

***Guidelines for the Acceptance of Certified Reference Materials in
Appendix C of the CIPM Mutual Recognition Arrangement***

The CIPM Mutual Recognition Arrangement (CIPM MRA) makes provision for the listing of certified reference materials (CRMs) in Appendix C, the MRA database that contains the Calibration and Measurement Capabilities (CMCs) of the designated NMIs and other designated institutes which have signed up to the MRA. One or more CRMs can be listed in a field entitled “Mechanism(s) for Measurement Service Delivery”, in association with amount of substance CMCs that are directly related to the ability of the designated NMIs and other designated institutes to characterize and assign traceable values to CRMs.

Appendix C of the CIPM MRA is not intended to be a catalogue of CRMs that can be delivered by the NMIs or other designated institutes. In order to have a CRM listed in Appendix C of the CIPM MRA as a mechanism of disseminating traceability, the NMI or designated institute must have demonstrated its measurement capabilities and competence in the field concerned, which are also explicitly or implicitly claimed by the institute in Appendix C. Furthermore, all CRMs listed in Appendix C must meet the requirements of the ISO Guide 34 (2000) and as far as applicable and useful of the ISO Guide 35, which pertain to the production of CRMs and to the assignment of certified values. In order for a CRM to be listed in Appendix C, the institute should take into account the following criteria:

1. NMIs and other designated institutes listing CRMs in Appendix C of the CIPM MRA shall have a quality system in accordance with ISO/IEC 17025 and ISO Guide 34 (2000) or equivalent. The quality system must include a complete description of the whole CRM production and certification process, also defining the internal organization responsible for the certification process;
2. Values assigned to CRMs have to be traceable to the SI or if this is not (yet) feasible, to other internationally agreed references;
3. The institute may list a CRM as a service delivery mechanism in Appendix C only if the institute has an in-house competence and the measurement capabilities for assigning values to the measurand in question and the characterisation (homogeneity and stability) of the CRM. The institute must take full responsibility and liability for the quality of the CRMs listed in Appendix C;
4. Value assignment and characterisation should be carried out in conformity with relevant ISO guides, such as ISO Guide 35;
5. The value(s) assigned to the CRM can be a direct result from in-house measurement capabilities in the field concerned.

Alternatively, the CRM value assignment capability can be the result of combining measurement results obtained internally with results obtained from other collaborating/subcontracted, competent institutes;

6. The claimed measurement uncertainties in the assigned value of a CRM must be representative of the capabilities and competence of the institute listing the CRM as a means of delivering traceability to its customers;
7. On request the complete certification report should be made available to the client;
8. The physical preparation of CRMs is not necessarily a task to be carried out solely by the institute, but the institute listing CRMs must carry out the value assignment and must include measurements that demonstrate adequate homogeneity and stability of the CRM;
9. In the case that an institute, in addition to its in-house capabilities and competences in the field concerned, collaborates for a part of the work with another (non-designated) expert laboratory the conditions mentioned before in this document and mentioned in the document CIPM/JCRB "*Subcontracting of measurements under the CIPM MRA*" have to be fulfilled;
10. If for special reasons it is desirable, or if it is considered desirable, CRMs listed in Appendix C may be subject to international comparisons by NMIs or designated institutes of other states or economies;
11. The institute listing CRMs in Appendix C must participate in relevant CCQM and/or RMO activities, which include CCQM and RMO studies and key comparisons and RMO supplementary comparisons;
12. Inasmuch as in many cases claimed CMCs and listed CRMs are not directly underpinned by the results of a Key Comparison or Pilot study, it is highly recommended to have additional information available, justifying the claimed CMC and listed CRM, preferably by peer-reviewed publications in an international journal or by an on-site peer review.

Sèvres, 27 July 2005