



EURACHEM General Assembly Sees Vivid Discussions

EURACHEM's 2001 General Assembly was held in Popowo (Poland) from 19-20 April 2001, in conjunction with meetings of the Executive Committee, the Education and Training working group, and the Measurement Uncertainty and Traceability working group. The meeting was attended by some 40 representatives from member countries and liaised organisations, and chaired by E. de Leer. A special welcome was extended to the representatives from the new member countries.



A serenade to EURACHEM: The Firemen's Orchestra from Wyszkow (a neighbouring locality of Popowo) performed popular tunes.

Vivid discussions developed around the topics of measurement uncertainty and traceability in ISO/IEC 17025, the definition, scope and role of proficiency testing in normative and non-normative documents, and quality assurance in, or possible accreditation of the production of reference materials. *For a full report on the GA meeting see page 6 and 7.*

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EURACHEM Uncertainty Guide Continues Best-Selling

Since it has been published, the 2nd edition of the EURACHEM Guide "Quantifying Uncertainty in Analytical Measurement" remains at the top of the list of best-selling electronic publications. The new EURACHEM web site at <http://www.eurachem.bam.de> sees 43000 page views with 88 - 90 MBytes sent per month (on average).

As of June 2001, a 1014 requests referred to EURACHEM MU Guide with a total amount of bytes sent equal to 320 complete downloads. The MU Guide clearly beats the Method Validation Guide into second place with 284 requests; the next places are occupied by the Proficiency Testing (212 requests), the Use of Recovery Information (117 requests), and the Quality Assurance in R&D Guide (111 requests).

These figures are well above the total requests for other categories of interest, although the next group in importance which is membership information counts an average of 70 requests per country and month. Remarkable that the EURACHEM transparencies saw 37 requests only in June 2001. It seems that our members are diligent protagonists of EURACHEM and its activities.

Also in this issue

- MetChem TC Activities
- EA Expert Group "Environmental Analyses"
- EuroALMA Promotes Management Skills
- EURACHEM Textbook Published
- Surfing Measurement Uncertainty

Mastering Measurement Uncertainty in The Netherlands

Accreditation organisations have adopted ISO/IEC 17025 as their reference document for accrediting calibration and testing laboratories. A major issue for testing laboratories is measurement uncertainty. ISO/IEC 17025 requires testing laboratories to have and to apply procedures for estimating uncertainty of measurement. Even if this is metrologically or statistically not simple a reasonable estimate must be made.

In many laboratories it came as a bombshell. Principles are known but never worked out and applied. What now? Just two years to go!

Self-activation

EURACHEM The Netherlands has taken an initiative to facilitate the process. If analysts of many laboratories do not know how to deal with the issue they better sit together and discuss about their problems. After all, a proven way of solving a problem is explaining it to a colleague.

EURACHEM NL invited all analysts to actively participate in training groups.

Many took part in a plenary meeting where training was defined as the main objective, EURACHEM's QUAM 2000 was introduced as an important information source and the rules of play were set:

- Form homogeneous groups chaired by experienced chemists.
- Prepare own examples of estimating measurement uncertainty as best as one can and present them in the working group; preparing an example is a condition of participation.
- Discuss presented examples in working group meetings (discuss missing parts, improvements, alternative approaches, complicating measurement conditions).

At the end of the plenary meeting, five working groups were established: two on *environment*, one on

pharmaceuticals, one on *petro-chemistry* and one large group on *food*.

All working groups had three or more meetings covering different types of analytical procedures within their discipline.

The findings and conclusions of each of the working groups will be presented and discussed at the EURACHEM NL 2001 symposium on 4 October in Delft. Furthermore, the Dutch accreditation body and a public prosecutor will give their view on measurement uncertainty.

Conclusions on the process

- More than forty people participated.
- The vast majority of participants represented accredited testing laboratories.
- All big commercial laboratories participated.
- Self-activation was high. There was no lack of examples.
- Participants also used meetings to get an idea about what others consider "enough" for accreditation.

Conclusions on the content

- Almost all examples started from existing data on validation and QC. The classical bottom-up approach is considered too complicated and expensive.
- The EURACHEM Guide QUAM 2000 should have focused on the use of validation data.
- Most working groups used recovery and reproducibility as basic uncertainty indicators.
- There was a tendency to overlook bias contributions and the impact of matrix variability.
- Data on uncertainty due to subsampling were usually not available. Validation studies usually started from homogeneous samples.

Henk J van de Wiel
Chairman EURACHEM NL

www. measurement- uncertainty.org?

If you have problems in evaluating uncertainty or if you are interested in discussions on this topic then you should visit this site, which has been set up and is maintained by EMPA. Measurement uncertainty is certainly a very hot topic and this site has a large number of visits per day with a particularly strong attention from the USA. Page views per day have more than doubled and increased from 284 in October 2000 to 703 in May 2001 resulting in more than 130 000 page views since the site has been established.

The site contains a fully searchable version of the EURACHEM Guide "Quantifying Uncertainty in Analytical Measurement", which is ideal for reference and for training. In addition there is a discussion forum where you can post your own questions and comment on the questions from others. A section on Frequently Asked Questions (FAQ) has been added recently.

There is also provision for posting examples for comment and it is possible to examine and comment on the examples already posted on the site. From the requests we receive in the feedback section there is a strong demand for more examples and we would like to encourage the posting of very many more. It is a very useful way of getting comments on your own evaluations and to learn from the evaluations of others. The site also contains a Glossary of Terms, an Information Board and links to other sites dealing with measurement uncertainty.

We are considering setting up a more interactive system using email to inform registered participants of activity on the site, e.g. when there are new examples or new discussion topics. If you like to become a participant and receive reminders in this way, then please register on the site giving your email address.

Matthias Roesslein, Alex Williams
EURACHEM WG on Measurement Uncertainty

Visit us at:
www.measurementuncertainty.org



Wolfgang Wegscheider awards the 2nd prize to John D. Green (right).

EURACHEM Textbook Published

The discussions between 50 international experts during the 2nd EURACHEM Workshop on Education and Training held at GKSS Geesthacht in September 1998 led to the unanimous result that the theme of the workshop was adjudged to be a most topical and important area in university teaching, however, one which has often attracted too little consideration. It was agreed that the most significant deficiency in this area is the problem of "teaching the teachers". In order to improve this situation, the results of the workshop have been published this year by Springer in: B. Neidhart, W. Wegscheider (Eds.) "Quality in Chemical Measurements. Training Concepts and Teaching Materials" (ISBN 3-540-65994-3).

This advanced textbook is designed for training, teaching and continuing studies providing an in-depth coverage of current teaching and training issues in the field of Quality Assurance in Chemical Measurement. The CD-ROM accompanying the book contains course materials of 15 experienced lecturers on more than 300 overheads (graphics and text) as ready-to-use Powerpoint R documents. The book will serve as a reference text and source of course materials for lecturers and as an advanced textbook for analytical chemistry stu-

dents and professionals in industry and service labs.

Three prizes have been awarded to the best contributions to this book at the occasion of the EURACHEM General Assembly dinner in Popowo, Poland. Besides one exemplary of the book each,

- Matthias Rösslein and Bruno Wampfler from Switzerland received the first prize for their contribution "Evaluation of Uncertainty in Analytical Measurement" (DM 1000.-),
- John D. Green from the United Kingdom the second prize (DM 700,-) for his contribution "Why do we need good results", and
- Ute Pyell from Germany the third prize (DM 500,-) for her contribution "Basic Course Experiments to Demonstrate Inter-comparisons".

The prizes have generously been sponsored by EURACHEM Germany.

It is hoped that the teaching material in this book will assist in reducing the "activation barrier" associated with the preparation of lectures and seminars on the topic.

Bernd Neidhart
EURACHEM Germany

Editorial

It's time to party, dear Reader: This is the 20th issue of your EURACHEM Newsletter. The very first Newsletter issue saw the light of day in January 1991 and was an 8-page information leaflet. Start-ups are easy, I read in one of these numerous journals on economy, finance and stock markets. This meant that the whole art is in surviving.

It seems to me that for an association which had recently been founded it was a brave idea to start up with a Newsletter for promoting its aims and tasks. Compilation and production of this first Newsletter edition consumed a lot of time and effort and have been done with dedication. Issue No 20 is the right time to pay tribute to the people from the former EURACHEM Secretariat at LGC/U.K. for the initiative.

Since that first issue, we did not only survive, but we have constantly been improving both the contents and the layout of our print medium. Nowadays, the EURACHEM Newsletter counts with an ever increasing readership and is distributed in 64(!) countries worldwide. Information about EURACHEM reaches both all our members in the national organisations and interested parties on all continents including Australia, Africa and the "New World" with numerous readers in the U.S. and Canada. The EURACHEM Newsletter has an ISSN number, and the issues are recorded and archived at the Deutsche Bücherei (library) in Leipzig. EURACHEM writes history! Furthermore, some readers prefer the electronic form. Only in June 2001, issue No 19 enjoyed 134 requests.

Thinking in the future, we are not free of worries. Up to the date, it is not clear who will take over responsibilities and continue improving the Newsletter. Don't give us the cold shoulder, and don't let the next Newsletter issue be the last one!

Have a nice summer holiday!

The Editor

The MetChem Technical Committee - Recent and future activities

Readers of the EURACHEM Newsletter have already made the acquaintance of the joint EURACHEM/EUROMET Committee for Metrology in Chemistry in issue No 19. The committee had a very busy time right from the start. Read more about ongoing and future projects in this article by MetChem TC Chairman Eva Deak.

As mentioned in the previous issue, by joining EURACHEM representatives the former Amount of Substance group in EUROMET had been transformed last summer into MetChem.

The representation of reference laboratories in MetChem is an important contribution to the European analytical infrastructure. The main goal is the mutual acceptance of analytical results inside and outside Europe. The starting point is the equivalence of the chemical "standards" i.e. equivalence of results achieved by realising primary or reference methods in different places and at different times. CCQM, the chemical committee of the international metrological organisation BIPM, is leading this activity on a world-wide basis.

But the participation in CCQM-organised comparisons is limited to the signatories of the MRA, mainly to national metrological institutes. As it is known only a little slice of chemistry is practised at NMIs in Europe (unlike NIST, USA), most of chemical reference measurements are distributed to sectorial laboratories.

EUROMET provides the possibility to these sectorial reference laboratories to participate in EUROMET comparisons, which are linked to CCQM comparisons or serving special European aims. The expected co-operation in MetChem necessarily creates a closer contact between the NMI and the sectorial reference laboratories inside the

country resulting in benefit to both sides.

MetChem activities, plans, projects are destined to fulfil these expectations.

The main tasks of the MetChem group in the last period were:

- re-organisation of the group, effective collaboration of "old" and "new" members
- to accept and to apply the EUROMET/MetChem rules to seek for links to national chemical reference laboratories
- to submit CMC (calibration and measurement capabilities) files to the Joint Committee of the Regional Metrology Organisations and the BIPM (JCRB).

The tasks are performed or being performed continuously.

Organisation of expert groups; meetings

Four expert groups were formed mirroring the CCQM: gas, electrochemistry, inorganic and organic.

The Gas WG had to begin its activity at the very moment of its birth because it was obliged to submit data on gas measurement capabilities by the end of October 2000.

The Gas WG held three meetings: 21–22 September 2000, Teddington; 14 February 2001, Bratislava, and 22–23 January 2001, Delft.

The main topics were the discussion and evaluation of measurement capability claims and review of ongoing and future projects. The Delft meeting, joint with CCQM experts, dealt with the uncertainty problems having arisen in course of the evaluation of gas analysis CMCs.

Working groups on the other three sub-fields were practically formed in February 2001, at the time of the plenary MetChem meeting in Bratislava. The expert groups discussed the future plans, but the main point was the data submission and the reviewing process on measurement capabilities. The deadline to submit "fully reliable data" was the end of May.

The first plenary MetChem meeting was held on 15 – 16 February 2001 at SMU in Bratislava with 32 participants. The excellently organised meeting and the friendly atmosphere promoted the understanding between the "old" and "new" members, who are all engaged in metrology in chemistry.

EUROMET guides and rules which had to be applied to the comparison type projects have not been evident yet to everybody. The necessary explanation and guidance were provided to the members as a post-meeting action.

The Draft Minutes of the meeting are available on the MetChem download site (operated by NPL, see info box on the next page for web address).

Measurement capabilities - MetChem submission to BIPM database

Measurement capabilities claimed by the NMIs have to go through a EUROMET internal review and to pass an inter-RMO review too.

Inside MetChem two pre-reviewers from different countries were appointed to each submitted worksheet to check the content.

Experiences of the pre-review were discussed on WG meetings and by mail. Authors corrected, deleted or explained their submission. After repeated review the whole WG checked and approved the entries. BIPM, JCRB and EUROMET documents provided the guidance to review.

Review of 567 gas entries from ten countries has been ended last year inside EUROMET and they were sent to SIM, COOMET and APMP. After explanatory remarks and minor, mainly editorial corrections the RMOs accepted all of the EUROMET submissions. After approval by the JCRB these gas measurement capabilities went to the BIPM database and they appear on the website: <http://kcdb.bipm.fr/BIPM-KCDB/AppendixC/>

From other chemical fields nine countries and IRMM submitted 350 entries. (MetChem decided to submit only this limited number in the first round). After intra-EUROMET review the files were sent to the other RMOs. An inter-RMO meeting is planned in August to harmonise the claims before finalising and submitting them to the JCRB by the end of September.

Eva Deák
MetChem TC Chairman

Recently completed EUROMET comparisons

- Standards and calibration facilities for automotive gases
Participants: NMI (NL), CMI-CHMI (CZ), CSIR-NML (ZA), GUM (PL), IMGC (IT), IPQ (PT), SMU (SK)
- Trace elements in sediment (Cd, Pb)
Participants: IRMM (CEC), LNE (F), NMI (NL), LGC (GB), GSSR (SK), FORCE (DK), OMH-KVI (HU), Ecochem (CZ), IFA (AT), Univ.Poznan (PL)
- Key comparison of ethanol/air standards
Participants: NPL (GB), BNM-LNE (FR), IPQ (PT), SKL (SE), GUM (PL), VTT (FI), CSIR (ZA), VNIIM (RU), SMU (SK), BAM (DE).
- Pb content in wine
Participants: IRMM (CEC), NPL (GB), BNM-LNE (FR), EMPA (CH), PTB (DE), VSCHT (CZ), DVFA (DK), Systembolaget (SE)
- Comparison of ozone standard reference photometers
Participants: PTB (DE), NPL (GB), IRECL (B), RIVM (NL), ISC III (E), Ispra (EU), OFMET (CH), LNE (FR), CHMI (CZ), UBA (AT), SMHI (SK), IEP (HU), DMU (DK), NILU (NO), ITM (SE), FMI (FI), UBA (DE), GUM (PL)

Ongoing projects

- Comparison of primary gas mass flow standards
Participants: LNE (FR), PTB (DE), CMI (CZ), IMGC (IT)
- Metals in water (linked to EU drinking water directive)
Participants: IRMM (CEC), EMPA (CH), LGC (GB), NMI (NL), SP (SE), SMU (SK)
- Calcium, glucose and creatinine in human serum
Participants: IRMM (CEC), EMPA (CH), LGC (GB), NMI (NL), PTB (DE), Univ.Gent (B), Ecochem (CZ), UKB (CZ), Univ.Poznan (PL), DEKS (DK), UMC (SI), Fürst Med.Lab. (NO), Rikshospitalet (NO)
- Cadmium content in rice (Project is going parallel with the CCQM key comparison)
Participants: IRMM (CEC), BAM (DE), PTB (DE), LGC (GB), NMI (NL), EMPA (CH), LNE (FR), DVFA (DK), NFA (SE), VSCHT (CZ), Balint (HU), AFB (PL)
- Determination of sulfur in fuel
Participants: IRMM (CEC), BAM (DE), LGC (GB), ITC Zlin (CZ), AMEI (HU), CPL (PL), SP (SE)
- Atomic spectroscopy as a potential primary method (co-operation in research)
Participants: DFM (DK), NPL (GB)
- Revision of terms for the revision of VIM (consultation)
Participants: MetChem members
- Standards and calibration facilities for reactive gases (consultation)
Participants: NMI (NL), NPL (GB), METAS (CH), CMI (CZ)

Planned projects

- Project to study and explain the BCR value assignment process; Participants: IRMM (CEC), LGC (GB), BAM (DE)
- Comparison of NO_x in nitrogen at 100 µmol/mol concentration (led by NMI)
- Comparison of NO and SO₂ in air at ambient levels (linked to EU Directive, led by NPL)
- Research project on electrolytic conductivity cell constructions (led by NMI and IEN)

MetChem web site: http://www.npl.co.uk/environment/euromet_aos.html

EURACHEM General Assembly Meeting 2001 in Poland

A warm welcome to EURACHEM GA delegates was given by this year's meeting host Zbigniew Dobkowski. On the left side of the photo: EURACHEM Chair Ed de Leer.



EURACHEM's 2001 General Assembly embraced a whole series of both scientific and technical issues.

Organisational Issues

New members: at the 2000 Annual Meeting, Albania, Romania and the Ukraine had become EURACHEM members. They had especially been invited to the meeting to sign the Memorandum of Understanding (MoU). M. Buzoianu from Romania, and O. Levbarg and M. Rozhnov from the Ukraine were present. In their presentations, M. Buzoianu and O. Levbarg outlined their considerable efforts to come to a national EURACHEM network, and this was followed by the signing of the EURACHEM MoU. The new members were heartily welcomed to EURACHEM.

Membership fee: at the 2000 Annual Meeting, the General Assembly had agreed on the introduction of a membership fee. The Secretariat reported on the actual status: many members had arranged invoicing details with the Secretariat in the meantime, and two requests for fee exemption had been granted by the Executive Committee. The very broad acceptance was acknowledged by the Chair and the Secretariat.

Secretariat: during a double two-year term, the German Federal Institute for Materials Research and Testing BAM had been hosting the EURACHEM Secretariat, and this period would come to a close by the end of 2001. Therefore, the Secretariat had been in search of a successor but not yet been successful. Various options were discussed during the meeting and the ones with perspective elaborated thereafter.

Discussion Forum on ISO 17025

During the previous Annual Meeting in Berlin, a start was made with what could become tradition: a half a day forum on a topical subject. This year's forum was dedicated to the implications of ISO 17025 for EURACHEM and its members, and organised around plenary presentations and discussions in the following fields.

Measurement Uncertainty: EURACHEM had participated in the first meeting of the EA Expert Group on measurement uncertainty (MU). A. Williams reported: the EURACHEM MU Guide and its principle to use validation data for the estimation of uncertainty had been acknowledged as the basis for new guidance on the evaluation of MU in testing, imply-

ing that this EURACHEM route would also find acceptance from accreditors in the field of testing.

The EURACHEM-Netherlands approach to help field laboratories fulfil the MU requirements of ISO 17025 was introduced by H. van de Wiel. The formation of special sectorial groups of analysts with comparable experience, and treatment of practical examples in these groups had been particularly successful.

Traceability: An approach to explain traceability on the basis of the examples in the EURACHEM MU guide had been developed in the Measurement Uncertainty and Traceability working group; A. Williams reported.

The EURACHEM guide on traceability was beginning to take shape accordingly and would also be the basis for the 2002 Luzern workshop "Meeting the requirements of ISO/IEC 17025". The final guide and its principles would be fully harmonised with the working group partners EA, CITAC and ILAC. The development of the draft ILAC policy paper on the traceability of measurement results was reviewed by M. Walsh.



The EURACHEM crew in full action.

Proficiency Testing: the definition and scope of proficiency testing (PT) and its role in various normative and non-normative documents was summarised by M. Walsh. This and the Chair's considerations regarding mandatory PT participation for accreditation induced a vivid discussion after which the following resolution was drawn up:

- EURACHEM recognises that proficiency testing (in the widest sense, as specified in ISO/IEC Guide 43-1) is a powerful and effective tool to determine the performance of individual laboratories for specific tests or measurements and to monitor laboratories' continuing performance.
- EURACHEM accordingly recommends that analytical laboratories participate in proficiency testing activities where available and appropriate.

The Proficiency Testing mirror group was requested to prepare recommendations concerning the trade-off between participation in PT activities and surveillance measures related to accreditation, and mandatory participation in PTs as a condition for accreditation.

Reference Materials: though not directly part of the forum, this subject contributed to the already vivid forum discussions. A. Zschunke had prepared four statements on product certification of reference materials and accreditation of reference material producers. However, terms and language had to be clarified, and there was no general agreement yet.

New Guides

Various guides were under revision or preparation, all in close co-operation with sister organisations. The status of work on the following guides was reviewed:

CITAC's *International Guide to Quality in Analytical Chemistry QA*

Guide (1995) was under revision. A follow-up was being developed by CITAC and EURACHEM to comply with the new demands of ISO 17025, and would become available early 2002. Also under revision was EURACHEM-WELAC's *Accreditation for Microbiological Laboratories* (1996). EURACHEM had taken the initiative and started a working group for its revision, and EA had agreed to participate therein.

Two new guides from the joint EA-EURACHEM-EUROLAB (EEE) working groups were submitted to the General Assembly for approval: one in the field of proficiency testing (PT) and one in the field of reference materials (RMs). *Selection and Use of Reference Materials* had been prepared by B. King with assistance from the 4E-RM working group (recently extended by EUROMET representatives). The EEE-PT working group had acquired itself of writing guidance for the *Use of Proficiency Testing as a Tool for Accreditation in Testing*. Both documents were endorsed by the EURACHEM General Assembly and are now awaiting approval from EA and EUROLAB.

A Strategy to Introduce the Concept of Measurement Uncertainty in Testing in Connection with the Introduction of the Standard ISO/IEC 17025 had been drafted by the EA-EURACHEM-EUROLAB Permanent Liaison Group (PLG). It had been submitted to the three parent organisations and ILAC in parallel for comments and approval and was published in EURACHEM Newsletter 19.

Within EURACHEM, the draft had been circulated to the members of the General Assembly. The comments received were discussed and summarised at the meeting. The document was welcomed as a timely and valuable contribution to facilitate the implementation of the uncertainty requirements in ISO/IEC 17025. The General Assembly resolved to appro-

ve the document, subject to allowance for minor technical comments. It is EURACHEM policy to make all guidance documents freely available via the EURACHEM website, although this is, of course, also depending on approval from the partners.

Workshops and Future Meetings

Invitations for the next Annual Meetings were received from various members. EURACHEM had already been invited to Cyprus for 2002, and this was warmly welcomed and agreed. An offer for 2003 was made by Switzerland, and an offer for 2004 by the Czech Republic.

Several workshops had already been announced or even fixed, and it took an extra session of the Executive Committee to adjust all forthcoming workshops and business meetings with regard to subject, date and venue. The result is a tight but attractive EURACHEM meeting and workshop programme for the next few years. The following workshops are in the pipeline:

5-6 November 2001: sampling workshop in Lisbon, Portugal

16-18 June 2002: MU and traceability workshop in Luzern, Switzerland
October / November 2002 (preferred, not yet confirmed): Thinkshop in Geel, Belgium

February / March 2003: proficiency testing workshop in the United Kingdom

Fall 2003: AQA and education & training workshop in Siegen, Germany.

Closure

The meeting was closed by thanking EURACHEM-Poland, especially Z. Dobkowski and A. Luszko-Bienkowska, for the hospitality and meeting arrangements. The next Annual Meeting will be hosted by EURACHEM-Cyprus in May 2002.

Johannes van de Kreeke
EURACHEM Secretariat



To find out who is who in the gallery, see the EURACHEM web site at <http://www.eurachem.bam.de>

Introducing EA Expert Group "Environmental Analyses"

A Bit of History

Working Groups of experts for different specific fields started their activities in the framework of the former Western European Calibration Cooperation (WECC) in the 1970s. Originally these were working groups for calibration fields such as thermometry, electricity and dimensional metrology. Activities of working groups were focused on the planning and co-ordination of international interlaboratory comparisons, harmonisation of calibration procedures and uncertainty evaluations. Working group activities were co-ordinated by a WECC committee which, after the merger of WECC and the Western European Laboratory Accreditation Cooperation (WELAC) (active in the field of testing) into the European co-operation for Accreditation of Laboratories (EAL), became EAL Committee 2, Technical Activities.

In 1997, EAL and the European Accreditation for Certification (EAC) officially merged into European co-operation for Accreditation (EA). With the growing importance of accreditation, it was realised that it was necessary to pay more attention to the testing field, in order to achieve a similar degree of cross-border mutual confidence as a basis for mutual recognition arrangements.

First WG in Testing Focuses on Water

In the middle of the 1990s, the first working group was created in the testing field. The working group had the status of a temporary Task Force (TF) and was focused on Water Testing. It is quite clear that Water Testing is an area of common interest in all European countries because e.g. drinking water analyses are regularly carried out in every country. Moreover, quality requirements for different types of water are laid down in EC legislation.

In the earlier period, the Finnish Accreditation Service (FINAS) played the leading role providing a convenor and the first meetings were held in Helsinki. The main activities

were dedicated to interlaboratory comparisons.

Interlaboratory comparison Wa 1 was performed in 1997 as the first EAL interlaboratory comparison (ILC) in the testing field. EAL ILC Wa 1 was organised by FINAS in co-operation with the laboratory of FEI (Finnish Environmental Institute) for laboratories analysing potable water according to EU directive 80/778/EEC. Three different water samples were distributed to participating laboratories for determination of 11 basic parameters. 30 laboratories from 14 European countries participated. The results were evaluated (using z-scores) and the preliminary report was discussed during the TF meeting. The corrective actions reported by accreditation bodies in the case of unsatisfactory results were included in the final report. About 90% of the data provided by the laboratories were satisfactory.

Uncertainty Issues

Laboratories were also asked to report their uncertainties. The uncertainties were not included in the evaluation of the laboratory performance but they gave an overview of the existing situation. It is understandable from the report that uncertainty estimation has been a difficult matter. In some cases uncertainties had not been in good agreement with the results, some laboratories did not report them at all.

The pilot study also demonstrated that the background document EAL – P7 for organisation of EA(L) ILC in calibration should be applied also to the testing field but some modification would be needed.

The Next Step

Since 1988 the Institute of Reference Materials and Measurements (IRMM, EC Joint Research Centre in Geel, Belgium) has been co-ordinating the International Measurement Evaluation Program (IMEP) which is a complement to regular PT schemes and enables laboratories to compare their results against SI traceable reference values.

EA initiated a co-operation with the IRMM, and the first practical outcome was EA ILC Wa 2/IMEP-9 for trace elements in water. It has been realised by IRMM and co-ordinated by the Czech Accreditation Institute (CAI) serving as regional co-ordinator for EA participants. 15 elements were determined in natural water samples. Certified/assigned reference values were produced on the basis of IRMM and 6 reference lab results. A total of 201 participants from 35 countries participated in IMEP-9. Thirty participants from 16 countries were nominated by EA members.

The results of EA participants were evaluated in the report prepared by an EA co-ordinator which included evaluation of laboratory performance using z-scores. The limits for acceptability were based on Council Directive 98/83/EC. In this ILC, about 70 % of results presented by EA nominated labs were acceptable. Lower percentage of acceptable results in Wa 2/IMEP-9 resulted from relatively low concentration of some elements and also relatively strict criteria included in the above-mentioned directive.

The report was discussed in detail at the TF meeting. The conclusions also included comments on the large spread of reported uncertainties and the necessity of harmonising uncertainty estimation while taking into account education and training activities concentrated on routine work in labs.

EURACHEM Uncertainty Guide in Testing

The EURACHEM Guide was accepted as the best approach to uncertainty estimation in chemistry. Its new draft has been awaited with the great expectation to be more suitable for routinely working labs. The recommendation was given to repeat such type of PT more closely linked to EC legislation requirements and to

- continued on page 10 -

**September
2001**

Quality of Measurements in Analytical Chemistry
CITAC/Greek Chemists Association Symposium, 3 September 2001, Athens/Greece)

Aim: to discuss the latest developments in analytical chemistry and how these can contribute to better measurements. The target audience of the symposium are practitioner chemists, academic educators, accreditors, laboratory managers as well as policy makers.

Contact: CITAC Secretary Dr Ioannis Papadakis
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EUROFOODCHEM XI

Biologically-active Phytochemicals in Food: Analysis, Metabolism, Bioavailability and Function, 26 - 28 September, Norwich Research Park, UK

Contact: Nicola Durkan
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www.rsc.org/lap/confs/eurofoodchemxi.htm

**Oktober
2001**

**EUROLAB/EA/EURACHEM Workshop on the
Experience with the Implementation of ISO/IEC 17025**
4 October, Paris/France

On the occasion of its 100th anniversary LNE (Laboratoire National d'Essais) organises the workshop in co-operation with COFRAC (the French Accreditation Body) under the auspices of EUROLAB, EURACHEM and EA. The workshop will bring together representatives from European accreditation bodies and practitioners from analytical, calibration and testing laboratories. The main objective is to arrive at pragmatic solutions and create a mutual understanding with regard to the new standard and the related requirements.

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- The Workshop Announcement Flyer is attached to some parts of this EURACHEM Newsletter issue. -

10th INTERNATIONAL METROLOGY CONGRESS "Du Laboratoire a l'Industrie"
22 - 25 October, St. Louis, France

General Secretariat: Sandrine Gazal, Maison de l'Entreprise; 429, rue de l'Industrie; 34966 Montpellier Cedex 2
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<http://www.metrologie2001.com>

**November
2001**

EURACHEM/EUROLAB Workshop on Sampling
5 - 6 November, Lisbon

in co-operation with RELACRE, the Portuguese Association of Accredited Laboratories. The workshop aims at a detailed discussion and clarification of all matters related to sampling, from basic concepts to the diversified areas of analytical activity. The Workshop will evolve around the following thematic sessions below, with oral contributions and panel discussions: (i) Sampling - Goals and Procedures, (ii) Statistical Tools for all Sampling Purposes, (iii) Sampling on the Production Area, and (iv) Sampling for Third-Party Labs.

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**April
2002**

EUROPT(R)ODE-VI
6th European Conference on Optical Chemical Sensors and Biosensors
7 - 11 April, Manchester, England, UK.

Deadline for abstracts: 19 November 2001. Contact for submitting papers and posters and for exhibition space:
Dr R.Narayanaswamy, DIAS, UMIST, P.O.Box 88, Manchester M60 1QD, UK.
Tel +44-161 2004891 Fax +44-161 2004911 EuroptrodeVI@umist.ac.uk
<http://www.dias.umist.ac.uk/EuroptrodeVI/>

- continued from page 8: Introducing EA Expert Group "Environmental Analyses" -

cut down the time limits between the PT sample analysis and the feedback to laboratories (reference values, report).

In autumn 1999 the convenorship of EA TF Water Testing was transferred to the Czech Republic, to CAI. In this year the EA ILC Wa 3 was executed in co-operation between the Austrian accreditation body, the Federal Ministry of Economic Affairs and Labour (BMWA), and the IFA Tulln as a reference laboratory. EA ILC Wa 3 was focused on the determination of selected herbicides in water as recommended by TF members. 33 laboratories from 15 countries participated in Wa 3. Laboratories determined 17 pesticides in three different samples. Using acceptability criteria for evaluation - as $\pm 50\%$ from the spiked value agreed by TF members - about 90% of the results were satisfactory.

As outcomes of TF discussion the recommendation was made to repeat this PT scheme after 2 years to see if an improvement has taken place.

More IMEP rounds with EA participation have been carried out during the last years. EA and IRMM agreed to intensify their ongoing co-operation and formalised this decision by signing a common letter of intent.

Ongoing Proficiency Tests

A new IMEP round - IMEP-12 - is now proceeding. IMEP-12/Wa 4 "Trace elements in water" is focused on the determination of 10 elements in one water sample. 91 labs from 26 countries were nominated in this ILC which is co-ordinated by CAI.

After modifying the new structure of EA at the turn of the years 2000/2001, the C2 committee was converted to the Laboratory Committee and its scope of activities has been broadened from technical activities to all issues related to laboratory accreditation. By now 21 working groups exist reporting to the Laboratory Committee, many new working groups have been established in the testing field.

Permanent Expert Group

The EA Task Force Water Testing was converted into a permanent Expert Group (EG) with a larger scope of environmental analyses. Environmental analyses have been defined in this context as chemical, microbiological and eco-toxicological testing of different types of environmental matrices (all types of water, soil, sludge, waste and air) including sampling.

The first meeting was held in Prague at the end of May 2001. Terms of reference of the EG were modified after extensive discussions during the meeting and the most important themes were resumed as follows: *The main effort is focused on the planning, co-ordination and evaluation of EA ILCs (as a support to the EA multilateral agreement) with the help of accreditation bodies and suitable organisers of PT schemes.*

This year these activities involve the evaluation of IMEP-12/EA ILC Wa 4, preparation of the EA draft report and discussions of results.

According to the opinion of the expert group members, another important task is to become a forum for the discussion of technical issues in environmental analyses (as e.g. uncertainty estimation, measurement traceability, sampling) connected with the implementation of ISO/IEC 17025 with the aim of harmonising individual approaches of national accreditation bodies.

As well as in other EA Groups, the membership in Environmental Analyses Expert Group is open to the stakeholders of accreditation systems who are invited to take part in those activities.

Martina Bednařova
Convenor of EA Expert Group
„Environmental Analyses“

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European Enquiry on Future CRM Demand

The European Commission (CEC) has actively supported CRM development for over 25 years. The number of applications for which CRMs would be required, is rapidly increasing. At the same time, the resources the CEC can allocate for development support are finite, necessitating clear prioritization. In order to realize the full benefit of the CRM related policy of the CEC at medium and long term, the CEC has engaged Technology Consultants of PricewaterhouseCoopers to study the (future) use of CRMs in Europe.

A web site which aims at evolving into the communication platform of all (Certified) Reference Materials (CRMs) stakeholders in a European context has been created. Visit it under

www.certifiedreferencematerial.org

A cornerstone of the ongoing CRM study is to make an inventory of the current and future needs of the European CRM end user (explicitly not restricted to users of BCR CRMs only!) and establish already undertaken initiatives of CRM producers. Furthermore, the potential CRM user should be reached which could benefit from CRMs but does not apply them yet. To this end, three comprehensive questionnaires have been developed aimed at CRM users, potential users and producers.

For direct access to the questionnaire, select the folder /questionnaires.html

The outcome of the questionnaires will be used to assist in developing a sound strategy for future development support of CRMs through the BCR framework. Therefore this is your chance to directly influence the CRM strategy of the CEC in the years to come!

PricewaterhouseCoopers
Communication (abridged)

Managing an analytical chemistry lab requires a unique blend of technical and managerial skills. Most laboratory managers, by virtue of their education and experience, are thoroughly capable of handling the technical aspects of their jobs, but often the managerial skills are obtained in the job in a haphazard manner. The literature on management and educational opportunities is geared primarily to manufacturing and typical service operations, neither of which matches the operation of an analytical laboratory.

Thus, a small group of university laboratory managers in USA gathered in 1980 to share experiences in the practical problems of operating a university analytical instrumentation laboratory. By 1982, the group was attracting the attention of industrial, government and instrument company management plus the university laboratory directors. It was recognized that management problems relating to facilities, equipment, staff, maintenance, finance, human resources, training, motivation, and compensation were common to all analytical laboratories. Consequently, the aims of the Association were broadened to include industry and government.

ALMA has arranged 21 Annual Conferences in USA where laboratory managers attend a program that includes presentation of papers, round table discussions, networking, social program, and workshops (optional). Experience has shown that there is a future for ALMA also on the European side of the Atlantic. Thus, EuroALMA was born. Two conferences have been held, one in Oslo Norway and one at Zeist, The Netherlands.

Historical ALMA Meeting in Oslo

ALMA came to Oslo - and won! The first European ALMA Conference was held in Oslo in November 1998. The Conference was held on 20 - 22 November, and it is seldom that we have heard so many positive comments on such a meeting. Quite often, at such meetings, there are one or two of the invited lecturers

who stray from their theme during their presentations. This did not occur at ALMA, and the committee is to be commended for choosing excellent lecturers.

A "Short Course" on management of analytical laboratories was taught by Dr. Claude Lucchesi, Northwestern University, USA.



The Analytical Laboratory Managers Association

The two-day short course was followed by the Conference with 60 conferees from 15 countries (Belgium, Sweden, Germany, Latvia, France, Netherlands, Finland, Denmark, Czech Republic, Scotland, England, Israel, Australia, Norway and USA) attending. The lecturers came from Germany, UK, USA, Netherlands, and Norway. The audience participated actively resulting in many fruitful discussions. A major activity of the ALMA Conference is the Round Table discussion session. Four subjects were chosen, and the discussions were spirited and informative.

The conference hotel (the Holmenkollen Park Rica) was superb. It is felt that this was one of the reasons that EuroALMA was so successful. The hotel provided excellent logistics and service. The food, especially the banquet, was exquisite. The conferees arrived on a sunny Oslo afternoon, and the hotel appeared as a grand castle on a snowy mountain slope.

The Conference Mixer was held at the Norwegian Ski museum. The conferees were requested to don their winter clothes and stroll to the museum on a lovely winter night. The conference banquet consisted of different Norwegian dishes.

The Conference would not have been as successful without the excellent sponsorship of Instrument Teknikk, Waters, Perkin Elmer, Hewlett Packard, LabConsult, and Kebo Lab. Each corporate sponsor had an exhibition booth.

Finally, active networking between the conferees was established during the Conference coffee breaks and other activities. Many good ideas, exchanges of experiences, and discussions surfaced. This is an essential part of the ALMA experience. It is the belief of the organisers that EuroALMA has created a forum for European Laboratory Managers that many of the attendees are interested in continuing.

A Successful Follow-Up at Zeist, The Netherlands

From 5 - 8 September 2000, the second "EuroALMA" was held in the historical city of Zeist, The Netherlands. ALMA and the Analytical Laboratory Management (ALM), a working group of the Royal Netherlands Chemical Society (KNCV), hosted this Conference.

The organising committee was a cross-functional team, originating from various businesses (industry, consultants, academia, institutes), working on a voluntary basis.

The challenge of the organising committee was to provide a two-day conference that would "add value to the business"; the theme of the conference. Prior to the conference three workshops were organised, allowing participants to obtain more knowledge on managing analytical laboratories, also from a quality or global perspective.

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The conference program focused on three topics: Development of the Analytical Laboratory, Quality Assurance and People Management. Many lecturers were able to give an enthusiastic contribution to an interesting overall program. During the lunches and coffee breaks lively discussions and exchange of experiences and information were conducted.

This "networking" was stimulated and supported in an environment of exhibition booths, manned by dedicated and supporting sponsors and exhibitors who took the opportunity to join the EuroALMA Conference. The exhibitors included Agilent Technologies, TANVEC Ltd., Dionex Corporation, Domnik Hunter Ltd., Skalar Analytical BV, and Waters Chromatography BV.

In addition to the lectures, panel discussions were organised. These

discussions resulted in "food for thought" action steps for the participants to think about and work on. To further stimulate the discussions and interactions, a social program was organised offering a banquet dinner at the Zeist Castle; a unique seventeenth century Castle situated in a natural area with historically restored interiors. The intimate location and menu enabled the managers a more thorough exchange of ideas in a relaxing setting.

As a general conclusion, the conference was regarded as very successful and fruitful.

The Third EuroALMA Conference

The Conference "Managing the Analytical Laboratory in an @-world" will be held in Berlin, Germany on 12 - 13 June 2002 in co-operation with EUROLAB Germany. The topics to be covered are: Development of analytical laboratories, hu-

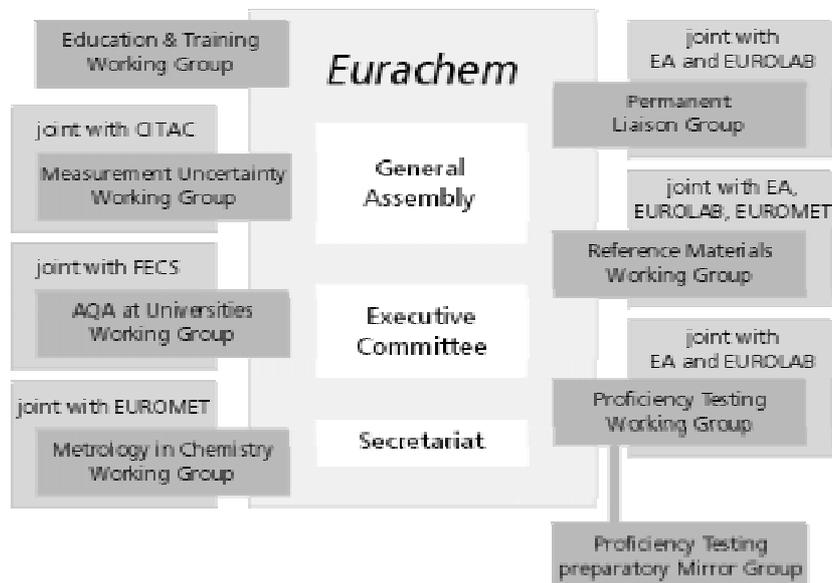
man resources, and e-tools and e-business. For further information: www.euroalma.bam.de.

The Analytical Laboratory Managers Association (ALMA) fosters the interchange of ideas among managers from a variety of institutions and companies. The unique strength of ALMA lies in providing a forum for you to interact with managers who have similar problems and who are willing to share solutions and ideas that have worked in their laboratories.

We invite you to join us in advancing our common imperative of making each of our operations as effective as possible.

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EURACHEM: Organisation, Members and Addresses



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Associate member countries: Albania, Russian Federation, and Ukraine.

EURACHEM has interfaces with AOAC, CCQM, CITAC, EA, EUROLAB, EUROM II, EUROMET, FECS, ILAC, ISO/REMCO, and IUPAC. A complete list of all contact points for both EURACHEM activities and partner/liaison organisations can be found on the EURACHEM web site at <http://www.eurachem.bam.de>