



## Recommendations on Regulatory Cooperation and Standardization Policies

Revised Edition

# K

## Metrological Assurance of Conformity Assessment and Testing<sup>1</sup>

### The Working Party on Technical Harmonization and Standardization Policies,

**Recognizing** that results of measurements are the basic facts on which decisions are taken in conformity assessment and testing;

**Noting** that metrological assurance serves as a means for establishing confidence in the necessary quality of conformity assessment and testing;

**Considering** that there may be differences between principles, methods and means for estimating the uncertainty of measurement results;

**Realizing** that such differences can create non-tariff barriers to international trade;

**Taking into consideration** that the harmonization of the above-mentioned principles, methods and means is required for:

- (a) Creating preconditions for the mutual recognition of conformity assessment and test results by establishing confidence in the results of measurements which serve as their basis;
- (b) Ensuring the possibility of independent assessment and documentary confirmation of the competence of conformity assessment bodies and testing laboratories.

### Recommends that:

- K.1** ECE Governments should support the development and implementation of fully harmonized standards<sup>2</sup>, guides and technical regulations promoting methods and means of metrological assurance on the basis of the international documents and recommendations of the International Organization of Legal Metrology (OIML) as well as the standards and guides of the International Organization for Standardization (ISO) and the International Electro-technical Commission (IEC).
- K.2** National technical regulations relevant to international trade and industrial cooperation should contain requirements for the technical competence of conformity assessment bodies and test laboratories for different types and categories of tested products, particularly with regard to the methods and means of obtaining measurement information used for the estimation of the uncertainty of measurement results which are the basis for conformity assessment decisions and test results.

<sup>1</sup> Recommendation adopted in 1988, revised in 2008.

<sup>2</sup> In science and technology, the English word "standard" is used with two different meanings: as a widely adopted written technical standard, guide, technical regulation or similar document (in French "norme") and also as a measurement standard (in French "étalon"). This Recommendation is concerned with both meanings and the qualifier "written" is generally omitted for brevity.

- K.3** The appropriate level of competence of conformity assessment bodies and test laboratories and, consequently, the metrological assurance level should be established according to criteria that ensure a high level of confidence when estimating parameters characterizing the products from the point of view of their safety, influence on health and environment and consumer protection.
- K.4** General stipulations, rules and requirements in national standards and technical regulations should cover, as far as appropriate, the following types of metrological activities:
- Metrological control procedures (type approval, verification, calibration, periodic re-verification or recalibration), or servicing, including the corresponding verification or calibration of auxiliary or supplementary measuring instruments used in conformity assessment and for testing;
  - Metrological qualification of measuring instruments and associated test equipment (stands, set-ups, chambers intended for reproduction of test modes and conditions);
  - Traceability to international or national measurement standards;
  - Metrological validation of test methods (procedures) and computer software used in conformity assessment and testing;
  - Estimation of the uncertainty associated with measurement results used as the basis for conformity assessment and test results;
  - Processing and recording of measurement and test results;
  - Application of conformity decision rules in relation to applicable maximum permissible errors or tolerances.
- K.5** When working out national standards and technical regulations the bodies concerned should take into account that each accredited conformity assessment body and test laboratory must have a set of measurement standards traceable to national or international measurement standards. Documents on methods of validation of test procedures and estimation of the uncertainty of measurement results should be submitted to the accrediting body including results of interlaboratory comparisons. Preference should be given to harmonized methods and procedures as laid down in OIML recommendations and documents based on the use of certified reference materials and recognized national or international standard methods and procedures.
- K.6** With the aim of facilitating mutual recognition of conformity assessment and test results, documents should be presented in connection with the accreditation of conformity assessment bodies and test laboratories, confirming their technical competence including the limiting values (for instance, the lowest uncertainty of measurement results), methods and means of their achievement and confirmation.
- K.7** Manufacturers, suppliers or customers submitting products for testing have the right to check the documentation of the test laboratory and/or its claim of being capable of achieving the desired level of technical competence required for measurement and testing.