

# Information from the KCDB Office

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**B**ureau  
♦ **I**nternational des  
♦ **P**oids et  
♦ **M**esures



CCM Meeting June 2025

# KCDB - CBKT online technical exchanges

<https://www.bipm.org/en/committees/cb/cbkt>




## Capacity Building and Knowledge Transfer (CBKT) Programme

### Online webinars

The online webinars will offer you the skills to use the KCDB tools for creation of CMCs, operation of the review process and piloting of comparisons, effectively.

[→ Course information](#)

### Online Technical Exchanges

	KCDB 2.0 – COMPARISONS	March 2025
	KCDB 2.0 - CMC WRITERS	April 2025
	KCDB 2.0 - TC CHAIRS IN CHEMISTRY AND BIOLOGY	Feb. 2025
	KCDB 2.0 - TC CHAIRS IN GENERAL PHYSICS AND IONIZING RADIATION	June 2025

# KCDB Software update in 2024

## Display of the CMC PID in Advanced Search

Requested by: FORUM-MD-WG-CC Priorities for TG-SIDF

### CMC QUICK SEARCH

Argentina, INTI (Instituto Nacional de Tecnología Industrial)

Matrix or material	Analyte or component	Dissemination range of measurement capability		Range of certified values in reference materials	
		Mass fraction in µg/kg	Relative expanded uncertainty in %	Mass fraction in %	Absolute expanded uncertainty in %
water	lead	2 to 20	2.9 to 1.0E1		

Mechanism for measurement service delivery : Reference measurement and calibration service

Approved on 28 September 2023

Institute service identifier : [INORGW-8](#)

CMC ID : SIM-QM-AR-00000DN-1

### CMC ADVANCED SEARCH

Results for: Chemistry and Biology > Argentina > "lead WATER"

2 results

SELECT ALL

EXPORT XLS

In the CMC uncertainty statements,  $Q[a,b] = [a^2 + b^2]^{1/2}$

Unless otherwise stated the expanded uncertainties given below correspond to  $k = 2$  (at a 95 % level of confidence)

	GROUP ID	SERVICE PROVIDER	INSTITUTE SERVICE CODE	EXPANDED UNCERTAINTY CRM	MECHANISM FOR SERVICE DELIVERY	APPROVAL DATE	KCDB CMC ID
<input type="checkbox"/>		Argentina INTI	INORGW-8		Reference measurement and calibration service	2023-09-28	SIM-QM-AR-00000DN-1
<input type="checkbox"/>		Argentina INTI	INORGW-11		Reference measurement and calibration service	2024-09-10	SIM-QM-AR-00000PEZ-1

# KCDB software update in 2024

## Update of CMC QUICK SEARCH



Search using part KCDB CMC ID

- Use wildcard to search by part of CMC ID  
for instance, EURAMET-T-A\*
- Use keyword AND and OR (in capital) for conditional search  
for instance, EURAMET-T-A\* OR EURAMET-L-A\*

CMC QUICK SEARCH

CMC ADVANCED SEARCH

Results for: EURAMET-T-A\*

EURAMET-T-A\*  

[Reset all](#)

**23 results**

**CMC Area**

☒ [General physics \(23\)](#)

**General physics**


☒ [Humidity \(7\)](#)

☒ [Temperature \(16\)](#)

[Deselect list](#)

In the CMCs uncertainty statements, the notation  $Q[a, b]$  stands for the root-sum-square of the t  
Unless otherwise stated the expanded uncertainties given below correspond to  $k = 2$  (at a 95 % l

**Austria, BEV (Bundesamt für Eich- und Vermessungswesen)**

Items for defining ITS-90 , Temperature : **419.527 °C**  
Freezing point of Zinc  
Absolute expanded uncertainty : **1.6 mK**  
Direct comparison  
Aluminium powder bath  
Approved on 20 May 2010  
Institute service identifier : BEV/6  
CMC ID : EURAMET-T-AT-00000BL1-1 

# KCDB software update in 2025

## Update of the module for the CMC statistics on the JCRB Review performance

*Prototype Validation in progress*

### Statistics on CMC review

JCRB review statistics for the last twelve months

	AFRIMETS	APMP	COOMET	EURAMET	GULFMET	SIM
CMCs received for review						
Responded 'Will not review'						
No reply to review requests						
Accepted but did not complete the review						
Reviewed but did not vote when requested						
Total CMCs reviewed						
Total loss of rights						
CMCs reviewed as a percentage of CMCs received for review						

# KCDB software update in 2025

## Update of the comments tools

Improving the accessibility and usability of the comment tool by writers to address reviewers' comments during the JCRB review process

*Specifications in progress*

**'Comments' Section Tab**

Edit CMC/CMC detail   Comments

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COMMENTS ON AFRIMETS-EM-EG-0000XXX-1

REVIEWER  
Hanson Mungwana (AFRIMETS, AFRM) *commented on 4 March 2025*

COMMENT (Technical)

"The uncertainty claimed is inconsistent with the results of the comparison reference provided. Please provide additional support for the CMCs."

REVIEWER  
Jamez Lignue (EURAMET, NMIEU) *commented on 12 February 2025*

COMMENT (Technical)

"CMC accepted"

Reply

Submit

Cancel

→ Add document

[Amended uncertainty budget](#)

[TC Chair review report](#)

[TC Chair quality management system report](#)

# KCDB Updates in 2025

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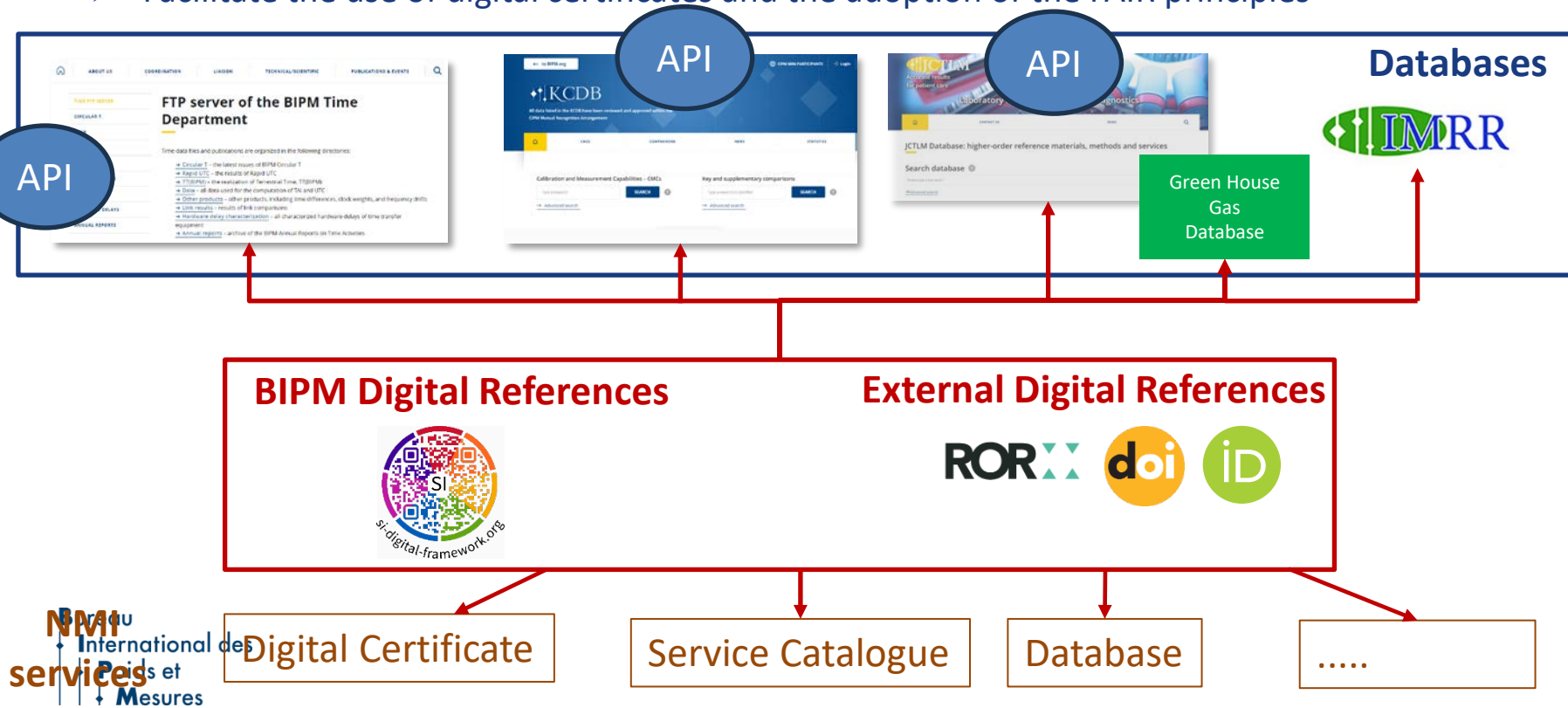
**KCDB / CMCs parameters – implementation of a control menu in the submission form**

Requested by : CCPR WG CMCs for harmonization

→ **Consultation amongst other CCs in 2025 for identifying their need**

# SI Digital Framework

- To provide the globally accepted anchor of trust for metrology in the digital era
- Facilitate the use of digital certificates and the adoption of the FAIR principles





# KCDB and digitalization

## Update of KCDB API for CMCs Search

Requested by : FORUM-MD-WG-CC Priorities for TG-SIDF

- Expansion of the query to the record of no longer published CMCs
- Addition of PIDs for NMIs/DIs and Service Category

### Work in progress

First phase of the development validated in 2024

KCDB API Prototype validated

Revision of the Guidance in progress

### Next step

Looking at how to integrate in the KCDB the SI Reference Point: namely kind of quantity > unit

```
curl -X 'POST' \
'https://kcdb2-dev.bipm.org:8443/api/kcdb/cmc/searchData/quickSearch' \
-H 'accept: application/json' \
-H 'Content-Type: application/json' \
-d '{
  "page": 0,
  "pageSize": 20,
  "showTable": false,
  "keywords": "EURAMET-M-GB-00000FV3-2",
}'
```

```
▼ data [1]
▼ 0 {39}
  id : 34488
  status : Published
  statusDate : 2021-06-01
  kcdbCode : EURAMET-M-GB-00000FV3-2
  domainCode : PHYSICS
  metrologyAreaLabel : M
  rmo : EURAMET
  countryValue : United Kingdom
  nmiCode : NPL
  nmiName : National Physical Laboratory
  nmiIdentifier : 136
  nmiRorIdentifier : 015w2mp89
  nmiWikiDataIdentifier : Q1967606
  nmiServiceCode : NPL/MM01
  nmiServiceLink : {value}
  quantityValue : Mass
  ▶ cmc {3}
  ▶ cmcUncertainty {3}
    confidenceLevel : 95
    coverageFactor : 2
  ▶ uncertaintyEquation {2}
  ▶ uncertaintyTable {5}
    uncertaintyMode : Absolute
    traceabilitySource : {value}
    comments : Uncertainty scales known following the kg.
    groupIdentifier : {value}
  publicationDate : 2021-06-01
  approvalDate : 2021-02-28
  internationalStandard : null
  branchValue : Mass, mass standards
  branchLabel : M/Mass
  serviceValue : Mass
  subServiceValue : Mass standard
  individualServiceValue : Mass standard
  physicsCode : 1.1.1
  kcdbServiceCategory : M/Mass/1.1.1
  instrument : Mass standard
  instrumentMethod : Comparison in air
  ▼ parameters [0]
```

# KCDB and digitalization

## KCDB / API for machine-readable comparison data (information and participants)

Requested by : FORUM-MD-WG-CC Priorities for TG-SIDF , CCL sWG-KC , COOMET Secretariat

### Comparison information and participants

- Identifier
- List of participation labs including role (pilot, copilot, link, participant)
- Metrological area, sub-field, comparison type, body
- Description, Measurand, Transfer device
- Dates (creation, measurement start, measurement end, ....)
- Status, Validity
- Link to the CMC quantity
- Link to report
- Link to protocol

→ Consultation amongst the CCs in 2025 for consolidation of meta data

# KCDB – citable comparison reports

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The workflow for publishing final comparison reports will have to be adapted, as the reports will no longer be published by IOPP as Technical Supplements of Metrologia from January 2026.

The KCDB Office and the BIPM webmaster developed technical specifications for implementing a new service for ensuring comparison reports are citable with assigned DOI.

[Decision CIPM/113-29 \(2024\)](#)

# Thank you

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[www.bipm.org](http://www.bipm.org)