

JCRB matters: Update to the CCM

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JCRB – 46th meeting, BIPM, March 15/16, 2023

- All RMOs represented with delegations and RMO reports to the JCRB including annual QS reports discussed.
- KCDB Report to the 46th JCRB approved and subsequently published online, <https://www.bipm.org/en/cipm-mra/kcdb-reports>
- Executive Secretary's report on the system's performance provided to the JCRB. And
- Three outcomes of the JCRB adopted.

JCRB – 46th meeting, BIPM, March 15/16, 2023

Discussions on:

- CMC review durations – JCRB review duration slightly increased since last JCRB meeting, but still improved as compared to KCDB 1.0;
- CMC review performance: loss of rights and accepted but uncompleted JCRB review tasks;
- CIPM MRA-G-11 revision on statistical evaluations not sufficiently supported by CCs;
- digital transformation: i. BIPM programme, ii. CC survey, iii. digital links to CMCs.

JCRB – 46th meeting, BIPM, March 15/16, 2023

Action JCRB/46-1 (2023)

The JCRB asks each RMO to nominate (one or two) RMO coordinators for the “Young metrologists’ 2050+ vision” foresighting exercise and to send their names to C. Kuanbayev (BIPM) by 31st March 2023.

Recommendation JCRB/46-1 (2023)

Noting the availability in the KCDB of a unique and persistent identifier for each CMC (and each version of a CMC), the JCRB recommends use of these CMC identifiers by the participating NMIs/DIs (for example in their quality documentation) and asks the BIPM Headquarters to make available appropriate training material to encourage this.

JCRB – 46th meeting, BIPM, March 15/16, 2023

Resolution JCRB/46-1 (2023)

The 47th meeting of the JCRB will be held in Costa Rica (Laboratorio Costarricense de Metrología); 12/13 September 2023.

Following Request CCM/2021-3B

Noting that:

- The headers of the KCDB listing of CMCs (including the entry forms) were presented in a form that may have led to misunderstandings,
- the KCDB Office has been tasked by the JCRB Chair to improve the KCDB tables.

Now the

- KCDB table column headings read:
 - “Instrument or Artifact under study” for the instrument to be calibrated; and
 - “Instrument type or method applied” for the calibrator / the method used by the NMI/DI holding the CMC.

Following Request CCM/2021-3B

It was agreed that:

- with these headlines the declaration of CMCs, e.g., for pressure will be more straightforward.

On the further issues raised by CCM/2021-3B it was concluded that

- with the updated description now in the header of the listings, a KCDB search for pressure CMCs does give many good examples on what entries could be listed under “Instrument type or method applied”; and
- a revision of the CIPM MRA-P-11 policy document would not bring any additional benefit.

CC survey: the CIPM MRA in view of digital transformation

<https://www.bipm.org/documents/20126/27085544/RapportBIPM-2023-01.pdf/>

Main findings:

- **Digital transformation is interesting to many NMIs.**
 - 56 % of all respondents have at least one digital project or plans to start one.
 - Digital transformation is in many NMIs still at an early stage. On average, 29 % of CC members reported stakeholder contact on digital topics over the last 5 years. There is, however, a significant variation between CCs, as this value ranges from 43 % (CCU) to 12 % (CCQM).

CC survey: the CIPM MRA in view of digital transformation

Main findings:

- **DCC is the DT-topic with the greatest interest to NMIs.**
 - Among the different DT topics, digital calibration certificate is the most mentioned topic of interest to NMIs. Of all respondents with digital projects, 68 % reported to work on DCCs.
 - Of the respondents with little DCC knowledge (typically not having ongoing DCC projects), 39 % still considered DCCs would be beneficial to their customers.
 - The best-known format for DCCs is xml.

CC survey: the CIPM MRA in view of digital transformation

Main findings:

- **The concept of how to provide a statement of metrological traceability in DCCs is not yet clear.**
 - Of the CC members expressing an interest in DCCs, only 15 % were able to articulate how metrological traceability to the SI could be addressed in a DCC.

- **API-KCDB is still at early stage of usage.**
 - On average, 7 % of the respondents used the API-KCDB; another 42 % plan to do so.
 - 22 % of the participants feel they have sufficient information about the API-KCDB. This is less than a third of the participants that responded to have an active role in the KCDB.

In the analogue world

Use of the CIPM MRA logo

Description of the logo. The logo for the CIPM MRA is:



This logo, designated as “CIPM MRA Logo”, is the exclusive property of the BIPM.

The following “CIPM MRA statement” shall also be included on the calibration certificates together with the logo.

This certificate is consistent with the capabilities that are included in Appendix C of the CIPM MRA drawn up by the CIPM. Under the CIPM MRA, all participating institutes recognize the validity of each other’s calibration and measurement certificates for the quantities, ranges and measurement uncertainties specified in the KCDB (for details see <https://www.bipm.org/kcdb/>).

Digital transformation: BIPM MicroProject placement

- With Recommendation JCRB/46-1 the JCRB promotes the use of CMC identifiers by NMIs/DIs.
 - A specific use-case is the application of CMC identifiers as digital SI traceability links for calibration certificates of NMIs/DIs.
 - NMIs/DIs issuing calibration certificates to customers could, with the consent of the customer, make use of the CMC identifier in combination with the CIPM MRA logo and statement as granted by the BIPM.
- ➔ *A pilot study has been launched with interested partners from KazStandart, METAS, PTB*
- The NMI MicroProject partner provides the calibration process case, including the preparation of the certificate ensuring the customer's consent.
 - The BIPM will provide the CMC identifier implemented in a statement, a QR code for the agreed "case" and a web API required to retrieve the CMC from the calibration certificate by humans and machines (in case of a digital calibration certificate, DCCs).

Thank you
from the 10th JCRB Executive Secretary,

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... and please, welcome the
11th JCRB Executive Secretary next time!