

1. General Aspects

The work of the Technical Committee for Metrology in Chemistry, TC-MC, continues alongside its activities in the European Metrology Research Programme (EMRP) in its well-established form. The fourth meeting of EURAMET TC-MC was conducted in Helsinki, Finland from 01 - 04 February 2011. All Sub-Committees had separate meetings on the first two days of the conference and a TC-MC plenary meeting was held on 03 - 04 February 2011. 71 representatives from 35 institutions and 31 countries participated in these meetings located at the site of the Finnish Meteorological Institute. An extra day at 31 January 2011 was reserved for annual meetings of iMERA+ and EMRP projects. Running EURAMET projects, iMERA-Plus projects, new EMRP projects and also proposals for upcoming EMRP calls were discussed in detail.

Dr. Michela Segal (INRIM) was introduced as new chairperson of EURAMET TC-MC (term starts in June). Dr. Francesca Durbiano (INRIM) was nominated as the new convenor of the Sub-Committee for Electrochemistry in the plenary meeting. She replaces Petra Spitzer (PTB), who acted as the convenor of this SC for four years.

2. Projects and 3. Comparisons

There are currently 16 active projects. The duration periods of projects in previous years as listed below have been revised according to the final reports given on the TC-MC project webpage.

year	project started	completed projects
2003	5	4
2004	4	3
2005	5	1
2006	7	3
2007	4	4
2008	4	1
2008	4	1
2009	4	6
2010	3	1

4 EUROMET.QM.Supplementary comparisons and 6 Key comparisons are registered in the BIPM KCDB:

EUROMET.QM- K3: completed
EUROMET.QM- K4: completed
EUROMET.QM- K1.c: completed
EUROMET.QM- K17: completed
EUROMET.QM-S1: completed
EUROMET.QM-S2: completed
EUROMET.QM-S3: completed
EUROMET.QM-S4: ongoing
EURAMET.QM-K4.2 ongoing
EURAMET.QM- K12 ongoing

4. CMCs

EUROMET reviewed 71 claims in the regional review under cycle XI during 2010, 49 were accepted.

Cycles	Number of CMCs
XI	71
Accepted	48
Deferred	23

All except one claim were accepted after interregional review by the CCQM KCWG. EURAMET experts have also reviewed 116 new CMC claims from COOMET, AFRIMET, APMP and SIM. 138 revised/re-reviewed claims have been submitted to the interregional review process.

New cycle, Cycle XII:

52 new claims and 210 revised/re-reviewed have been proposed by EURAMET members in the regional CMC review process, 46 of the new claims, 39 revised and 108 re-reviewed claims have been submitted to the interregional review process. These claims were submitted by 11 NMIs and Designated institutes from 10 countries covering 9 categories (1, 3-5, 8-12). The collated claims from all sub-committees inorganic, gas, organic and electrochemical were sent to JCRB on the 02nd of March.

5. Activities of the Sub-Committees

Meetings of all Sub-Committees were conducted together with the TC-MC plenary meeting in Helsinki 1 – 4 Feb 2011. A review of new claims as well the obligatory re-review of a range of existing claims was carried out under cycle XII of the CMC claim period. Running iMERA-Plus projects, the new EMRP projects and also proposals for upcoming EMRP calls were discussed in detail in all sub-committees. Annual meetings of the project T2J10 “Tracebioactivity” and ENG09 “Metrology for biofuels” were carried out on 31 January in Helsinki prior to the TC-MC meeting.

6. Participation in iMERA-Plus/EMRP

The ongoing European Metrology Research Programme (EMRP) is now a dominant factor in the work and prospect of the Technical Committee for Metrology in Chemistry (TC-MC) of the European Association of National Metrology Institutes EURAMET e.V.. TC-MC is strongly involved in the EMRP process and participates in 7 running projects in the fields of “Health”, “SI and fundamental constants”, and “Energy”. TC-MC members are also engaged in the calls for the Targeted Programmes (TPs) on “Metrology for environment” and “Metrology for industry” conducted in 2010 and participate in four successful projects in the TP Environment on “Metrology for chemical pollutants in air”, „Emerging requirements for measuring pollutants from automotive exhaust emissions”, “Metrology for oceanic salinity and acidification” and „Traceable measurements for monitoring critical pollutants under the European Water Framework Directive (WFD-2000/60/EC)“. An interesting aspect is the successful engagement of TC-MC members also in two projects of the physics-oriented TP Industry. The project “Metrology for the manufacturing of thin films” tackles, among other things, standards for chemical quality control of solar cells, while “Traceable quantitative surface chemical analysis for industrial applications” aims at standards for instrument calibration and verification of industry-relevant surface chemical measurements. The 6 projects from these two calls start in mid 2011.

Ideas for research topics were discussed in a workshop: "Preparation for the Targeted Programmes "Health II, SI broader scope, New technologies" " organized during the meeting in Helsinki. 13 contributions were presented. The presentations can be downloaded from the TC-MC webpage. Also, Hans Koch, PTB, Facilitator of TP Health I gave an overview of “Recent developments of the TP Health programme” at this occasion.

7. Meetings

- TC-MC annual meeting:
1 to 4 of February 2011 (sub-Committees and TC-MC plenary meeting) in Helsinki, Finland
- EURAMET workshop: "Preparation for the Targeted Programmes "Health II, SI broader scope, New technologies" Helsinki, Finland 2011-02-03 with invited speakers:

Highlights:

Reports on:

- Activities of CCQM and JCTLM (Joint Committee on Traceability in Laboratory Medicine)
by Bob Kaarls, President of CCQM
- Recent developments of the TP Health
by Hans Koch, PTB, Facilitator of TP Health I

- Workshop: "Preparation for the EMRP Targeted Programmes "Health II, SI broader scope, New technologies"":

Health II

Isotope dilution ICP-MS as the metrological basis for accurate determination of health relevant parameters

Claudia Swart, PTB (Germany)

Requirements for novel elemental, isotopic and metallomic developments in the diagnosis and treatment of disease

Mike Sargent, LGC (United Kingdom)

Protein & proteomic metrology:

Where are we going? Where have we been? Where are we?

Gavin O'Connor, LGC (United Kingdom)

Metrology research needs for the efficient standardisation of protein measurements

Heinz Schimmel, IRMM (Belgium)

Metrological requirements for cell/bio-assays to support innovation in diagnosis and treatment of disease

Mariapaola Sassi, INRIM (Italy)

SI broader scope

Traceability system for elemental analysis

Heinrich Kipphardt, BAM (Germany)

Absolute Fluorescence Quantum Yield

Ute Resch-Genger (presented by Heinrich Kipphardt), BAM (Germany)

Metrology for complex system quality parameters

Petra Spitzer, PTB (Germany)

New Technologies

Metrology research needs for European regulatory aspects of nanotechnologies

Gert Roebben, Thomas Insinger, IRMM (Belgium)

General

LNE proposals for metrological research topics

Sophie Vaslin-Reimann, LNE (France)

Discussions at the bio/biochem perspective workshop in Teddington

Helen Parkes, LGC (United Kingdom)

Speciation of heavy metals in food

Timo Kapp, BVL (Germany)

Food traceability: tracing food through the production and distribution chain to identify and address risks and protect public health

Michela Segal, INRIM (Italy)

Potential developments in food metrology

Mike Sargent, LGC (United Kingdom)

Ideas for new research proposals from the Gas Working Group

Rob Wessel, VSL (The Netherlands)

8. Issues

- CMCs review process between RMOs
- Re-review process of existing CMCs exceeding new CMCs
- Coordination of EMRP activities

9. Strategic planning and 10. Outlook for 2011/2012

- Discussion about participation in future EMRP TPs
- Discussion about CMC activities,