

## Eurachem Newsletter 15

### Winter 1998/1999

Please note: This is an old HTML file. Links may be outdated.

Contents of this issue	
<b>Headlines</b>	<a href="#">New EURACHEM QA Guides</a>
<b>News</b>	<a href="#">Eurachem News from Slovakia and Ireland</a>
<b>Workshop</b>	<ol style="list-style-type: none"> <li><a href="#">EURACHEM Education &amp; Training Workshop</a></li> <li><a href="#">Workshop on Quality Management in Analytical R &amp; D</a></li> </ol>
<b>Reports</b>	<ol style="list-style-type: none"> <li><a href="#">Concepts for Teaching Quality -Reports from 2nd EURACHEM Education &amp; Training Workshop</a></li> <li><a href="#">Introducing the new EURACHEM Guides</a></li> <li><a href="#">Introducing the EURACHEM/CITAC Guide 2 at EUROANALYSIS</a></li> <li><a href="#">Harmonised Guidelines for the Use of Recovery Information in Analytical Measurement</a></li> <li><a href="#">Shared Responsibility for Metrology in Chemistry</a></li> <li><a href="#">AOAC Method Validation and PT Programmes</a></li> <li><a href="#">Professional Judgement and Testing Laboratories</a></li> <li><a href="#">Constitution of the European Accreditation Advisory Board (EAAB)</a></li> <li><a href="#">ILAC: Committed to Accreditation</a></li> <li><a href="#">Teaching Quality in Analytical Chemistry: The Maltese Experience</a></li> <li><a href="#">Towards a Common Position on PT</a></li> <li><a href="#">IAEA Proficiency Test on Evaluation of Methods for 90Sr Measurement in a Mineral Matrix</a></li> <li><a href="#">New BCR Report: Metrology in Chemistry &amp; Biology</a></li> </ol>
<b>Events</b>	<ol style="list-style-type: none"> <li><a href="#">Forthcoming events (April - November, 1999)</a></li> </ol>
<b>Contacts</b>	<a href="#">Eurochem Committee and Contact Points - 1999</a>
<p>Published by:            The EURACHEM Secretariat, BAM, D-12200 BERLIN , GERMANY            Tel + 49 30 6392 5861 Fax + 49 30 6392 5577 Email: <a href="mailto:eurachem@bam.de">eurachem@bam.de</a>            Internet <a href="http://www.vtt.fi/ket/eurachem.html">http://www.vtt.fi/ket/eurachem.html</a>  <b>Editor: W Bremser , BAM, Germany .</b>  <a href="#">Additional copies available from EURACHEM Secretariat</a></p>	

Eurachem News

## New EURACHEM QA Guides

The growing collection of guidance documentation produced under the EURA-CHEM umbrella has been

boosted recently by the publication of two new quality assurance guides:

- Quality Assurance in Research and Development and Non-routine Analysis
- The Fitness for Purpose of Analytical Methods

Both of these guides may be downloaded from the EURACHEM website. Alternatively for those wanting to have hardcopies, English language versions may be obtained.

For detailed information, see article "[Introducing the EURACHEM/CITAC Guide 2](#)"



Eurachem News



## News from all over Europe

1. **EURACHEM -Slovakia:** Endeavour for Accuracy
2. EURACHEM-Ireland Reports



Eurachem News



### **EURACHEM -Slovakia:**

#### **Endeavour for Accuracy**

Continuing last years' activities, the main 1998 events of EURACHEM-Slovakia were focused on the improvement of chemical measurement accuracy and the support of quality-system implementation in chemical laboratories.

According to these focal points, the seminar "Pathways to the Quality Improving of Analytical Results" was organised and held in Bratislava in April 1998. The central idea of the seminar was the communication to the general public of new trends in the EN 45000 compliant accreditation process when considered from the point of view of result quality. The seminar attracted considerable interest and attendance exceeded the figure of 100.

The topic of uncertainty evaluation in chemical measurement was covered by the national conference "Industrial Toxicology 98" held in May in Mojmirovce, Slovak Republic. The conference has actively been supported by lectures and contributions of EURACHEM-Slovakia members. Another focal point of interest has been traceability of measurements in chemical analysis. EURACHEM-Slovakia members participate in the preparation of the forthcoming workshop on the Status of Traceability in Chemical Measurement in Bratislava (see announcement in this Newsletter). The lecture "Traceability in Chemistry" given by P. de Bièvre at the Slovak Institute of Metrology in Bratislava in June 1998 enjoyed success and a very good response among Slovak metrologists.

**Viliam Pätoprstý,**  
**EURACHEM-Slovakia**

## EURACHEM-Ireland

### EURACHEM-Ireland Reports

The EURACHEM-Ireland network has direct contact with approximately 200 laboratory personnel and users of analytical data. 1998 saw the launch of the EURACHEM-Ireland Newsletter, which is compiled and edited by Kathleen Gallagher, Abbot Ireland Ltd. It serves as a very useful channel of communication and mechanism for the distribution and sourcing of information between EURACHEM and its members.

During the past year EURACHEM-Ireland members contributed to the European inquiry on the use and needs for reference materials and a cross section of members participated in the E.U. workshop to identify actions to improve the measurement infrastructure in Ireland.

In November a very successful (and oversubscribed) training course in measurement uncertainty took place. The level of demand was such that it may be repeated in 1999.

Plans for 1999 include a competition (analysis of water) for third level students and a symposium on the implications of the revised ISO Guide 25 (now to become ISO 17025 standard) for analytical laboratories.

**Maire C. Walsh,**  
**EURACHEM-Ireland**

## Workshop Report

### EURACHEM Education & Training Workshop

From 27 - 29 September 1998, the Second EURACHEM Workshop on Education and Training was held at GKSS Geesthacht, Germany. Some 50 experts from throughout the E.U. and overseas discussed education-related QA issues. Interesting approaches on how to tackle the problem of filling the gap between theory and reality have been presented, giving rise to a confidence that the gap will eventually be bridged.

For a comprehensive meeting report, please see "[Report from the 2nd EURACHEM Workshop](#)"



The EURACHEM E&T Workshop organising team Heide Neidhart, Bernd Neidhart, Erika Arndt, Runar Eberhardt (from left to right, missing Marcus Krapp):

**Tired, but happy with the success.**

 Eurachem Workshops 

## Workshop Report

# Workshop on Quality Management in Analytical R & D

**Münster, Germany, 31 May - 1 June 1999**

A workshop on Quality Management in Analytical Re-search & Development will be held in Münster, Germany, on 31 May and 1 June 1999, organised by the Institut für Chemo- and Biosensorik, with financial support from the S, M & T Programme of the European Commission and with the support of EURACHEM.

The objective of the workshop is to promote the development of a harmonised system to guarantee accurate, reproducible and repeatable measurements, analyses and tests in analytical research and development (R&D) necessary for the competitiveness of the European industry and for the implementation of Community policies.

An overall purpose of the workshop is to achieve universal approval/agreement by the majority of analytical experts about the quality standards. Target participants should be

persons responsible for quality in research laboratories and projects and persons delivering expert opinions. They should be experienced in the field of Quality Management (QM) in R&D.

The workshop will comprise lectures and working in small groups on topics like

- The EURACHEM/CITAC-Guide 2
- Technical Quality Elements for valid analytical measurements
- QM in research and development

The workshop will end with a plenary session hosted by a panel of the speakers and invited experts. The results of the workshop will be published via the WWW site, which will also be used to collect further comments and to establish an ongoing discussion forum on the topic of the workshop. In addition, speakers and participants will be invited to pre-prepare papers which will be published together with a report on the workshop in a scientific journal. For further information, please contact:

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or visit the web site at <http://www.uni-muenster.de/ChemoBioSensorik/qm.workshop>

 Eurachem News: Reports 

## Concepts for Teaching Quality

### Report from the 2nd EURACHEM Workshop on Education and Training

**held at GKSS, 27 - 29 September 1998**

The workshop enabled approximately 50 experts from 14 European countries and Australia to meet and exchange ideas on "Current issues in teaching quality in chemical measurements - filling the gap between theory and reality".

Among the participants at the workshop were representatives of the chemical and pharmaceutical industries, private and government laboratories, and for the main part, the university sector.

The 16 invited lectures on the topics:

- The importance of analytical quality management and quality assurance in industry, academia and research projects

- Worked examples for the teaching of analytical quality concepts · Experiments as tools to demonstrate the principles of QA
- Course structures, contents and experience

provided the basic fundamentals for the subsequent group discussions, the results of which were then reported and discussed in the final plenary session. The group discussions covered the themes:

- Teaching concepts
- The glossary of analytical terms - needs, concepts and impact Ideas and concepts for the implementation of experiments.

The meeting, which was set within the framework of a culinary programme, was organised and conducted according to the GKSS standards to which we are accustomed, and took on a very harmonious character.

The discussions 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 are to be published by Springer as a CD-ROM with a collection of transparencies and an accompanying text. It is hoped that the availability of this material will assist in reducing the "activation barrier" associated with the preparation of lectures and seminars on the topic.

The significance of AQS in university teaching was underlined via the generous support of a number of sponsors whose financial contributions helped to ensure the success of the workshop: BASF AG, EURACHEM/D, Fonds der Chemischen Industrie, Gesellschaft Deutscher Chemiker e.V., GKSS Forschungsgesellschaft, Schering AG, Springer Verlag GmbH & Co KG, Verein der Freunde und Förderer des GKSS-Forschungszentrums Geesthacht e.V.

EURACHEM acknowledges the support and expresses its gratitude.

The very positive reactions received following the workshop and still being received should encourage all those involved in this field to continue to pursue purposefully the tasks jointly defined.

Interested parties can order copies of the book of Abstracts from the author of this report (see back page for contact data).

**Bernd Neidhart**  
**EURACHEM-Germany**

 Eurachem News: Reports 

## Introducing the new EURACHEM Guides

**Quality Assurance in Research and Development and Non-routine Analysis**  
**EURACHEM/CITAC CG2**

The difficulty in applying quality assurance (QA) to research and development (R&D) and non-routine work is widely acknowledged. The benefits gained from a well-defined QA system are more difficult to realise when the tasks involved are less routine. Likewise, many have seen the constraints of a QA system as counter-productive to creativity in the R&D environment. As a result, the formal take-up of QA principles has been slowest in the R&D world, particularly in academia

This guide, developed by a working group representing, government, academic and industrial interests, is jointly published with CITAC, and is intended to foster the uptake of QA in the non-routine world. In doing so, it complements CITAC's existing International Guide to Quality in Analytical Chemistry.

Guide CG2 provides advice on good practice which will facilitate the design and implementation of quality systems for non-routine situations, and provide a suitable level of assurance without being unduly burdensome nor stifling R&D creativity. It does this by considering QA requirements at three levels: organisational; technical; and analytical task. Topics covered in the guide are:

- Aims and objectives
- Introduction,
- definitions Principles of making valid analytical measurements
- Organisational quality elements
- Technical quality elements
- Analytical task quality elements
- External verification
- Bibliography /References/Annexes

### **The Fitness for Purpose of Analytical Methods (A Laboratory Guide to Method Validation and Related Topics)**

One aspect of QA that has gained prominence in recent years is validation. Methods that are not suitably validated are acknowledged as having, at best, limited value. In the past, the availability of useful guidance for method validation has been patchy. On the one hand there have been a number of general papers which have discussed the broad principles, policy and value of validation. At the other extreme there have been papers providing very specific technical advice for narrow applications. The need was identified for guidance which was both widely applicable and technically appropriate for raising awareness and increasing the implementation of method validation in analytical chemistry. This guide has been written to meet that need.

The original draft of this EURACHEM guide was conceived and written at LGC. It was subsequently developed through extensive consultation with international experts and has now been published with EURACHEM approval. The guide attempts to provide useful advice in these areas:

- Validation requirements differ from method to method. Rules laid down in the guide must be interpreted differently for each method.
- Some form of compromise is required between extensive replication (on statistical grounds) and time- and cost-efficient laboratory operation.
- Between-laboratory performance measures are desirable. The guide gives advice on how to tackle the problem in isolation, e.g. when no other laboratory uses the method

under examination

The guide covers the subject areas:

- Preface and Introduction
- What is method validation?
- Why is it necessary?
- When should methods be validated?
- How should methods be validated?
- Using validated methods
- Quality control design
- Documentation
- Calculating results and reporting
- Bibliography /References/Annexes

Both of these guides can be down-loaded from the EURACHEM www site. Hardcopies (price £30 each) and related information may be obtained from

LGC's Office of Reference Materials,  
LGC, Queens Rd, Teddington, Middlesex,  
TW11 0LY, UK.

Tel +44 (0)181 943 7565

Fax +44 (0)181 943 7554

E-mail [orm@lgc.co.uk](mailto:orm@lgc.co.uk)

**David Holcombe,**  
LGC

 Eurachem News: Reports 

## **Introducing the EURACHEM/CITAC Guide 2 at EUROANALYSIS**

During this year's EUROANALYSIS conference held in Basle, EURACHEM and CITAC organised a joint workshop on QA in R&D and Non-Routine Analysis scheduled for 9 September, 1998 (EURACHEM Newsletter 14 had the announcement). About 50 attendants - out of approximate 300 EUROANALYSIS participants - took part in the workshop lectures of the morning session. Two group discussions were held during the afternoon meeting which were attended by about 12-15 people each. The final plenary discussion, chaired by W. Wegscheider, was visited by about 20 participants

Five lectures were given under the chairmanship of W. Wegscheider: EURACHEM/CITAC Guide 2 "QA in R&D and Non-routine Analysis" (D.G. Holcombe), QM-Systems for Non-Routine and R&D Analytical Work - Accreditation of Non-Routine Laboratories (W. Steck), QA Aspects for the Academic world (B. Neidhart), Analytical Task Quality Elements (P.R. Radvila), and Technical QA aspects (W. Wegscheider).

According to the special interest of the participants, two issues were discussed in groups during afternoon session:

- Applying formal QM-Systems in Non-Routine and R&D Analytical Work (ISO 9001, ISO 25/EN 45001, GLP...) The group was chaired by W. Steck.

- Implementation of QA in academic/research laboratories (Chair: B. Neidhart)

The workshop was well placed providing the chance of presenting and distributing the final version of the EURACHEM/CITAC Guide 2 on site. Since the final version of the guide became accessible on the Internet not until the beginning of October, this goal could not completely be reached.

Nevertheless, the audience welcomed the new guidance document in a sector which is considered not to be adequately covered by the existing and widely available guides

A summary of the workshop will be published by the above mentioned speakers, probably in *Analytica Chimica Acta*.

With the publication of the guide and its presentation at the EUROANALYSIS the joint EURACHEM/CITAC working group on QA in R&D and Non-routine Analysis, chaired by K. Camman (Germany), has successfully completed its work.

**Werner Steck,  
EURACHEM-Germany**

 Eurachem News: Reports 

## **Harmonised Guidelines for the Use of Recovery Information in Analytical Measurement**

It is recognised that the use of recovery information to correct/adjust analytical results is contentious for analytical chemists. Different sectors of analytical chemistry have different practices. Formal legislative requirements with regard to the use of recovery factors also vary from sector to sector. However, it is the aim of IUPAC to elaborate general guidelines which may be seen as an aid for preparing the "best estimate of the true result" and to contribute to the comparability of the analytical results reported.

The IUPAC Interdivisional Working Party on Harmonisation of Quality Assurance Schemes for Analytical Laboratories has co-operated with ISO, the International Association of Official Analytical Chemists (AOAC Int.), and EURACHEM to produce the

### **Harmonised Guidelines for the Use of Recovery Information in Analytical Measurement.**

On the basis of contributions presented at the Symposium on Harmonisation of Quality Assurance Systems for Analytical Laboratories dedicated to the "Use of Recovery Factors in Analytical Chemistry" (September 1996, Orlando, USA; sponsored by IUPAC, ISO and AOAC Int.), a final document was prepared for publication by M. Thompson, S. Ellison, A. Fajgelj, P. Willetts and R. Wood (submitted for publication in *J. of Pure and Applied Chemistry*).

The document attempts to give guidelines (intended to be general in their scope) and recommendations that reflect best common practice in attaining comparability of analytical results. However, specific sectors of analytical chemistry will feel the need to adopt these guidelines to their own requirements. Therefore, the recommendations given should not be seen as binding for all areas of analytical chemistry.

To obtain a copy, contact the author at IAEA Seibersdorf (see back page for full address) or visit the IUPAC or EURACHEM www sites (free downloading).

**Ales Fajgelj**

**Chairman of IUPAC Interdivisional Working Party**

 Eurachem News: Reports 

## Shared Responsibility for Metrology in Chemistry

Recently BAM and PTB have signed an agreement to share responsibility for the provision of national standards for chemical measurements in Germany by way of co-operation in development, provision and dissemination of national standards for chemical analysis in the form of primary reference measurement systems and primary reference materials. Based on this agreement, from now on BAM and PTB will share responsibility for metrology in analytical chemistry in Germany.

The first of a series of detailed agreements concerns the field of gas analysis. Here the following division of tasks has been agreed:

- BAM is responsible for primary reference materials as national standards of gas composition. These are gas mixtures prepared by static gravimetric methods.
- PTB is responsible for primary measurement systems as national standards of gas composition. These are systems to produce transient gas mixtures by means of dynamic methods as well as instruments to measure gas composition.

Both federal institutes expect that this agreement, in conjunction with the work done in and through CCQM, will help to increase the reliability and acceptance of chemical analyses both nationally and internationally.

Similar developments have taken place in Switzerland, where OFMET and EMPA recently signed an agreement concerning division of tasks in the provision of national standards for the measurement of chemical composition.

Wouldn't this type of co-operation on an eye-to-eye basis between national metrology institutes and national chemical laboratories be applicable to other countries, as well as to the future co-operation between EURACHEM and EUROMET in the field of traceability in chemistry?

**Werner Hässelbarth**

**EURACHEM Secretariat**

 Eurachem News: Reports 

## AOAC Method Validation and PT Programmes

Currently, AOAC International is running the three methods validation and adoption

programmes:

- AOAC® Official Methods of Analysis
- AOAC® Performance Tested Methods
- AOAC® Peer-Verified Methods

With an objective to harmonise (integrate) the validation criteria of all three programmes, a task force recommendation report was discussed and adopted in 1998. A significant accomplishment in the harmonisation process was agreement on overlapping sets of methods performance parameters required to be studied for each of the validation programmes, with the majority of the parameters being applicable to all three programmes.

For the Peer-Verified Methods programme, guidelines for conducting microbiological method (qualitative and quantitative) validation studies have been developed, being the first in a series of topic-specific validation guidelines expected to be added to the PVM guidance documents. As part of the harmonisation process, these guidelines may become applicable to the other two AOAC® validation programmes.

In October 1998, AOAC INTERNATIONAL initiated the first phase of the AOAC® Laboratory Proficiency Testing Programme. Initial offerings are in the areas of standard microbiology, pathogen-free microbiology, meat microbiology (3 programs), HACCP for cattle/swine, HACCP for poultry, meat chemistry, and cheese chemistry.

The programme is designed to meet the needs of subscribers for a comprehensive PT programme that complies with international guidelines (ISO/IEC Guide 43), and the requirements of laboratory accrediting bodies adhering to the criteria in ISO/IEC Guide 25.

Further near-term phases of the program are planned for food nutrition, pesticide residues, environmental contaminants, and water analysis.

Supported by the Technical Division on Reference Materials, the AOAC Official Methods Board (OMB) is currently investigating available (certified) reference materials that can be recommended for quality assurance purposes in connection with selected AOAC® Official Methods. The Technical Division for Laboratory Management (established in 1997) provides a focus within AOAC for members, and potential members, concerned with laboratory management in the broadest sense, and a forum for networking, information sharing, and problem-solving on issues of mutual interest for managing an efficient, cost-effective, and high quality laboratory.

### **Publications, Education, Meetings**

Besides monthly magazines, AOAC issues books and methods compilations related to all aspects of QA in the chemical lab. A Spanish translation of the Pesticide Laboratory Training Manual just became available in late 1998.

AOAC provides training courses for "Quality Assurance for Analytical Laboratories", "Quality Assurance for Microbiology Laboratories"; "Implementing Good Laboratory Practices"; "Statistics for Method Development"; "ISO 9000, ISO/IEC Guide 25 and the Laboratory"; and "Intralaboratory (In-House) Analytical Method Validation".

In cooperation with EURACHEM, the AOAC Europe Section organised a symposium in

June 1998 on "Quality Assurance in Computerized Laboratories" (Newsletter 14 had the report). A joint EURACHEM/AOAC Central Europe Subsection Workshop on the "Status of Traceability in Chemical Measurements" is planned for 6-8 September 1999 in Bratislava, Slovak Republic (see announcement on page 8).

For further information and detailed listings of validated methods, please contact the AOAC representatives to EURACHEM (see back page for addresses).

From: AOAC INTERNATIONAL Report to the Inter-Agency/CCMAS Meetings, 20 - 27 November 1998, Budapest, Hungary (Extract by EURACHEM Secretariat)



Eurachem News: Reports



## Professional Judgement and Testing Laboratories

NORDTEST, a joint coordination organisation in the field of technical testing founded in 1973 by the Nordic Council of Ministers, has recently published a position paper on Professional Judgement and Testing Laboratories

The aim of the position paper is to discuss to what extent testing laboratories can apply professional judgement in their work and when presenting their results. The main conclusion of the paper is that professional judgement should be made by the organisation which has the best technical expertise.

Consequently, testing laboratories are very well suited to give their opinions and interpretations of test results and, based on them, a conformity assessment judgement of the results with regard to regulations, technical standards and requirements as well as contractual specifications.

For more information or a copy of the position paper, please contact

nordtest, P.O. Box 116, FIN-02151 Espoo, FINLAND.  
Tel/fax: +358 9 455 4600/+358 9 455 4272  
E-mail: [nordtest@vtt.fi](mailto:nordtest@vtt.fi)  
or visit Nordtest web site at <http://www.vtt.fi/nordtest>.

EURACHEM Secretariat



Eurachem News: Reports



## Constitution of the European Accreditation Advisory Board (EAAB)

An independent Advisory Board to EA has now been established. The constituting meeting took place in Brussels on 16 November 1998. Anthony Davies, CEPMC, and Alan Bryden, EUROLAB, were unanimously elected as Chair and Vice Chair respectively. The composition of the Board constitutes a well-balanced representation of the parties which depend upon and contribute to the European accreditation system. The represented parties belong to the categories Conformity Assessment Bodies, Industry, National Authorities, Consumers, European Standards Organisations, European Commission services, EFTA, EOTC (as observer) and EA. EURACHEM is represented by Werner Steck, member of EURACHEM Executive Committee, who is also authorized to speak on behalf of EUROMET.

Browsing through the EAAB Terms of Reference, one might highlight the following statements

**Background:** "Accreditation is fundamental to the proper operation of a transparent and quality driven conformity assessment market... EA aims at building and maintaining mutual confidence in the accreditation schemes... In order for EA to respond and be responsible to the needs of its stakeholders, as well as ensuring transparency in accreditation, a mechanism where EA is answerable to and can receive input from its stakeholders is essential."

**Mission Statement:** "The European Accreditation Advisory Board... shall constitute an independent body, composed of the stakeholders to which EA accounts for independence, technical competence, cost effectiveness, impartiality and integrity of its accreditation and related activities... (It) will represent a link between EA, the European Commission, EFTA, the national authorities of EA member states and trade and industry... (EAAB) seeks assurance from EA that accreditation is applied in such a way that it ensures openness and transparency in conformity assessment activities... (EAAB) shall constitute a focal point for discussion, consultation and guidance... for the stakeholders of EA."

**Composition:** "The composition of the Board shall constitute a well-balanced representation of the parties which depend upon and contribute to the European accreditation system... The Members of the Board shall be persons knowledgeable, representative and competent in matters related to accreditation." (followed by a detailed listing of the number of members eligible from the diverse groups and organisations interested in being represented in EAAB)

**Tasks and responsibilities:** "EAAB shall give advice on the general direction of accreditation in Europe and contribute to the policies of EA... (It) may at its own initiative or at the request of EA give input to the strategic aims and priorities to be pursued by EA... (and) ...offer arbitration or advice on disputes related to accreditation."

EAAB shall be a forum for the exchange of information, experiences and discussion on accreditation in Europe with the aim of promoting confidence in accreditation as a vehicle for one-stop testing and certification at the service of industry and public authorities."

"EAAB shall review its functioning and in particular its composition within one year from its constitution... The result of such reviews shall be made public."

EURACHEM members who are interested in the complete version of the EAAB TOR or in

the EAAB membership list can order these documents at the EURACHEM Secretariat (e-mail delivery possible). Werner Steck EURACHEM-Germany

**(abridged by EURACHEM Secretariat)**

 Eurachem News: Reports 

## **ILAC: Committed to Accreditation**

ILAC, the International Laboratory Accreditation Cooperation (formerly: Conference) was inaugurated about 20 years ago. During the intervening years, it "has played a key role in helping to develop international accreditation standards and guides and in harmonising national approaches. It has also laid the foundation on which international mutual recognition agreements can be built" (cited from: ILAC - S2: 1998, Memorandum of Understanding). LAC, the International Laboratory Accreditation Cooperation (formerly: Conference) was inaugurated about 20 years ago. During the intervening years, it "has played a key role in helping to develop international accreditation standards and guides and in harmonising national approaches. It has also laid the foundation on which international mutual recognition agreements can be built" (cited from: ILAC - S2: 1998, Memorandum of Understanding).

The aims of ILAC are

- to harmonise the operating procedures of participating accreditation bodies and their regional organisations
- to promote the use of accredited laboratories
- to open and maintain channels for the flow of information and knowledge · to help develop and promote the use of international standards and guides
- to encourage the development of regional cooperations to work towards the avoidance of unnecessary duplication of work
- to promote the advancement and acceptance of mutual recognition agreements
- to help all interested accreditation bodies to develop their systems.

ILAC distinguishes between full and associated members, regional cooperation body members, and stakeholder members. The ILAC General Assembly meets once a year.

Under the recently adopted MOU, laboratories have a direct mechanism for input into ILAC through the Laboratory Liaison Committee (LLC).

Other ILAC committees deal with accreditation policy, technical accreditation issues, and public affairs. Most of the committees operate through working groups

which cover topics such as:

- implications of the revised ISO/IEC Guide 25
- guidance for forensic laboratories (has recently been circulated to national EURACHEM contact points for comments)
- requirements for the competence of reference material procedures (EURACHEM input)
- requirements for the competence of PT schemes
- assessor qualifications and competence (EURACHEM input)
- accreditation of multi-discipline laboratories.

EURACHEM is an ILAC stakeholder member. As such, EURACHEM is invited to participate in the ILAC General Assembly. EURACHEM is also a member of the LLC and is represented on that committee by the author.

**Maire C. Walsh,  
EURACHEM-Ireland**

 Eurachem News: Reports 

## **Teaching Quality in Analytical Chemistry: The Maltese Experience**

The publication of R. Kellner's et. al. "Analytical Chemistry", the FECS (Federation of European Chemical Societies) approved text for the Eurocurriculum, prompted the Analytical Chemistry Division of the Department of Chemistry, University of Malta, to phase the Eurocurriculum in the Bachelor of Science Honours degree programme. The University of Malta is therefore in the forefront of developments in analytical chemistry in Europe, through its connections with EURACHEM.

The importance of quality in chemical measurements is evidently highlighted in the Eurocurriculum. This has stemmed from the contributions, submitted for the formulation of the Eurocurriculum, by fellow members of EURACHEM to the FECS Working Party on Analytical Chemistry (WPAC).

Quality assurance and chemical measurements have consequently been introduced in the analytical chemistry modules at our University. Some of the quality-related topics of our BSc (Hons) analytical chemistry syllabus are:

Year 1:	Errors, precision and accuracy, standard deviation; fitness for purpose; method validation, CRM's; laboratory accreditation/certification.
Year 2:	Use and misuse of standard reagents; safety measures for staff and equipment

Year 3:	Calibration, confidence limits; further validation techniques; sampling techniques
Year 4:	Measurement uncertainty; international quality systems.

These topics are delivered to students in the form of core and elective modules. The total number of hours allocated for these topics are about 15 hours for core topics and 30 hours for elective topics.

I would be interested to learn from EURACHEM members involved in the formulation and evaluation of the Euro-curriculum in their University analytical chemistry syllabi. Contacts for mutual exchange are welcome.

**George Peplow**  
**EURACHEM-Malta**

 Eurachem News: Reports 

## Towards a Common Position on PT

The Joint EA-EUROLAB-EURACHEM Working Group "Proficiency Testing in Accreditation Procedures" (EEE-PT) drafted a "Common Position Paper for the Use of Proficiency Testing as a Tool for Accreditation in Testing" and discussed comments sent in by interested parties. Following an EA suggestion, currently an effort is being undertaken to combine the "Common Position Paper" with the "Guidelines for Assessors in Using Results of PT in Assessment of Laboratories", taking into consideration existing documents on the topic such as ISO/IEC Guide 43 and ILAC draft document on "Requirements for Competence of Providers of PT Schemes".

This aims at a common approach for the selection and nomination of laboratories participating in PT schemes and a harmonised catalogue of measures to be taken by accreditation bodies when unsatisfactory results of laboratories are observed.

A harmonisation-through-information project got under way with the concerted action "Information System and Qualifying Criteria for PT Schemes" having the objectives to establish an information system on national PT schemes in all testing areas (except metrology and EQAS) and to draft a list of minimum qualifying criteria for national PT schemes. Sixteen E.U. countries participate in the project, which is strongly supported by EUROLAB, EURACHEM and EA, co-ordinated by BAM Berlin, and funded by the European Commission (for a 2-year period).

The current status of the pilot projects for EEE-coordinated intercomparison is as follows (project co-ordinator in parentheses):

- IMEP-10b - Toxic elements in polyethylene (BAM/ DAR): New round about to start.
- IMEP-11 - Pt, Zr in car catalysts (DANAK): Running.

- IMEP-8 -  $^{13}\text{C}/^{12}\text{C}$  isotopic measurements for food authentication laboratories (IPQ): Still open for participation.
- IMEP-9 - Trace elements in water (CAI). Round closed, evaluation report expected for 02/99.

New proposals for EEE-coordinated intercomparisons are "Tensile stress of steel bars" and "Global migration of plastic films".

**Source: EEE-PT 1998 Annual Report Extract by EURACHEM Secretariat**

 Eurachem News: Reports 

## **IAEA Proficiency Test on Evaluation of Methods for $^{90}\text{Sr}$ Measurement in a Mineral Matrix**

Past experience, supported by results from numerous intercomparison exercises and proficiency tests, indicates that accurate measurement of  $^{90}\text{Sr}$  in solid environmental matrices poses a problem to many analysts. The causes of the observed wide scatter of analytical results are not well understood and hence difficult to remedy.

In order to assess the effect of various analytical operations and measurement routines on the quality of the  $^{90}\text{Sr}$  data, IAEA's Analytical Quality Control Service is organising a proficiency test using mineral samples spiked with known amounts of  $^{90}\text{Sr}$ .

Each participant will receive three samples with low ( $10^{-2}$  Bq) and medium ( $10^{-1}$  Bq) activity, one high activity sample (100 Bq), one blank sample, reference solution, handling instructions, an operation check list, and a questionnaire.

The sample size will be either 50 g (standard size), 10 g or 5 g which must be analysed in its entirety (i.e. no sub-samples). Sizes of 10 g or 5 g will be offered to analysts whose methods cannot handle larger samples (please indicate when ordering).

It is essential that each participant furnishes analytical results for all samples (in case of loss, samples will be re-placed by identical items).

Participation in the test **is free of charge**. Results will be coded such that the identification of the code number will be known only to the participant himself and the IAEA.

Samples will be distributed beginning December 1998 and finishing on 31 March 1999. The deadline for submission of results is 30 June 1999.

A large participation of analysts with various levels of experience is a prerequisite for a meaningful outcome to this test. Apart from fulfilling the role as a proficiency test, the results will be used to identify limitations of certain techniques which will ultimately contribute to upgrading of the environmental  $^{90}\text{Sr}$  measurements.

Interested persons should contact the

Analytical Quality Control Services

International Atomic Energy Agency (IAEA)  
P.O. Box 100, A-1400 VIENNA, AUSTRIA  
Fax + 43 1 2600 28222  
E-mail AQCS@IAEA.ORG.

## IAEA communication

 Eurachem News: Reports 

# New BCR Report: Metrology in Chemistry & Biology

Within the framework of the European Commission's S, M & T Programme, the project "Metrology in Chemistry and Biology: A Practical Approach" has been successfully concluded. The project report has recently been published (ISBN 92-828-4049-2).

Under the project coordination of M. Valcarcel (Cordoba, Spain), 13 experts from 11 countries of the European community investigated the aims of and approaches to metrology in chemistry. After a consideration of general aspects like traceability (key elements, reference materials, urgent issues) and the differences between metrology in physics and chemical/biological measurements, the authors develop and work out practical approaches for a "metro-logical" handling of method validation and proficiency testing, calibration, uncertainties, and sampling.

Realising that "the inherent difficulties of measurements in Chemistry and Biology make necessary to open discussion forums specially devoted to the bench level work, the document (supported by the European Commission) deals with the application of Metrology in Chemistry and Bio-logy

The underlying aims of the document can be itemised as to help analysts working at chemical or biological laboratories in an effective way

- to establish pathways and tools to pursue in a practical way traceability in these fields
- to deal with several highly relevant key words of Metrology in Chemistry and Biology (traceability, calibration, validation, etc.)

The document also tries to provide orientations to the European Commission about the specific problems of Metrology in Chemistry and Biology in order to guide future actions (v.i. within 5th Framework Programme), as well as to remark some recommendations which could partially satisfy end user needs in the near future." (from the Report summary)

Condensing the outcome of the report, the authors give clear recommendations concerning the necessity of research activities on the topic, including fundamental aspects, matrix CRM, the establishment of traceability chains, and the creation of a centres-of-reference network.

The report (EUR.18405) may be obtained from the Office for Official Publications of the European Communities, Luxembourg. Reproduction is authorised provided the source is acknowledged.

## **EURACHEM Secretariat**