

## Preamble

National accreditation and regulatory bodies require multilateral agreements or arrangements to define the conditions under which they can accept calibration, measurement and test certificates issued by laboratories accredited in other countries. These agreements or arrangements depend for their validity on the accuracy of national measurement standards and of calibration and measurement certificates issued by national metrology institutes (NMIs).

This arrangement provides for the mutual recognition of national measurement standards and of calibration and measurement certificates issued by national metrology institutes, and is founded on the efforts of each individual national metrology institute to base its measurements and measurement uncertainties on SI units.

To put the criteria for mutual recognition on an objective footing, the arrangement calls upon: (a) the results of a set of key comparisons carried out using specified procedures which lead to a quantitative measure of the degree of equivalence of national measurement standards; (b) the operation by each NMI of a suitable way of assuring quality; and (c) successful participation by each NMI in appropriate supplementary comparisons. Together, these three procedures demonstrate to participating institutions the degree to which each may have confidence in the results reported by others, and so promote mutual confidence between them.

For the purposes of this arrangement, the degree of equivalence of measurement standards is taken to mean the degree to which these standards are consistent with reference values determined from the key comparisons and hence are consistent with one another. Each reference value is referred to as a key comparison reference value and, in most cases, it can be considered to be a close, but not necessarily the best, approximation to the SI value. The degree of equivalence of a national measurement standard is expressed quantitatively in terms of its deviation from the key comparison reference value and the uncertainty of this deviation.

This arrangement is in two parts: through part one, signatories recognize the degree of equivalence of national measurement standards of participating national metrology institutes; through part two, the signatories recognize the validity of calibration and measurement certificates issued by participating institutes.

Formally, this document is a technical arrangement among directors of the national metrology institutes of Member States of the Metre Convention and it is not a diplomatic treaty. It is drawn up by the CIPM under the Metre Convention and it is neither an extension to the Convention nor a replacement for any Article of the Convention. The directors who in due course decide to sign the arrangement do so with the approval of the appropriate governmental or other official authorities in their own country. It is expected that participation in this arrangement will open the way to, and provide the technical basis for, wider agreements related to trade, commerce and regulatory affairs, signed by the competent authorities in each country or region.

Participation in the arrangement through their regional metrology organization is also open to the NMIs of States and Economies that are Associates of the CGPM.

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