

# The CIPM MRA



Following a recommendation by the CIPM Working Group on the Implementation and Operation of the CIPM MRA, the BIPM key comparison database (the KCDB) has been revised and the new version (the KCDB 2.0) was launched on 29 October 2019, offering a collaborative web platform for editing and reviewing Calibration and Measurement Capabilities (CMCs) as well as extended search facilities. The comprehensive support and guidance for comparisons, that was

offered to users, was well used by the end of 2019. The new CMC platform was introduced and made accessible to users and a training site was launched.

The CIPM Mutual Recognition Arrangement (CIPM MRA) is the framework through which NMIs demonstrate the international equivalence of their measurement standards and the calibration and measurement certificates they issue. The outcomes of the Arrangement are the internationally recognized (peer-reviewed and approved) CMCs of the participating institutes. Approved CMCs and supporting technical data are publicly available from the KCDB.

## Key and supplementary comparisons

In December 2019, the key and supplementary comparisons database included 1 047 key comparisons and 588 supplementary comparisons. This represents an increase of 32 key comparisons on the previous year, while supplementary comparisons increased by 28. Around 60 comparisons were completed and published during 2019. Today, almost 90 % of the 96 ongoing BIPM key comparisons and around 70 % of all registered comparisons of the Consultative Committees and RMOs have results published in the KCDB. Almost all Associates participating in the CIPM MRA had at least one of their metrology institutes listed as a participant in a key or a supplementary comparison.

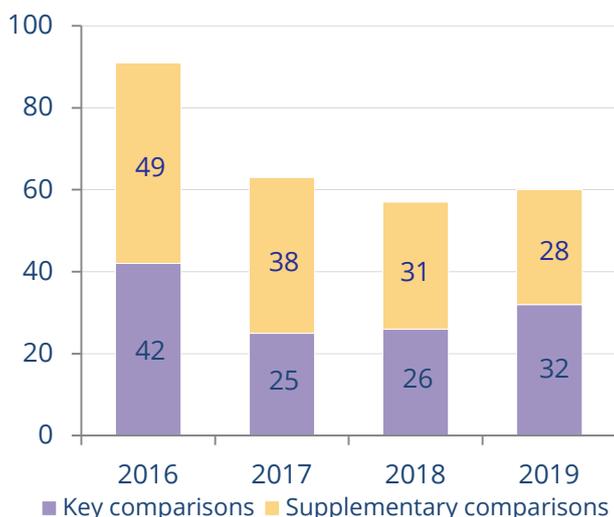
The KCDB currently includes a dozen examples where more than seven key comparisons are linked together.

## Calibration and Measurement Capabilities

On 31 December 2019, there were 25 244 CMCs registered in the KCDB. Of these, 14 978 were in the field of general physics, 3 856 in ionizing radiation, and 6 410 in chemistry. The total number of CMCs was quasi-stable during 2019. Twenty-four of the 42 Associates that participate in the CIPM MRA had CMCs published in the KCDB at the end of 2019.

It is possible to temporarily withdraw CMCs from the database by “greying out”. At the end of 2019, 481 CMCs were “greyed out”, an increase of 17 %, mainly linked to postponements of activities. Thirty-one CMCs that had already been greyed out were definitively deleted. This is a negligible number when compared to the total number of registered CMCs.

Number of new comparisons registered in the KCDB



Total number of CMCs registered at 31st December

