



METCHEM

Metrology in Chemistry Technical Committee

Plenary Session

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Lisbon - Portugal

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- 1 - Welcome address**
- 2 - Introduction and approval of agenda**
- 3 - Tour de table**
- 4 - TC Chair's report on Euromet TC Chair's meeting and Euromet GA - TC Chair's report on status of Euromet QM CMCs**
- 5 - Convenor's reports on sub-committees activities**
- 6 - Information from President of CCQM**
- 7 - Reports on CCQM WG meetings**
- 8 - How to ensure adequate supply metrology capabilities to users (with 8 invited speakers and round tables)**
- 9 - Recent development of the iMERA project : EURAMET**
- 10 - Information on activity of the JCTLM**
- 11 - Reports on on-going and completed projects**
- 12 - Discussion on project proposals**
- 13 - Mandate of Chairman**
- 14 - Report on Eurachem activity**
- 15 - Any other business**
- 16 - Next meeting 2008**

* In the whole document the sign  indicates a presentation available on the METCHEM website:

www.metrologiefrancaise.fr

1 - Welcome address

Mrs. Maria José Brito, member of the IPQ board welcomes the participants of Metchem meeting. **Mrs. Eduarda Filipe**, Head of the Central Laboratory of Metrology presents the scientific, legal and industrial metrology activities at IPQ, at INETI and LMRIR . She also informs participants that the metrology activities at INETI will certainly join IPQ in the near future.

Mrs. Eduarda Filipe expresses her best wishes for the success of the meeting and new R&D projects, and the great pleasure for IPQ to welcome METCHEM community.

Philippe Charlet, Chairman of the meeting, thanks Portugal to welcome Metchem representatives, and in particular Mrs. Florbela Dias for the nice organisation of all the meetings.

The minutes of the last METCHEM meeting were already amended. The minutes are approved with the modification included. Minutes will be loaded on the website.


2 - Approval of agenda

The agenda is approved.

3 - Tour de table

The chairman asks delegates to introduce themselves.

4 - TC Chair's report on Euromet TC Chair's meeting and Euromet GA - TC Chair's report on status of Euromet QM CMCs

Philippe Charlet gives a summary of the different topics discussed at the Euromet meetings (TC chair's meeting with Euromet Executive Committee and Euromet General Assembly meeting). 

- **Euromet GA**

Recommendations have been done to TC Chairpersons to present the questions TC Chairs have to face up to and questions that have been raised in the TC groups.

For chemistry the following points on general issues have been presented:

- iMERA view facing the joint group Euromet / Eurachem ;
- the large number of participants in each METCHEM session (about 50) ;
- the change of 2 convenors over 4 ;
- the chemistry related to societal issues.

On the specific METCHEM group activities, Philippe Charlet pointed out the difficulties on CMC review processes for the 2005 cycle (delays, lack of international expert in some field, etc..), and information relative to the roadmap elaboration process in the METCHEM group, quite uniform regarding the different groups. At the present time, the METCHEM group proposed 4 roadmaps in chemistry, 3 in bio-analysis, and 2 on life science, quite a lot (9) regarding the total number of roadmaps (43).

Another point raised was the possible development of a specific group on bio-sciences, to be discussed in the future, at METCHEM meetings.

- ***Euromet CMC, KCWG***

Philippe Charlet presents the two main topics discussed at the meeting chaired by Jim Mc Laren : the review of CMC claims, and the review process of future CMCs.

379 CMCs were reviewed with 1/3 only for Euromet. A tentative of time schedule for claim submission to RMO approval has been defined: 1st December 2006 for the deadline.

- ***Euromet view on CMC process***

Considering some remarks on the submission, review and integration of accepted CMCs in the BIPM-KCDB, Philippe Charlet presents to the METCHEM assembly questions and major problems, which occurred in 2006. The process is not smooth at all, and has to be improved. The main point raised was the change of the time schedule to constant new deadlines, for the process of CMC's review, with concrete examples given.

To summarise :

- There were still two missing claims from BAM (nobody knows why, but usual problem !)
- 57 CMCs were postponed to the next cycle.

Information has been done to all convenors in view to inform the different groups.

A new problem appeared recently on SIM claims sent to RMOs for approval, after the deadline and without supporting evidence. The METCHEM TC Chairperson answered negatively to the request, and rejected the SIM files ; APMP answered also negatively. The CMCs were postponed, which is fair, considering that other RMOs did the same a while before and especially with EUROMET claims. Whatever, it seems that the rules are not interpreted the same way, considering a RMO to another.

Robert Kaarls agrees with the Chairman that something has to be done, to improve the review process and to be more professional.

- ***Quality system (QS) coverage for CMCs***

An added column has been included in the CMC table to inform of the QS related to the considered CMCs with annotation 0, 1, 2 or 3:

0 - no QS

1 - ISO 17025

2 - ISO 17025 + ISO guide 34

3 - equivalent (to be specified)

Following the request from JCRB, EUROMET responded that all CMCs linked with a CRM as a way of dissemination are covered by a QS responding to ISO 17025 + ISO Guide 34, for all the European NMIs.


5 - Convenor's reports on working group activities and meetings

The points 11 and 12 are part of the discussion concerning working group activities (WG). Agenda points 5, 11 and 12 are included in this chapter.

For the third time, there were only two working groups in parallel, in view to get more exchanges between the different working groups.

- **Report on inorganic analysis**

Christophe Quézel reports on the activities of the inorganic analysis WG .

Bernd Guettler reports on the on-going and proposed projects. .

- 22 participants attended the WG. The two main subjects were the CMCs and the projects. For cycle VIII, the claims concerned only LGC (UK), PTB (DE) and INRiM (IT). For all of them, after a complete review process the CMCs were accepted.

- A mini workshop has been organised on the traceability and characterisation of isotopic CRMs by means of synthetic isotopic mixtures.

- 2 projects have been registered.

The project n° 894 deals with "Surface Enhanced Raman Spectroscopy - SERS - based metrology at a primary level". A work-plan was proposed. It will be interesting to put on the project on EMRP. Normally, the NPL-PTB project is open to other participants.

The project n° 924 topic is on "the development of a sustainable traceability and dissemination system providing Europe-wide comparable measurement results in water analysis under the WFD". The project to support the Water Directive, started in December 2006 and should be completed in February 2009.

- **Report on Electrochemistry**

Petra Spitzer reports on the activities of the electrochemistry WG. .

16 participants attended the meeting.

- At the meeting three presentations were given: one on some developments for the measurement of dissolved oxygen by INRiM, one on electrochemical metrology activity in Estonia by UT, and the last one on electrochemical measurements of simple ions and glucose in complex mixture by METAS.

Another topic discussed at the WG was on the specific claims from Denmark on pH measurements. The pH activity has been transferred from Radiometer AS to DFM. At the present time, the claims are the same but there is no comparison published yet, and no supporting evidence. These claims from DFM were taken over for the moment.

- Concerning the projects, there are 3 on-going projects.

The n° 843 on the evaluation and the calibration of pH on site measurement instrument : the end of the project is scheduled for the end of 2008.

The two other projects are the project n° 898 on electrolytic conductivity at pure water level and the project n° 918 on traceability of salinity measurements in sea-water.

Another project has been proposed: a research project on traceability on ion activity measurements (Electrolytes in e.g. serum - Ion selective electrode - ISE).

- **Report on gas chemistry**

Martin Milton reports on the activities of the gas analysis WG. .

The attendees were from 22 countries and 26 laboratories. The two main topics were CMCs and projects.

- At the present time, declared and reviewed CMCs come from 13 countries. Two weeks ago a new laboratory was designated for Spain, ICS III, in the frame of the CIPM MRA.

- Concerning the projects, the presentation is given in three parts: the co-operation and workshops (n° 853, 888, 893), the comparisons (n° 708, 883, 867, 886, 900, 919), and finally the proposals.


For the workshops, Martin Milton informs the assembly that the workshop on “dynamic measurements of NO₂, SO₂, CO at low ambient level and their comparability” will be held in March 14 to 17, 2007.

Concerning the comparisons, Martin Milton gives the new results on the projects 708, 883, 867 and 900.

Four new projects are proposed on the following topics :

- optical spectroscopy as a potential primary method
- purity analysis comparisons of nitrogen at sub 50 nmol/mol
- bilateral comparison
- ozone pre-cursor, already a Euromet project n° 886 with 20 participants. A lot of components to study from solvent, cleaning, chemical industry, bio-genics, active components, difficult to control and treat.

- **Report on organic analysis**

Franz Ulberth reports on organic analysis WG .

The report concerns the CMC cycle VIII review and the on-going projects. A question has been raised on the necessity or not to keep this group, for the reason that there are no new proposed projects at the moment.


The project n° 878 has been updated for “Crude protein in cereals”. Some new results were presented on the project n° 833 concerning PCB congeners in organic solution to build up measurements capacities. The results have been improved compared to the results given in 2004-2005.

A questionnaire has been sent in 2004-2005 on the activity and on needs in the organic field. At this time, the community expressed a great interest in training exercises and comparisons. Whatever, there is no new proposal for future comparisons and no real reason given. In Europe, some NMIs have well-established capabilities, and it seems that they have other priorities.

A discussion starts on the difficulties encountered in this WG related to the active participation. There are a lot of designated institutes (DI) in this field. DI needs encouragements from NMIs to participate and to take part in the activity of this group. There is certainly also a question of funds. It seems important to the Metchem contact persons to attract laboratories and potential DI to share some ideas and experiences. The lack of process of communication, transfer of information to those laboratories is also a point raised. The laboratories are not intrinsically aware and interested by metrology but just in the delivering of CRMs. For some countries it can be difficult to motivate the laboratories to participate in such a group.

The question of the future of the organic group is still open, no consensus expressed by the Metchem contact person group.

6 - Information from President of CCQM

Robert Kaarls gives an overview of CCQM works .

Robert Kaarls presents the activity of the CCQM for the period 2005 - 2006 and the activity of the seven CCQM working groups. The CCQM works on the further needs for harmonisation of CMCs (review of CMCs, KC repeat, measurement uncertainty in the KCRV, etc...). A

CCQM workshop will be held on April 18, 2007, on calculating KCRV and its uncertainties and on efficient testing of claimed CMCs.

The BIPM programme 2009-2012 is also presented as the relations and liaisons with organisations such as ILAC, REMCO, ISO, etc.

Robert Kaarls then presents the CCQM and CIPM related programme which concerns mainly CRM traceability on the basis ISO 17025 and ISO Guide 34, the redefinition of the SI. CIPM is also asking RMOs to limit the number of comparisons, and is working on the redefinition of the term CMCs (CIPM-MRA) compared to BMC (accreditation).









An update of RMOs is in process. A new possible region could be created, AFRIMET, with some sub-regions, as SADCMET. The question is still open for a region in the Middle East.

7 - Reports on CCQM WG meetings


Taking into account the time schedule, the reports have not been presented. The ad-doc document are on the METCHEM website.

8 - How to ensure adequate supply metrology capabilities to users (with 8 invited speakers and round tables)

Eight topics were presented as follows:

- "Water analysis laboratories - European directive" by **Maria Joao Benobiel** 
- "Proficiency assays suppliers - traceability" by **Maria Ascensao Trancoso** 
- "Producers of reference materials" by **Maria José Machado** 
- "Emergent sector - traceability in medical sector" by **Maria Adelina Gomes** 
- "Emergent sector - traceability in bio-metrology" by **José Carlos Roseiro** 
- "Measurement uncertainty revisited - alternative approaches to uncertainty evaluation" by **Bertil Magnusson** 
- "The status of the European training and education initiatives" by **Philip Taylor** 
- International master study programme" by **Ivo Leito**. 

9 - Recent developments of the iMERA project - EURAMET

Andy Henson from NPL, iMERA project manager presents the recent developments on the iMERA project, and on the future activities in the frame of EURAMET. 


Andy Henson presents the state of art of the iMERA project funded in the frame of an ERA-NET programme, in particular with the creation of the legal entity under the German law, EURAMET, the 11th of January 2007.

Then Andy Henson presents the possible R&D funding in the frame of the programme ERA-NET plus. 1/3 of funding provided by the EU and 2/3 by the NMIs of EU, in case of success. The funding will not concern the preparation of proposals. The rules and tools for the process of call in this ERA-NET plus programme are still under improvement, a lot of news from the European Commission coming every day.

Some questions rose related to the future of the group EUROMET/EURACHEM in the frame of the new organisation EURAMET.

There will be activities in the frame of the European metrology research programme (EMRP), and activities in the frame of the Technical Committees that will transfer directly to EURAMET. There will be no change for the moment. The EURAMET/EURACHEM group will continue its activities on projects (including comparisons), co-operation in research, traceability and consultation.

10 - Information of activity of JCTLM

Robert Wielgosz, from BIPM, being absent temporarily, **Robert Kaarls** presents the activity of the JCTLM .

Robert Kaarls presents rapidly the activities of the two working groups: reference laboratories - network, reference materials and reference methods.

The JCTLM is collecting information on reference measurement laboratories. Robert Kaarls informs the attendees of the meeting about JCTLM stakeholders seminar which should be held in China in October 2007. Then presentation and information are given on the JCTLM database and JCTLM nomination cycle.

Concerning the role of ILAC, Robert Kaarls specifies that IFCC said that laboratories have to be accredited; this is the reason why ILAC is present at the JCTLM.

Reference laboratories should be the laboratories with the high accuracy of measurement. They have also now to fit with the ISO 15195 in addition to ISO 17025.

11- Reports on on-going projects and completed projects

See chapter 5

12 - Discussion on projects proposals

See chapter 5

13 - Mandate of the Chairman

In the Euromet rules, the duration of the mandate for a Technical Committee Chairman is two years, mandate which can be renewed for another two years (four years at maximum).

The mandate of Philippe Charlet will end at the next Euromet General Assembly in May 2007 (mandate 2003-2007). The METCHEM Chairman asked METCHEM contact persons names of persons to be proposed (no answer received from Eurachem). Two names were proposed to Euromet.

The new METCHEM Chairman for the period 2007-2009, at least, is **Bernd Guettler** from PTB.

Philippe Charlet thanks the assembly and in particular the convenors for their constant support and also thank them for the real pleasure he had to work with. Metrology in chemistry will play a key role in the future, in particular if the R&D increase, and Philippe Charlet presents his best wishes to Bernd Guettler.

14 - Report on Eurachem activity

Steve Ellison reports on Eurachem activities .

Steve Ellison gives an overview on Eurachem aims and activities : trainings, workshops, guidance documents (uncertainties, interpretation of results, sampling, etc.). Eurachem has close relationships with CITAC and Eurolab. The primary audience is accredited laboratories under ISO 17025 for analytical measurements, national accreditation bodies and related organisations.

Two workshops are announced: the first one on measurement uncertainties in Autumn 2007 and the 2nd one on proficiency testing in 2008.

About strategy consideration, Eurachem is watching at the moment the new organisation Euramet, to see what could be the position of Eurachem regarding the new status of Euramet.

Philippe Charlet comments and concludes that it seems that there could be concrete projects between Euramet and Eurachem, some real co-operation and not only good relationships. For example, both parties can be involved in the elaboration of the guide on reference materials. Concerning bio-sciences needs, the survey on this topic can be a important input to create a sub-group on bio-sciences.

15 - Any other business

Ed de leer informs the assembly of the next International Metrology Congress which be held in Lille from the 18th to 21st of June 2007. There are specific sessions on chemistry, environment and health.

Information will be sent by the DFM on a seminar in April 2007 in Copenhagen.

16 - Next meeting

The next meeting will be held in Turkey, in Istanbul, in February 2008. Dates to be defined.