

K. METROLOGICAL ASSURANCE OF TESTING

The Working Party on Technical Harmonization and Standardization Policies

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

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

Considering that there may be differences between principles, methods and means for estimating the uncertainty of test 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 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 testing laboratories.

Recommends that:

K.1 ECE Governments should support the development and implementation of fully harmonized standards¹, 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 competence of testing laboratories for different types and categories of tested products, particularly with regard to the methods and means of obtaining measuring information used for the estimation of the uncertainty of test results.

K.3 The appropriate level of competence of testing 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 and influence on health and environment.

¹ 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.4 General stipulations, rules and requirements in national standards and technical regulations should cover the following types of metrological activities:

- Metrological control or servicing including the corresponding verification or calibration of auxiliary or supplementary measuring instruments used for testing;
- Metrological qualification of test equipment (stands, set-ups, chambers intended for reproduction of test modes and conditions);
- Metrological validation of test methods (procedures) and computer software used in testing;
- Processing and recording of test results.

K.5 When working out national standards and technical regulations the bodies concerned should take into account that each accredited testing 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 test results should be submitted to the accrediting body including results of interlaboratory comparisons. However, preference should be given to methods 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 test results, documents should be presented in connection with the accreditation of testing laboratories, confirming their technical competence including the limiting values (for instance, the lowest uncertainty of test 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 testing laboratory and/or its claim of being capable of achieving the desired level of technical competence required for testing.
