a quantity which characterizes the range of values within which the "true value" is asserted to lie with a stated level of confidence.

Note: See also *uncertainty of measurement* in Section 18.2.3.

Precision

See the definition given in section 18.2.3.

Accuracy

See the definition given in section 18.2.3.

Accepted reference value

A value that serves as an agreed-upon reference for comparison and which is derived as:

- a) a theoretical or established value, based on scientific principles;
- b) an assigned value, based on experimental work of some national or international organization;

c) a consensus value, based on collaborative experimental work under the auspices of a scientific or engineering group.

Traceability

Property of the result of a measurement or the value of a standard whereby it can be related, with a stated uncertainty, to stated references, usually national or international standards, through an unbroken chain of comparisons.

Notes:

- (1) The concept is often expressed by the adjective *traceable*.
- (2) The unbroken chain of comparisons is called a *traceability chain*.

Interlaboratory test

Series of measurements of one or more quantities performed independently by a number of laboratories on test samples of a given material. See in section 18.6.

Reference method

Thoroughly investigated method, clearly and exactly describing the necessary conditions and procedures, for the measurement of one or more property values that has been shown to have accuracy and precision commensurate with its intended use and that can therefore be used to assess the accuracy of other methods for the same measurement, particularly in permitting the characterization of an RM.