

CMCs REVIEW PROCESS- CIPM MRA-D-04



CMC definition

- “A CMC is a calibration and measurement capability available to customers under normal conditions: (a) as published in the BIPM key comparison database (KCDB) of the CIPM MRA; or (b) as described in the laboratory’s scope of accreditation granted by a signatory to the ILAC Arrangement.” Where the term NMI is used it is intended to include Designated Institutes (DIs) within the framework of the CIPM MRA.”



Drawing up CMCs files

- There are two different cases to be taken into consideration:
 - CMCs files from an institute that has not previously submitted CMCs in a particular area (New CMCs)
 - CMCs files that imply the modification or expansion of already approved CMCs.



Drawing up CMCs files

- Blank Excel files and particular instructions for the different areas can be found in the JCRB website, under “Instructions for drawing up CMC excel files”:
 - Basic excel template
 - Excel template with uncertainty matrices and closely related CMCs
 - Excel template for CMCs in chemistry
 - Instructions for closely related CMCs
 - Additional instructions for CMCs files in EM
 - Instructions for uncertainty matrices in CMC files
 - International rules for filling in the CMC tables for ionizing radiation



Drawing up CMCs files

- Use one Excel file per country, per metrology area and per category. The Excel file may include several worksheets, but all CMCs should be listed in one single worksheet for all branches of the metrology area, the additional worksheets being used for information needed in the intra- or inter-regional review.
- When submitting a new excel file, you have to download the existing one from KCDB and modify it .Modifications must be made only on the Excel files available from the link “Get published CMCs” located in the Summary box of the JCRB CMCs Website.



Drawing up CMCs files

- Modifications must be made clearly visible by the use of the following color code:
 - a. bold red characters for corrections to be brought to a published CMC and for presenting a new CMC not yet published
 - b. highlighting with a light pink background a CMC that should be deleted, the words “to be deleted from the KCDB” must also be placed in the “comments” column of the CMC.



Classification of services

- There is a yellow column including the service number (Columns 19) drawn up from the Classifications of Services defined by the CC of each metrology area.



http://www.bipm.org/en/cipm-mra/cipm-mra-documents/cmc_excel_files.html

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Criteria for acceptance of CMCs

- The JCRB requires:
 - an RMO report indicating that the local Technical Committee/Working Group has approved the range and uncertainty of said CMCs
 - and that each one of them is supported by a fully implemented Quality System reviewed and approved by the local RMO.



Criteria for acceptance of CMCs

CMCs submitted should be consistent with information from some or all of the following sources:

1. Results of key and supplementary comparisons
2. Documented results of past CC, RMO or other comparisons (including bilateral)
3. Knowledge of technical activities by other NMIs, including publications
4. On-site peer-assessment reports
5. Active participation in RMO projects
6. Other available knowledge and experience



Requirements for Traceability

- There are two choices for NMIs to establish traceability route to the SI:
1. via a primary realization or representation of the unit of measurement concerned, in which case traceability must be declared to its own demonstrable realization of the SI;
 2. via another NMI or DI having relevant CMCs with appropriate uncertainty published in the KCDB or through calibration and measurement services offered by the BIPM, in which case traceability must be declared through the laboratory providing the service.



Intra-regional review of CMCs

Prior to be submitted for the inter-regional review, the CMCs should be reviewed and approved by the RMO from which the NMI or DI is part of. Each RMO is responsible for establishing the process for the intra-RMO review. This process must follow the general guidelines and assure that the CMCs submitted for the inter-regional review have sufficient technical support. 5. Inter-regional review of C



Inter-regional review of CMCs

The process is conducted through an interactive website at www.bipm.org/JCRB.

Every time that there is an intervention on the website, automatic e-mails are sent to the TC/WG chairs of the metrology area concerned, the RMO representatives to the JCRB and to the JCRB Executive Secretary.

Controversies are resolved by the JCRB which may request arbitration by the CIPM.



Inter-regional review of CMCs Submission of CMCs:

-TC/WG Chairs or RMO Representatives may submit a set of CMCs for interregional review at any time.

-Only CMCs that are supported by a fully-implemented quality system, reviewed and approved by the respective RMO may be submitted for inter-regional review. All submissions must be accompanied by a declaration from the Chair of the RMO Quality Systems Working Group, indicating that this requirement has been met.

- Each submission may contain CMCs from several NMIs belonging to the same technical area.



Inter-regional review of CMCs Steps followed:

1. After posting, the CMCs file is distributed by e-mail to:
 1. RMO representatives
 2. TC/WG Chairs in the area of the submitted CMCs
 3. JCRB Executive Secretary
2. TC/WG chairs indicate their interest in participating in the review of the posted CMCs
3. The chairs are requested to provide the date for sending comments no later than three weeks after the CMCs are posted in the website. After two weeks an automatic reminder is generated. After one further week, if the TC/WG chair has not provided a date for sending comments, the respective RMO relinquishes its right to continue with the review.



Inter-regional review of CMCs Steps followed:

1. TC/WG chairs post their first comments in the JCRB website by the date they set when they accepted to review them. Three weeks before the RMOs chosen date an automatic reminder is generated. If they have not sent their comments by their chosen date, in the absence of any other communication with the JCRB Executive Secretary, they relinquish their right to continue with the review.
2. If a TC/WG chair needs to change the date specified for sending their first comments he/she should contact the JCRB Executive Secretary.
3. After posting their first comments in the JCRB website the reviewing TC/WGs shall continue their communications directly with the originating TC/WG or even individual NMIs.



Inter-regional review of CMCs Steps followed:

1. The inter-regional review continues until all TC/WG chairs agree that the originating TC/WG has produced a submission that can be approved by all.
2. The originating RMO shall submit a revised Excel file through the website for final approval, which will be used for the publication in the KCDB.
3. The RMOs TC/WG chairs now have three weeks for considering the final vote. Two weeks after the final submission, a reminder e-mail will be sent and after one further week the RMO loses its right to vote and is considered an abstention.




Publication of CMCs

After the final approval is obtained, the BIPM proceeds to publish the CMCs in the KCDB.




CMC inter regional review through the Working Groups on CMCs



Each Consultative Committee has a Working Group on CMCs. Objectives are:

- a) To establish and maintain lists of service categories, and where necessary rules for the preparation of CMC entries;
- b) To agree on detailed technical review criteria;
- c) To coordinate and where possible conduct inter-regional reviews of CMCs submitted by RMOs for posting in Appendix C of MRA;
- d) To provide guidance on the range of CMCs supported by particular key and supplementary comparisons;
- e) To identify areas where additional key and supplementary comparisons are needed;
- f) To coordinate the review of existing CMCs in the context of new results of key and supplementary comparisons.

CMC inter regional review through the Working Groups on CMCs



CC-WG on CMCs may establish their own rules and timelines for coordinating the interregional review of CMCs. Therefore, posting, distribution and submission of comments on CMC submissions may be done without the use of the JCRB website and without following the deadlines specified for this purpose.

However, in order to maintain a record of the formal approval of all CMCs, once the CC-WGs on CMCs have agreed on a set of submissions, these will be posted in the JCRB website only for final approval.

Fast track approval of CMCs




An NMI may request through its TC/WG Chair that a small group of already-published CMCs be reviewed by the other TC/WG in the same area without the formality of posting the file for review in the web page.

In this case, all communications will be done directly among the TC/WG Chairs.

After they reach a consensus on the new scope of the revised CMCs the CMCs will be posted only for final approval in the JCRB website.

Once the reviewing TC/WG chairs have approved the CMCs under review the JCRB Executive Secretary verifies that the originating RMO has confirmed that the MRA quality system requirements have been met. In such a case, the KCDB office is notified that the approved CMCs must be published in Appendix C.

Criteria for acceptance of CMCs reflections from the JCRB executive secretary based on operating the inter-regional review process




D. Olson gave a presentation on information that could be obtained about the interregional review process:

- A data set of 101 CMC sets that were submitted in the time period from 1 March 2013 to 23 January 2015 was used in the analysis.
- Of these, 64 CMC sets were submitted using "classic review" and 37 CMC sets were submitted using "fast track".

The analysis first looked at whether more Consultative Committees had adopted the use of "fast track", "web forum", or "workload distribution" for the inter-regional review process compared to CMC sets prior to 1 March 2013. The use of fast track had increased, but the use of web forum and workload distribution had not changed.

- In 32 of the 64 CMC sets that were submitted using the classic review, either the QS report, the TC report, or both were missing.

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• THANK YOU FOR YOUR ATTENTION!!!