

KCDB REPORT TO THE 21th JCRB MEETING

This report gives the highlights of the work at the KCDB Office since the 20th JCRB meeting held on 1 and 2 May 2008.

1. The CMC database

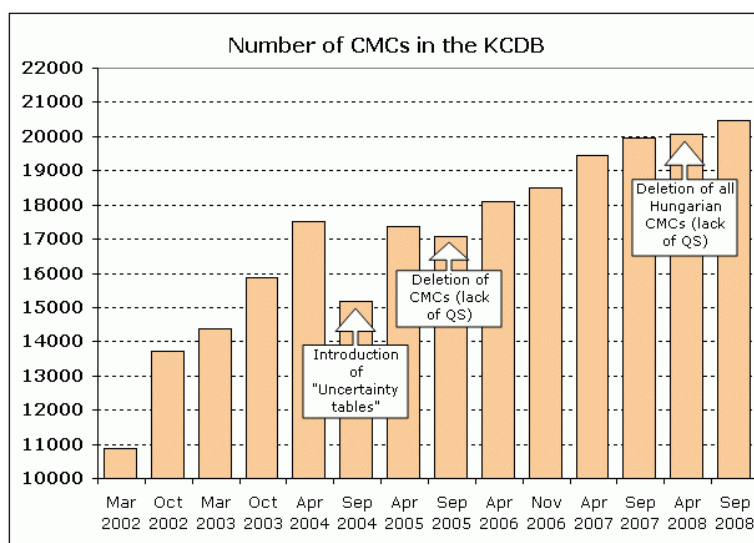
1.1. Content of the CMC database

On 11 September 2008, 20458 CMCs were published in the KCDB:

- 12 807 in General Physics,
- 3 671 in Ionizing Radiation, and
- 3 980 in Chemistry.

This is an additional 400 CMCs compared to the time of the 20th JCRB meeting. Over the last five-month period, 12 newly approved sets of CMCs were published (see Section 1.3 below), among which the set identified as "EUROMET.RI.8.2007" (259 new CMCs in Ionizing Radiation).

Details on the number of CMCs currently published in the KCDB, per country and per metrology area, are available in real-time from the [Statistics page of the KCDB](#).



Number of CMCs registered in the KCDB since March 2002

The page entitled "[Get Published CMCs](#)" in the access-restricted JCRB website makes available at any time the EXCEL files of CMCs as they are currently imported into the database.

1.2. CMCs and Quality Systems

The situation regarding deletion and re-instatement of CMCs linked to approval of appropriate Quality Systems is available on page 5 of the same [Statistics page of the KCDB](#), and is pretty similar to that described in the KCDB Report to the 20th JCRB meeting. The main difference is the re-instatement on 15 May 2008 of all CMCs from Cuba (12 CMCs in Mass and Related Quantities, and 51 CMCs in Ionizing Radiation), greyed-out in November 2006.

On 10 September 2008, 672 CMCs were still greyed-out from the KCDB due to lack of approved Quality Systems (QS), especially all CMCs from Hungary (374).

1.3. New CMCs publication (since 20th JCRB meeting) – see also “[CMCs News](#)”

Over the last five-month period, the following sets of CMCs were published in the KCDB:

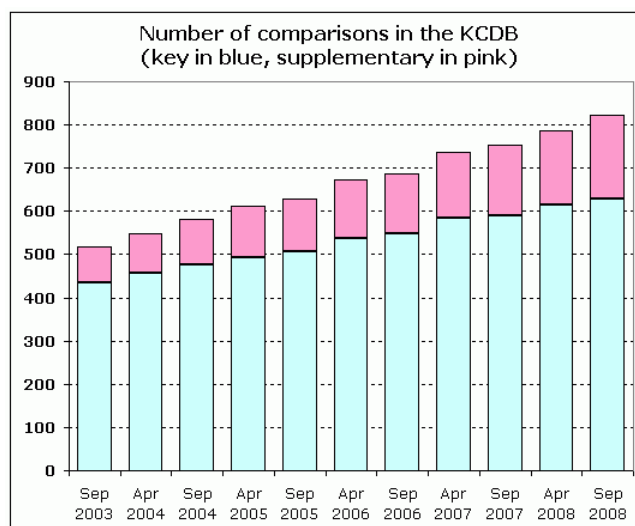
- 15 May 2008: EUROMET.RI.8.2007 (ES, SK, and RO).
- 16 May 2008: APMP.L.4.2006 (ID).
- 16 May 2008: EUROMET.M.8.2008 (HR).
- 22 May 2008: APMP.TF.6.2007 (IN).
- 29 May 2008: SIM.RI.8.2007 (BR).
- 5 June 2008: APMP.TF.5.2007 (MY).
- 26 June 2008: APMP.L.6.2008 (HK).
- 1 September 2008: APMP.M.14.2008 (IN).
- 2 September 2008: APMP.M.15.2008 (HK).
- 2 September 2008: EUROMET.PR.7.2007 (CH).
- 10 September 2008: SIM.M.10.2008 (US).
- 11 September 2008: EUROMET.M.7.2007 (CH, CZ, DE, ES, FR, IT, PL, PT, and SE).

In addition, the KCDB Office dealt with numerous corrections: editorial changes, deletion of services that are no more available, and changes of laboratory names and acronyms.

2. Key and supplementary comparisons database

2.1. Content of the database

On 11 September 2008, the database covered 629 key comparisons (79 from the BIPM, 318 from the CCs, 81 from APMP, 24 from COOMET, 96 from EURAMET, 1 from SADC MET, and 30 from SIM) and 193 supplementary comparisons.

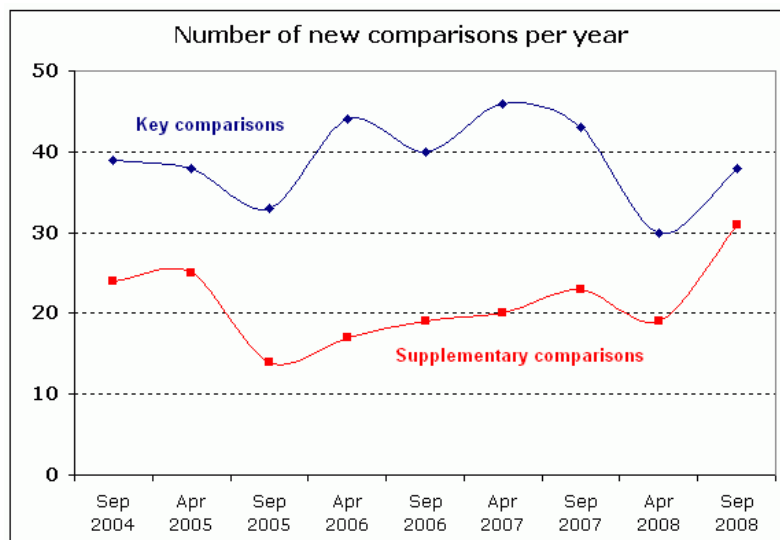


Number of key comparisons (in blue) and of supplementary comparisons (in pink) registered in the KCDB: evolution since September 2003

One observes that 31 new supplementary comparisons were registered over the last year. It is a higher rate than previously observed, and reflects the awareness of RMOs on the interest of declaring their internal exercises and posting the corresponding reports in the KCDB, mainly for supporting their CMC claims.

Information on new key comparisons decided by the CCQM Working Groups at their meetings in October 2007 and at the CCQM in March 2008 reached the KCDB Office in

August 2008. It explains the increase in the number of newly registered key comparisons, which is now again at its average level of about 40 per year.



Number of new comparisons registered in the KCDB over the one-year period ending at the date indicated on the x-axis

Updated graphs illustrating the participation in [key](#) and [supplementary](#) comparisons were made available from the [Statistics page of the KCDB](#) on 9 June 2008.

2.2. Key and supplementary comparisons registered since 20th JCRB meeting

- 13 May 2008: [APMP.T-S4](#), [APMP.T-S5](#), and [APMP.T-K3.1](#).
- 16 May 2008: [EURAMET.L-S15.a](#).
- 19 May 2008: [CCQM-K65](#), [CCQM-K66](#), and [CCQM-K68](#).
- 22 May 2008: [EUROMET.T-K5](#) and [APMP.T-K5](#).
- 28 May 2008: [EURAMET.L-S20](#).
- 5 June 2008: [COOMET.EM-S5](#).
- 9 June 2008: [COOMET.EM-S6](#).
- 12 June 2008: [EURAMET.M.T-S1](#).
- 16 June 2008: [APMP.AUV.A-K1.1](#) and [APMP.AUV.A-K3.1](#).
- 20 June 2008: [EURAMET.M.FF-S2](#).
- 26 June 2008: [CCM.M-K6](#).
- 2 July 2008: [COOMET.M.FF-S2](#).
- 21 July 2008: [EUROMET.M.P-S6](#).
- 4 August 2008: [COOMET.M.F-S1](#) and [COOMET.M.FF-S3](#).
- 6 August 2008: [APMP.PR-S4](#).
- 19 August 2008: [CCL-S4](#) and [CCL-K11](#).
- 25 August 2008: [CCQM-K34.2](#), [CCQM-K36.1](#), [CCQM-K67](#), and [CCQM-K70](#).
- 26 August 2008: [CCM.P-K13](#) and [CCQM-K69](#).
- 28 August 2008: [CCM.V-K2.1](#) and [APMP.AUV.A-S1](#).
- 3 September 2008: [COOMET.T-K7](#), [COOMET.T-S1](#), and [COOMET.T-K5](#).
- 5 September 2008: [COOMET.RI\(II\)-K2.Eu-152](#).

Identifiers including “.1”, “.2” indicate subsequent bilateral key comparisons to an existing key comparison.

Since the 20th JCRB meeting, three registered comparisons were deleted from the KCDB (for technical reasons): EUROMET.M.FF-K1 and EUROMET.M.FF-K2 (on 19 June 2008), and CCQM-K37 (on 26 August 2008). Note also that:

- key comparisons EUROMET.M.FF-K6 and EUROMET.M.FF-K3 became supplementary comparisons (respectively [EUROMET.M.FF-S3](#) on 23 June 2008, and [EUROMET.M.FF-S4](#) on 29 August 2008); and
- key comparison CCAUV.A-K1.1 became a full-scale CCAUV key comparison ([CCAUV.A-K3](#)) on 23 June 2008.

2.3. Published results of key and supplementary comparisons

On 11 September 2008, among the 629 key comparisons that were registered:

- 88 corresponded to exercises prior to the implementation of the CIPM MRA, and will never have results published in the KCDB (they were “Approved for provisional equivalence”),
- 73 of the 79 on-going BIPM key comparisons had results published in the KCDB, which are regularly extended when new data becomes available (eight new results were published since 6 August 2008), and
- another 234 CC and RMO key comparisons had their final reports approved and posted in the KCDB website, and corresponding tables of numbers and graphs entered in the database.

All together, the KCDB currently displayed a total of 1 105 graphs of equivalence.

The results of 86 RMO key comparisons (against 73 at the time of the 20th JCRB meeting) - 29 conducted by APMP, 8 by COOMET, 43 by EUROMET, and 6 by SIM - are published in the KCDB - see “[Comparisons News](#)” for the list of the most recent publications.

Linkage has also been carried out for 14 bilateral key comparisons subsequent to full-scale CC key comparisons; their results are added on the appropriate graphs of equivalence. The most complete graph of equivalence available from the KCDB displays 66 degrees of equivalence, obtained from four different RMO key comparisons linked to CCM.M-K1 ([1 kg stainless steel mass standards](#)).

The final reports of 59 among the 193 supplementary comparisons registered in the KCDB are also posted in the KCDB.

Note that final reports of key and supplementary comparisons posted in the KCDB are also generally published in the series of [Metrologia Technical Supplements](#).

3. Design of the KCDB system

No further modification has been brought to the design of the KCDB system since March 2007, except the implementation of a new release of the search engine software on 10 September 2008.

4. Publicity

[Issue 9](#) of the KCDB Newsletter was launched on 9 June 2008.

A plenary session on the 10th anniversary of the CIPM MRA is scheduled at the International Congress of Metrology to be held in Paris from 22 to 25 June 2009. It will include four talks around the themes “The CIPM MRA: Why? How?”, “The KCDB”, “The CIPM MRA: added value for NMIs and RMOs”, and “Impact of the CIPM MRA on the Accreditation and Regulatory communities”. The KCDB Coordinator is a member of the Organizing Committee and of the Scientific Committee of this congress.

Follow-up of Action 17/1 from the 17th JCRB meeting

"Future KCDB reports to the JCRB are to include the information on CMC statistics (per RMO) thus avoiding the inclusion of this information in the RMO reports to the JCRB.9".

Status as on 11 September 2008

APMP: 3899 CMCs

COOMET: 1590 CMCs

EUROMET: 10167 CMCs

SADCMET: 336 CMCs

SIM : 4227 CMCs

IAEA : 13 CMCs

IRMM : 226 CMCs

All details by metrology area and by country are available by clicking [here](#).