

Eurachem

A focus for analytical chemistry in Europe

Words from the Chair....

As the new Chair of Eurachem, I wish to thank the Eurachem community for their trust. It is an honour and a great responsibility, which I accept with joy, knowing that I will have at my side the past Chair, David Milde and the newly elected vice Chair, Vicki Barwick, whose commitment and enthusiasm is well known. As another asset, Francesca Rolle from the Italian National Institute of Metrological Research (INRiM) was appointed by the General Assembly as Secretary and Treasurer. She will be assisted by her colleague Ilaria Balbo.

I first joined Eurachem in 2005, as a result of the collaboration established between the Italian Metrology Institute "G. Colonnetti" (IMGC, now INRiM) and the National Institute for Health (Istituto superiore di sanità, ISS), aimed to promote metrology in chemistry to public health laboratories. The late Margherita Plassa, pioneer of women in metrology, former Italian Eurachem delegate, strongly supported this process. I met an enthusiastic and friendly community, who actively involved me in developing and disseminating guidance. Since then, I have continued to enjoy working with Eurachem and now, as the Chair, I am committed to serve the Eurachem community to my best, from a wider perspective. Choosing to elect a woman in this position, Eurachem indicated its commitment to promote the fair sharing of top level responsibilities, in line with European Union priorities and policies, aimed to attract

more women and girls to seek careers in Science, Technology, Engineering and Mathematics, all of which are deeply rooted in metrology.

Over the years, the analytical community has seen several changes in common practices and requirements. A milestone for metrology was reached in November 2018 with the decision to redefine the International System of Units (SI) starting from the World Metrology Day, 20 May 2019. More details about the changes involved and their impact on the future of measurements can be found in this Newsletter issue. Eurachem closely follows new developments underpinning analytical quality, producing and updating its guidance. To this aim, two new informative leaflets were released this year and work is in progress to revise several Guides. The Workshop held alongside the General Assembly in Dublin addressed the various challenges related to the production and usage of scientific data as well as related risks and opportunities. A training course was organised in Nicosia (Cyprus) on 21-22 February 2019 and another challenging area, the validation of targeted and non-targeted methods of analysis, will be the topic of the next Eurachem workshop (Tartu, Estonia, 20-21 May 2019). More details about Eurachem activities as well as reports from national organisations and working groups can be found in this Newsletter issue.

In 2019 Eurachem is celebrating its 30th

News

Issue 36

Winter 2018/2019

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anniversary. Many people have given their time and efforts for its continuous progress and to them goes our warmest thanks. In addition, Honorary Life Membership can be awarded to individuals who have made exceptional contributions to the work of Eurachem or to the promotion of good measurement practice in analytical science. I am glad to announce that Alex Williams and Máire Walsh were nominated and unanimously approved by the General Assembly for such recognition.

Enjoy your reading!

Marina Patriarca



Marina Patriarca at the General Assembly.
Photo: Wolfhard Wegscheider

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Eurachem Week 2018

Workshop on “Data – Quality, Analysis and Integrity”, 14-15 May 2018

Eurachem Week 2018 took place in Dublin Castle, Ireland on 14-18 May. Ireland last hosted the Eurachem General Assembly (GA) in 1997 when Dr. Máire Walsh was Chair of Eurachem. She decided to hold a 1 day workshop for Irish laboratories on measurement uncertainty to take advantage of the presence of many Measurement Uncertainty experts in Dublin for the GA. The workshop was very successful and this was the start of the tradition of holding a workshop in conjunction with the GA. The 2018 workshop was on the topic of “Data – Quality, Analysis and Integrity”. Eurachem Ireland and the Education and Training Working Group in conjunction with Dublin City University and the State Laboratory organised the workshop. It was supported by Science Foundation Ireland, the Royal Society of Chemistry and sponsors Agilent, QuoData, Anton Parr and Bipea.

The workshop was directly relevant to everyone involved in generating or using data in state, semi-state, pharmaceutical, environmental and academic sectors. The workshop aims were to understand the importance of scientific data integrity and how to achieve it, understand risks and opportunities related to data, discuss future challenges in data quality, analysis, integrity and compliance and discuss the impact of new developments on data quality, analysis, integrity and security. Approximately 120 delegates, from 28 of the member countries in Eurachem as well as Asia, North America and South America attended. Each session included plenary, keynote, regular and early career researcher presentations, and incorporated a panel led discussion session. Oral and poster presentations reflected current and potential future developments and their impact on the analytical community. Discussion sessions encouraged delegates to contribute and participate actively in the workshop. With speaker permission, all presentations have been made available on the workshop website (eurachem2018.com) and the Eurachem website (eurachem.org). Presenters have also been encouraged to submit their work for publication in the journal 'Accreditation and Quality Assurance', a leading peer reviewed journal in this area.

A short walking tour through historical Dublin led to the Guinness Storehouse, the venue for the workshop dinner. The workshop was deemed a resounding success with 96% of respondents to the anonymous feedback survey reporting that the



The workshop Organisers. From left to Right Barbara O'Leary, Hugh Fay, Blánaid White, Vicki Barwick. Photo: Eurachem Ireland

workshop exceeded their expectations. Thanks are due to all speakers, the participants, supporters and sponsors, and the members of both the Organising and Scientific Committees.

Barbara O'Leary
Eurachem Ireland Chair

Blánaid White
Workshop Chair

Hugh Fay
Eurachem Ireland Vice-Chair

Vicki Barwick
ETWG Chair



Opening Address from Ita Kinahan, the State Chemist, Ireland. Photo: Eurachem Ireland.



Attendants of the workshop «Data - quality, analysis and integrity» - Dublin, 14-15 May 2018. Photo: Eurachem Ireland.

The General Assembly, 17-18 May 2018

Introduction

The Chair, David Milde (Czech Republic) opened the 34th General Assembly, that took place on 17 May 2018, from 13:30 to 17:00, and on 18 May 2018, from 9:00 to 13:00, at Dublin Castle, Dublin, Ireland. Barbara O'Leary and Hugh Fay, Eurachem Ireland Chair and Vice Chair, welcomed the delegates, on behalf of the local organising committee. There were 35 delegates from 23 countries. Apologies were sent from Armenia, Croatia, Georgia, Greece, Iceland, Latvia, Norway, Slovakia, Slovenia, Turkey, Ukraine and the European Commission Joint Research Centre, who were therefore not represented at the GA this year. The GA approved the Secretariat and the Treasurer reports from May 2017 to May 2018 presented by Joanna Znaleziona-Hadrová and the financial audit carried out by Andrzej Brzyski (PL).

Elections and Appointments

A new Vice Chair and four new Executive Committee members were elected during the GA meeting, since three candidates ended their mandate, while Ricardo Bettencourt da Silva changed his role from elected EC member to Chair of the Working Group on Qualitative Analysis. Vicki Barwick (United Kingdom) was elected as Vice Chair. According to the Eurachem policy, the term of serving for the new EC elected members was agreed as: Isabelle Vercruyse (Belgium) and Anna-Liisa Pikkarainen (Finland), for two years; Kyriacos Tsimillis (Cyprus) and Wolfhard Wegscheider (Austria), for three years. Francesca Rolle, from Istituto Nazionale di Ricerca Metrologica (INRIM, Italy) was appointed by the GA as the new Secretary and Treasurer. Andrzej Brzyski (PL) was confirmed as financial examiner for year 2019.

Eurachem policies and procedures

The GA approved the Strategic Plan 2018-2022, including the new Reference Materials WG, as well as the inclusion of "Supplementary materials" in the "Procedure for the development of Eurachem Guidance", and the revision of the "Honours and awards policy" (see details of awarded Honorary Life Memberships in this Newsletter issue). The GA also approved an amendment to the Memorandum of Understanding allowing the GA to propose an associate member to become a full member.

Discussion forum

Two topics, both related to ISO/IEC 17025:2017, were presented. Brid Burke, from the Accreditation Body of Ireland, illustrated the concept of risk analysis in the laboratory environment, whereas Kyriacos Tsimillis (Cyprus) gave an overview of the main changes in the revised standard.

Handover of Chairpersonship

Marina Patriarca officially became Chair of Eurachem, after the exchange of the Memorandum of Understanding with David Milde.



Marina Patriarca and David Milde.
Photo: Wolfhard Wegscheider

After thanking the former Chair and Secretariat for their work, she addressed the GA to thank them for their trust. Marina remarked that Eurachem is made of the "people" who choose to contribute their competence and knowledge (as well as DOUBTS!). In this respect, she hoped that the impact of Eurachem for younger people can be strengthened. She also suggested that the choice of two ladies as Chair and Vice-Chair of Eurachem is an open invitation to addresses the European Union policies to attract young women to undertake scientific careers.

Progress on Eurachem work items

Several Eurachem guides are currently under review ("Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories", developed jointly with EUROLAB and EA; "Quality Assurance for Research and Development and Non-routine Analysis", "Selection and Use of Reference Materials", "Measurement uncertainty arising from sampling"). Revised editions of the Guides on "Traceability in Chemical Measurement" and "Terminology in Analytical Measurement: an introduction to VIM3" are expected to be released shortly.

Presentations from Liaisons and Stakeholders

Reports on the activities of the following organizations were presented:

- European Cooperation for Accreditation Lab Committee (EA LC)
- EA-Eurolab-Eurachem working group "Proficiency Testing in Accreditation" (EEE-PT)
- Eurolab
- Euramet TC-MC
- Nordic Committee on Food Analysis (NMKL)
- BIPM Joint Committee for Traceability in Laboratory Medicine (JCTLM)
- CITAC

- Codex Alimentarius Committee on Methods of Analysis and Sampling (CCMAS)
- International Laboratory Accreditation Committee/ Laboratory Committee (ILAC/LC)
- International Laboratory Accreditation Committee/ Accreditation Issues Committee (ILAC/AIC)
- International Union of Pure and Applied Chemistry (IUPAC)
- ISO REMCO Committee on Reference Materials

Meetings of the Working Groups:

Three Working Groups, namely "Education and Training, "Measurement Uncertainty and Traceability" and "Qualitative Analysis" met on 16 May.

Next General Assembly... will be held in Tartu, Estonia, on 23-24 May 2019.

Francesca Rolle



Eurachem General Assembly participants.
Photo: Eurachem Ireland

Honorary Life Membership To...

Dr. Máire Walsh

Eurachem Ireland nominated Dr. Máire Walsh for Honorary Life Membership of Eurachem for her contribution to Eurachem and its objectives of quality in analytical chemistry. Dr. Walsh was one of the signatories of the first Eurachem MoU in 1990 and quickly became an active member of the Executive Committee helping it grow into the successful organisation it is today. She held the position of Chair from 1995-1997. She was the State Chemist in Ireland from 1989 to 2004 and, following her retirement, continued to contribute to Eurachem and Analytical Chemistry. In 2005 she was President of the Association of Official Analytical Chemists and later became the stakeholder representative to ILAC.

Barbara O'Leary, Chair Eurachem Ireland



Máire Walsh at the General Assembly dinner on 17 May.
Photo: K. Tsimillis

Dr. Alex Williams

Eurachem- Portugal unanimously nominated Alex Williams for Honorary Life Membership of Eurachem for his outstanding contributions to the development and dissemination of Metrology in Chemistry by founding Eurachem and by leading the most productive working group of Eurachem, the "Measurement Uncertainty and Traceability Working Group" (MUTWG), for 27 years. The MUTWG published guides that stand as the most solid pillars of Metrology in Chemistry for testing laboratories responsible for the management of relevant socio-economic interests.

Ricardo Bettencourt da Silva, Eurachem Portugal



Alex Williams, formerly the UK Government Chemist, proposer and founder member of Eurachem.
Photo: <http://eurachem2018.com>

The CGPM Votes to Change the SI



At 12:20 CET on November 16 2018, CGPM, the General Conference on Weights and Measures responsible for decisions on the «*système internationale*», voted unanimously to move the foundations of physical and chemical measurement.

The CGPM met, at an open meeting at the Palais des Congrès, Versailles, to discuss and vote on the re- definition of four of the SI's seven base units: the mole, the ampere, the kelvin, and the kilogram.

This change, which will come into effect on **World Metrology Day** (20 May 2019), is perhaps the most fundamental change in the SI since its inception. For the first time, the SI will be defined entirely in terms of fundamental physical constants, instead of requiring the maintenance of a physical artefact.

This is achieved by defining the kilogram – currently the last SI unit to be based on a physical artefact – in terms of the Planck constant; the fundamental physical constant that relates frequency to energy. At the same time, the ampere will be defined in terms of the elementary charge e ; the unit of temperature, the kelvin, will be defined by reference to the Boltzmann constant and the mole will be defined in terms of the Avogadro constant.

Why is this important?

The simplest reason for making this momentous change is that reliance on a single physical artefact is simply not sufficiently reliable for the needs of modern and future high-accuracy measurement. The present definition of the kilogram is, essentially, the mass of a particular prototype kilogram held in the vaults of BIPM, in Paris. At the simplest level, if the artefact were ever damaged or lost, the SI would no longer have its anchor for mass. More importantly, measurements over time of the many national kilograms show a degree of drift – due, perhaps, to simple wear – that compromises their long term viability (figure 1). Redefining the kilogram in terms of a fundamental constant removes the reliance on a single artefact.

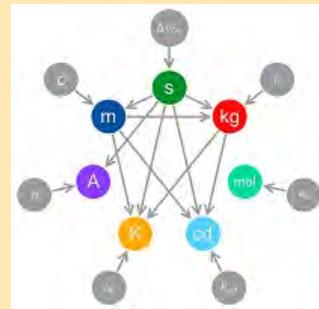
Similarly, defining the ampere in terms of the fundamental charge, via the Coulomb, makes it possible to realise the ampere with much improved accuracy. The definition of the kelvin, currently using the triple point of water, will also change fundamentally to include a fixed numerical value of the Boltzmann constant in J K^{-1} (equivalent to kg

$\text{m}^2 \text{s}^{-2} \text{K}^{-1}$); again, this opens the way for steady improvements in uncertainty for temperature standards. In wider terms, it becomes possible – at least in principle – for every measurement institute to realise their own units of mass, and all the other SI units, using fundamental physics instead of relying on comparison with a single artefact. The foundations of measurement are now truly available to all.

What is the scientific basis of the redefinition?

These changes are the culmination of decades of development work, most recently related to the development of the «Kibble balance», and the detailed work in the Avogadro project to determine the Avogadro constant to unprecedented accuracy.

The Kibble balance is a device that allows a direct comparison of force generated by an electric field against the gravitational force on a standard mass. Previously, this phenomenon was used to realise the ampere; but with steady improvements in the measurement uncertainty, it is now possible to relate the force generated to fundamental constants including the Planck constant and the charge on the electron. Defining these constants as fixed values in SI units is equivalent to defining the units themselves.



The Avogadro constant – a fundamental feature of any chemistry course – has been measured to extraordinary accuracy as part of the Avogadro project. The scientific principle is relatively simple; by measuring the size of a unit cube in pure silicon using crystallography, and combining this with accurate density measurement and the known atomic mass of silicon, the number of atoms in a mole of silicon can be determined. Silicon was chosen because it is available in extremely high purity; even so, it was essential to use very highly enriched silicon-28 to ensure that uncertainties associated with isotopic impurities – as well as surface oxide and other impurities – were sufficiently small to determine the constant to nine significant digits.

Further, since the measurement of The Avogadro constant also relied on mass, it was possible to cross-check the Avogadro project results against those from work on the Kibble balance; the redefinition was not enacted until agreement was so good that no practical measurement would suffer any adverse impact from the change.

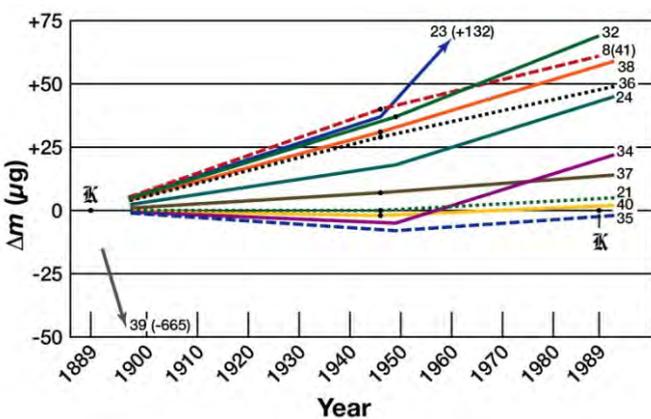


Figure 1: Mass drifts in national prototype kilograms 1889-2000

Image: Emilio Pisanty - Own work, CC BY-SA 4.0, <https://commons.wikimedia.org/w/index.php?curid=50713156>

What difference will it make to practical chemical and biological measurements?

In practice, the changes will make no difference at all to any practical measurement. The fixed values chosen for the fundamental constants are carefully aligned with the best available values, so that there is no visible change. The uncertainties are far, far smaller than any realistic chemical measurement uncertainty currently available. Chemical and biological measurement scientists will see “business as usual” for the mole. Calibration and accreditation will carry on as usual; we will not need to recalibrate any instruments or review accreditation as a consequence of the change.

In the longer term, however, there could be small changes in high-accuracy measurements of atomic mass. Since the mole will no longer be reliant on the kilogram and the atomic mass of carbon 12, the dalton – a convenience unit currently defined as 1/12 times the mass of an atom of carbon-12 – will no longer have a fixed relationship to all three of the kilogram, the Avogadro constant N_A , and the mass of ^{12}C . Instead, the dalton is likely to be defined to retain its relationship to the mass of ^{12}C , with the consequence that exactly 1 g of ^{12}C will no longer contain identically N_A atoms by definition. It currently seems unlikely that this will have important ramifications in practice, as the relationship will hold within the very small uncertainties involved. Perhaps a more exciting possibility is that the changes may usher in a new generation of high accuracy measurement instruments for other units on which chemists rely. For example, once the kelvin is decoupled from the traditional water triple point cell, new instruments for very high accuracy measurement of temperature, based on different physical principles, become conceivable. Such developments could open a route to greater accuracy, or greater simplicity, for a wide range of measurements that are routinely undertaken in the course of chemical and biological measurement.

How will CIPM and the national measurement institutes guarantee comparability of their standards if they are no longer traceable to the same physical artefacts?

Calibrations for most measurement standards will not change in the short term, and the general principles will still apply within each country. To make sure measurements are consistent across borders, there is already a well-established system of international comparisons; the CIPM Mutual Recognition Arrangement (see <https://www.bipm.org/en/cipm-mra/>). Although some national laboratories may transfer their primary mass standard calibrations to instruments based on the Kibble balance, they will still be able to weigh and compare standards across borders to make sure that their measurements remain compatible.

Summary

The CGPM, with the support of decades of work by measurement scientists in national laboratories world-wide, have taken a historic decision that will improve the stability of measurement world-wide and in decades to come.

The change will, for the first time, make the whole of the SI universally available. The new definitions, no longer

dependent on any particular artefact, will make the fundamental units of physical and chemical measurement more stable in the very long term, setting a firm foundation for future decades of measurement. Comparability across national borders will continue to be maintained by laboratories participating. Although fundamental, the changes will have no adverse effects on day-to-day analytical measurement, and calibration and accreditation activities will continue unperturbed; no calibration certificates will need to be renewed earlier than usual. This is a great achievement for metrology and for science in general.

Steve Ellison
Chair, Eurachem Measurement Uncertainty & Traceability WG

New information leaflets

A leaflet for the new ISO/IEC 17025

Following the publication of the new standard in 2017, the Education and Training Working Group has prepared a leaflet to highlight the changes from the previous version of the standard and provide guidance on how laboratories can proceed smoothly with the transition to the new standard.

The leaflet illustrates the changes in the structure of the standard and refers to the definition of “laboratory” which is extended to include sampling, associated with subsequent calibration or testing which are not necessarily carried out in the same entity. Furthermore, the leaflet refers to a series of new aspects introduced in the standard, namely the use of a decision rule, and the introduction of risk-based thinking in relation to opportunities which eliminates the need to refer to preventive actions. The leaflet gives emphasis to the introduction of an additional management option. While, according to Option A, a laboratory has to comply with all provisions of the standard including the management system requirements included in Clause 8, the new Option B provides a laboratory already implementing a management system complying with ISO 9001 the opportunity to make use of this, and not necessarily address Clause 8 of ISO/IEC 17025. This alternative is expected to be of interest to those laboratories operating under a parent organisation which meets ISO 9001 requirements.

The leaflet also refers to all other changes in the new standard. The most important ones refer to new/additional requirements regarding impartiality and liability issues, sampling activities and uncertainty from sampling, metrological traceability, control of data and information management, externally provided products and services and ensuring the validity of results. Last but not least, the leaflet refers to some of the main steps to be taken by a laboratory during the three-year transition period. The leaflet is currently available in English, Bulgarian, Georgian, Russian, Spanish and Turkish.

Kyriacos Tsimillis, Eurachem Cyprus

New information leaflets

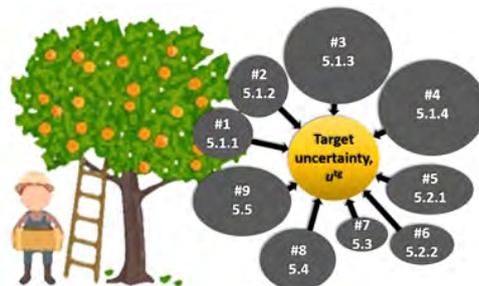
A leaflet on setting the target Uncertainty

The Measurement Uncertainty and Traceability Working Group (MUTWG) has produced a leaflet on the importance of the target measurement uncertainty concept which is described in the Eurachem/CITAC guide on "Setting and Using Target Uncertainty in Chemical Measurement". The leaflet gives a fictional example of how defining the target (i.e. maximum admissible) measurement uncertainty can guarantee that the reported measurement will be fit for the intended purpose, particularly when assessing compliance. The definition of the target uncertainty involves balancing measurement quality and cost.

The working group produced this leaflet to contribute to the dissemination of the guidance given in the guide. At this moment, the accreditation of laboratories includes

consideration of the risk of an incorrect decision, but does not explicitly request laboratories to define the target measurement uncertainty when it has not been set by the customer or in the relevant regulation. The leaflet has been translated into Spanish and Czech.

Ricardo Bettencourt da Silva
Member of Measurement Uncertainty & Traceability WG



In figure: Mr. Reis requiring an adequate assessment of his oranges for thiabendazole pesticide and Brix level, and a "tree" of options on how to define a target uncertainty described in the Guide.

NEWS * NEWS * NEWS * NEWS

Eurachem satellite workshop at the Biennial National Atomic Spectroscopy Symposium (BNASS 2018)

The Biennial National Atomic Spectroscopy Symposium (BNASS) is the meeting of the Royal Society of Chemistry Atomic Spectroscopy Group, held every two years for over 30 years, to acknowledge developments in the discipline <http://www.rsc.org/events/detail/26021/bnass-2018-the-19th-biennial-national-atomic-spectroscopy-symposium>

On invitation by the organisers, Eurachem held a training session on "Measurement Uncertainty and Traceability in the Modern Laboratory" with 18 participants on Monday 2 July, 2018, before the start of BNASS.

The workshop aimed to present Eurachem activities and give an overview of the concepts of metrological traceability and measurement uncertainty (MU) and related guidance from Eurachem and Nordtest for their application in the analytical laboratory. The topics introduced to the participants, who were mainly university students, covered MU and how to estimate it; target MU and how to set it; traceability of analytical measurement and how to achieve it; MU in compliance assessment. Participants worked on practical examples to document the traceability of their measurement results as well as calculated and assessed their estimates of measurement uncertainty.

Marina Patriarca & Bertil Magnusson
Eurachem Chair and MUTWG Secretary

Eurachem satellite workshop at IMSC 2018

The XXII International Mass Spectrometry Conference (IMSC 2018) was held in Florence (Italy) on 26-31 August 2018, with a massive participation of young scientists, supported by a free child-care service. Five short courses on MS fundamentals and applications, organised around the main conference by 19 trainers, attracted 116 trainees. Among these, the satellite workshop "Are MS-based methods fit for purpose?" organised by the Eurachem Method Validation Working Group was held on Monday

27 August.

Mass Spectrometry (MS) has developed tremendously over the years and thousands of scientists are currently finding new ways of applying and exploiting the principles for new purposes in many different fields. The workshop aimed to address the question whether MS-based methods, useful for solving specific analytical tasks in the R&D laboratory, can also be applied in routine testing laboratories and provide reliable, consistent and "fit for the purpose" measurement results and how can this be demonstrated. After a brief introduction about the mission and activities of Eurachem, the principles of method validation (as described in the Eurachem Guide) were presented. This was followed by a practical example of the validation of an MS-based method for the determination of antibiotics in food. The presentations were welcomed by the participants, most of whom were not familiar with the topics, and followed by numerous questions, addressing issues related to the assessment of linearity, limit of detection, limit of quantification and trueness of analytical methods based on MS.

Burcu Binici, Marina Patriarca & Lorens Sibbesen
Method Validation WG

METROFOOD-RI Updates

METROFOOD-RI ("Infrastructure for promoting metrology in food and nutrition"), an infrastructure designed to support research and develop concrete solutions and synergies in the area of food quality, safety and authenticity, has been included in the ESFRI Roadmap 2018, which was officially launched on the 11 September in Wien. An event to present the infrastructure was held in Rome on 4 October 2018, with the participation of representatives from ESFRI and all the 18 Countries involved in METROFOOD-RI, institutional representatives (from Ministries and Public Institutes), the EURAMET and Eurachem Chairs, and various other Stakeholders. The METROFOOD-RI Consortium includes 48 Partners from 18 European countries, with more than 2200 researcher involved.

Giovanna Zappa & Claudia Zoani
ENEA, Italy

Eurachem endorses the International Year of the Periodic Table 2019



A Common Language for Science

The Periodic Table of Chemical Elements is one of the most significant achievements in science, capturing the essence not only of chemistry, but also of physics and biology.

The year 1869 is considered as the year of discovery of the Periodic System by Dmitri Mendeleev. 2019 will be the 150th anniversary of the Periodic Table of Chemical Elements and has therefore been proclaimed the "International Year of the Periodic Table of Chemical Elements (IYPT2019)" by the United Nations General Assembly and UNESCO.

More information can be found at <https://www.iypt2019.org/>.

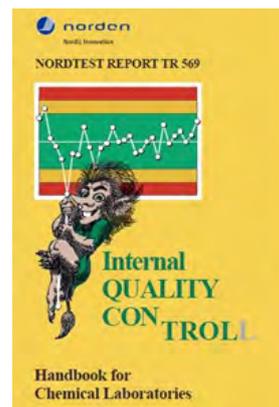
Internal Quality Control 5.1: more focus on target control limits

The revision (TR 569 5.1 2018, www.nordtest.info) of the popular Nordtest guide focuses on setting target control limits (see examples 1, 2, 5 and 7). When the customer's demand, translated into target control limits, is lower than the actual performance of the method, it recommends to set wider control limits, that will result in fewer out of control values, still meeting the customer's expectations. In addition, the possibility to change the control limits and/or the central line owing to long-term evaluation is now discussed separately.

Pooled standard deviation (previously called combined standard deviation) is recommended to obtain the control limits. An example (number 10) of pooling standard deviation to estimate s_p and s_{RW} from an internal control sample measured three times in every analytical run is added, showing that if all results were used to calculate s_{RW} a too low estimate would be obtained resulting in too narrow control limits.

NOTE - Also the previous version (4) can be downloaded from nordtest.info.

Bertil Magnusson



A XRF User Meeting

EuroLab/Eurachem Sweden and RISE organise biannually a meeting for XRF users. The next meeting will be held on 10-11 September 2019, with an XRF course on Monday 9 September. Register before 1 August 2019 at www.sp.se/en/training/.

Bertil Magnusson

A two-day Training Course - Critical Issues of the Accreditation Standards:

ISO/IEC 17025:2017 and ISO 15189:2012

21-22 February 2019 - Cleopatra Hotel, Nicosia, Cyprus

The Division of Quality Assurance of the Pancyprian Union of Chemists (PUC), in cooperation with Eurachem, has organised a two-day training course on "Critical issues of the accreditation standards - ISO/IEC 17025:2017 and ISO 15189:2012". After a series of training activities on ISO/IEC 17025:2017, it was considered that some of its critical issues should be analysed in more detail, providing the opportunity for interaction with laboratory personnel. It was also realised that some of the issues were not new but had already been addressed in the latest version of ISO 15189, the accreditation standard for medical laboratories. This was the initiative for this two-day training programme. It is the first time these aspects are discussed in relation with the requirements of both laboratory accreditation standards. The correlation with both standards will certainly be useful, based on the presentations by experienced tutors from Eurachem and group exercises.

Kyriacos Tsimillis

Membership News

- Vicki Barwick has been elected as the new Vice-Chair of Eurachem
- Isabelle Vercruyssen (Belgium) and Anna-Liisa Pikkarainen (Finland) are appointed as Executive Committee members for two years, Kyriacos Tsimillis (Cyprus) and Wolfhard Wegscheider (Austria) for three years
- Turkey has two new representatives, Fatma Akçadağ and Oktay Cankur
- Cyprus has a second new representative, Despina Charalambous
- Ernst Halder represented Switzerland at the last GA in Dublin
- Francesca Rolle will serve as Secretary until 2020 and as Treasurer until 2019.

Working Group Reports

Eurachem Education and Training Working Group

The Education and Training Working Group held a successful meeting during the General Assembly week in Dublin in May. During the year the Working Group has made progress on a number of activities.

In July, the leaflet 'ISO/IEC 17025:2017 – A New Accreditation Standard' was published. The leaflet gives a quick overview of the main changes in the 3rd edition of ISO/IEC 17025. Bulgarian and Spanish versions are available on the website with additional translations being prepared.

In 2017, a decision was taken to revise the guide 'Terminology in analytical measurement: Introduction to VIM 3' (in line with Eurachem policies on the development of guides). Given that the VIM is under revision, the Working Group agreed that a minor revision should be undertaken. This work is progressing well and it is planned to publish the revised guide in the second half of 2019.

The 3rd edition of the 'Guide to quality in analytical chemistry' was published in January 2017. It was recognised during the preparation of this edition that a more substantial revision would be required once the new version of ISO/IEC 17025 was published. Now that the 3rd edition of the standard is available, the Working Group has initiated a project to update the guide to bring it into line with the requirements of the new standard. The Working Group also collaborated with Eurachem-Ireland on the organisation of the successful workshop on 'Data – Quality, Analysis and Integrity' held in Dublin during the General Assembly week in Dublin. Finally, the Working Group is also responsible for the 'Reading list' that is published in the publications area of the Eurachem website. The list is reviewed annually and an updated version published on the website. The current members of the Working Group are listed on the Education and Training Working Group page on the website. If you are interested in joining the group, please get in touch!

Vicki Barwick
Chair, Eurachem ETWG

Method Validation Working Group

The main activities of the WG are

focusing on the ongoing work of expanding and improving the guidance on practical method validation. A list of subjects supplementing the existing "Fitness for Purpose" guide have been identified and in this period members of the group have been working on the following supplementary notes (probably to be added as annexes to the next version of the guide, but possibly also to be published as preliminary recommendations in the intermediate period):

- Linearity
- Selection (and validation) of Test Kits
- Dealing with Bias
- Extent of Validation/Verification (coordinating with IUPAC document)
- Planning of Method Validation (establishing the protocol)
- Use of Blanks and Standard Addition
- Instrument qualification as a prerequisite for doing proper method validation

...and more subjects related to Method validation are "in the pipeline" for further elaboration.

In the spring of 2018, the WG launched a "Feed-back" facility on the Eurachem website where possible inputs for necessary revision will be collected. So far, the facility has only been used very few times. Furthermore, the WG is working on identifying a number of illustrative examples on application of the various principles in the guide – also for eventual up-load on the website. Users of the guide are urged to provide good examples, which might be serve as good inspiration for others (will be evaluated for relevance by the MVWG before presentation on the website).

The fast development of analytical chemistry takes many different directions these years, both with regard to refining of old, well-known principles (e.g. taking methods to handle very low levels), but also coming up with a lot of rapid, automated methods, bioanalytical methods, non-targeted screening-methods (requiring comprehensive data-handling, e.g. using chemometrics and AI) etc.

And, what about the sampling as a necessary precursor for the testing in the laboratory?

All these developments put a constant challenge on the task of validating the methods applied, securing they are fit for the actual purpose – and as such challenges the

MVWG, who is currently discussing how Eurachem can deal with this development, and still remain a "center of expertise" on method validation.

One of the many questions related to this, is whether the WG actually holds the expertise needed for giving proper guidance in all of these new fields. To cover some of this, the WG is seeking (and re-confirming) liasons with other professional organizations (e.g. NMKL, AOAC a.o.)

The MVWG is also actively following the promotion and use of the validation guide around the world (incl. 6 translated versions by now). The promotion often goes through members of the WG actively using the guide in relation to various trainings and other presentations, but the MVWG is also preparing some leaflets and posters for promotion of the WG and the Guide.

In August 2018 the WG conducted a special workshop on the "Fitness for Purpose" principle and method validation as a part of the 22nd INTERNATIONAL MASS SPECTROMETRY CONFERENCE (IMSC) held in Florence, Italy. Two presentations were given under the heading "Are MS based methods valid – i.e. Fit for Purpose?" as introduction to eager discussions among the around 70 participants (...many of which did not know about the Eurachem FfP guide on beforehand).

In 2019 the WG will be involved in the planning of the workshop in the "Eurachem Week" in Tartu, Estonia, and communication with NMKL has been started on possibly contributing with a WS (like the one in Florence) in connection with their symposium "Speeding Towards -Omics. Chemical and microbiological food analyses", on 3 – 4 June in Norway.

At present, the MVWG consists of 26 members from 14 European countries, with a "core group" of around 15 persons being the main active ones, participating in the discussions and contributing with written material.

Lorens P. Sibbesen
Chair, Eurachem MVWG

Measurement Uncertainty and Traceability Working Group

The Eurachem working group on Measurement Uncertainty and Traceability is responsible for four

Working Group Reports

current Eurachem guides:

Quantifying Uncertainty in Analytical Measurement (2012), Traceability in Chemical Measurement (2003), Use of uncertainty information in compliance assessment (2007), Setting target measurement uncertainty (2015).

The Traceability Guide is undergoing a modest revision. The appearance of additional metrological traceability provisions in ISO/IEC 17025:2017 has been considered; after some additional review, the working group feels that the new provisions do not require further amendment to the Traceability Guide, which will accordingly be issued for GA comment and voting in 2018. In addition, the WG is considering how best to address the modest changes in ISO/IEC 17025; at present, the WG is considering an amendment to the existing Information Leaflet on metrological traceability to provide updated guidance on implementation. The uncertainty guide from 2012 (QUAM:2012) has been reviewed.

The WG do not propose to revise the guide in the near future. Since a small number of editorial issues have been identified, however, the WG propose to add a short list of errata to the website. This allows the retention of the existing ISBN; editorial changes to the body of the document would formally require a new ISBN. The WG will also monitoring JCGM activity, which may result in new international guidance on MU; JCGM have indicated an intention to prepare guidance based on Bayesian methods. The MU WG is working to gain a better understanding of the use of Bayesian methods for uncertainty evaluation in chemistry; for example, Bayesian methods can provide useful alternatives for severely non-normal distributions, high uncertainty (> 30 % RSD) or uncertainties for purity statements when the measurand cannot exceed 100%. At present, the direction from JCGM appears to be to add to, rather than replace, existing guidance; as new guidance emerges, the Eurachem MUWG will consider updating QUAM:2012 or related guidance to take account of new approaches emerging from JCGM. The WG is also considering additional draft guidance on the evaluation of uncertainty from in-house validation data to supplement QUAM:2012. This is currently at an early stage; detailed technical instructions are hard to prepare because it is difficult to

provide exact instructions that apply well to a wide range of analytical problems.

The WG recently issued an information leaflet on the handling of uncorrected bias in measurement uncertainty evaluation. This gives general guidance, but the WG do not feel that there is sufficient consensus, at present, on treatment of a known, but uncorrected, bias to provide technical guidance. The WG will monitor developments in the handling of measurement bias with a view to preparing improved technical guidance as methods improve. The WG has also been working on an Information Leaflet relating to setting target measurement uncertainty. This draws on the existing guide on the topic.

Finally, the WG is coordinating a workshop on measurement uncertainty, jointly with the Sampling Uncertainty WG, to be held in November 2019 at BAM, in Berlin, with the kind support of EuroLab. For further details see "Upcoming meetings" and the Eurachem website.

Steve Ellison
Chair, Eurachem MU & Traceability WG

Proficiency Testing Working Group

The WG on proficiency testing provides a forum within the European chemical measurement community for pursuing excellence in the development and implementation of proficiency testing.

During the past year the WG has continued to work on a number of educational leaflets aimed at helping laboratories in the selection and use of proficiency testing, which can be downloaded from the Eurachem website in various languages. The most recent leaflet published was:

- Proficiency testing – How much and how often? – available in Bulgarian, Czech, English, Persian (Farsi), French, German, Serbian, Swedish and Turkish

Two new leaflets will be shortly published:

- How to investigate poor performance in proficiency testing

- Use of surplus proficiency test items

Following the success of the 9th Eurachem PT workshop, a 10th workshop will be organised in the UK during October 2020.

Brian Brookman
Chair, Eurachem PTWG

Reference Materials Working Group

Following the decision to establish a WG to revise current guidance on Reference Materials, information was distributed to GA Members and other interested organizations. A number (19) of experts were nominated to take part in the activities of RMWG. It was also agreed with CITAC to this will be a joint Eurachem / CITAC WG. A list of the current members of the RMWG is available on the website. The kick-off meeting was held in Rome, 28 March 2018, with 15 people attending, either in person or via a web connection.



Kick-off meeting of the RMWG

The terms of reference were agreed as follows:

- To establish a working group of experts nominated by GA Members, EA, EUROLAB and other interested organizations with liaisons with Eurachem, to review and update as necessary the guide on 'Selection and use of Reference Materials' (2002) following the revision of the ISO/REMCO Guides on RMs.

- To contribute to disseminate information on good practice in the selection and use of RMs, by promoting Eurachem guidance on RMs.

- To contribute to maintain and update the relevant section on RMs of the Eurachem Reading List.

- The Eurachem Reference Materials Working Group has been established and will operate in accordance with the Constitution agreed in the Eurachem Memorandum of Understanding

The scope of the revision of the Eurachem Guide "Selection and use of Reference Materials" was defined as follows:

- To fulfil the need for shorter and simpler guidance, of practical use, still well received by accreditation and other regulators.

- To address issues related to the

Reference Materials Working Group, cont.

interpretation of general rules that may influence the practices applied in different laboratories and so the comparability of measurement results.

- To refer the users of C/RMs to related guidance described in other Eurachem Guides.

- To promote best practice in the selection and use of C/RMs, according to the principles of ISO Guide 33, among both laboratory staff and other interest parties, e.g. those teaching these issues.

The WG also agreed on the structure of the revised guide, which will follow the template for Eurachem Guides, and planned a course of action to develop the revision by 2020.

*Marina Patriarca
Chair, Eurachem RMWG*

Qualitative Analysis Working Group

The Qualitative Analysis Working Group is currently working towards a guide on "The Expression of uncertainties in qualitative analysis and testing", a topic on which there is

National Reports

The work within our national Eurachem organisations is one of the most important channels to convey our message to the laboratories and our stakeholders. Below you will find reports about activities in the national organisations.

ARMENIA

As an associate member of Eurachem (officially from 2017), Scientific Centre of Drug and Medical Technologies Expertise and Armenian Chemical Society organizes meetings with medicine, food, environmental quality control laboratories representatives. Our goal is to establish Eurachem Network in Armenia, already discussed some points to establish new web site and invite all interested laboratories to join to our web site and share all information regarding service availability field, method of testings, instruments.

In cooperation with National Standard institute of Armenian and Ministry of Health of Armenia our center organize translation and implementation of the following ISO guides for medical laboratories.

ISO 15189 Clinical laboratory medicine — In vitro, diagnostic

currently very little published guidance. "Qualitative analysis" includes, for example, the identification of chemical compounds using spectroscopic methods, or use of test kits that respond positively or negatively to the presence of a particular material. Although measurements are often involved in such analysis, the result is not usually numerical, so the usual concept of measurement uncertainty for quantitative measurement does not apply. Instead, uncertainty is expressed in terms of false response rates or other probabilistic statements. The Guide will provide information on the main metrics used for this purpose, focusing on the determination of different metrics and on their advantages and disadvantages.

The most important metrics in use at present include false positive and false negative rates, the 'sensitivity and specificity' measures derived from these and used in clinical practice, and the 'likelihood ratio' used heavily as a statement of 'strength of evidence' in forensic DNA interpretation and, where available the Bayesian 'posterior probability', which provides an indication of the probability that a conclusion is correct. At its latest meetings, the group also agreed to

medical devices — Validation of user quality control procedures by the manufacturer
ISO 15190 Medical laboratories — Requirements for safety
ISO 22367 Reduction of error through risk management and continual improvement
We took participation in training of ISO 17025/2015 organized by our colleagues from Cyprus.
In cooperation with WHO and BSI we had organized training program for ISO 9001/2015 implementation in November 2017.

For 2018 we also plan various some activities including cooperation with Georgian Eurachem Network and implementation common standards in food testing laboratories.

Due to May 2018 political situation change after Velvet revolution, we hope our cooperation with Eurchem will become now efficient.

Levon Melikyan

include measures of precision for qualitative tests. In the qualitative context, 'precision' still relates to the agreement between results, as it does in quantitative analysis. It is, however, expressed in different ways, as concepts such as standard deviation do not apply well to qualitative data. Including measures of precision has slowed the work, but the group are working hard under its new Chair, Ricardo Bettencourt da Silva, to prepare a draft for comment in 2018.

*Steve Ellison
Secretary, Eurachem QAWG*

Uncertainty from Sampling Working Group

The Sampling Uncertainty WG are making good progress on preparing the second edition of the Eurachem/EUROLAB/CITAC/Nordtest/AMC Guide: Measurement uncertainty arising from sampling: a guide to methods and approaches.

We plan to send the latest version of the Guide out to the GA early January 2019 (via the Eurachem Secretariat) for voting and comments, by a deadline at the end of February.

We are also aiming to organize a Workshop, joint with the MUTWG, on the Eurachem Guidance on Measurement Uncertainty, including that from Sampling, to explain the recent revisions to the guidance.

*Mike Ramsey
Chair, Eurachem UfSWG*

BELGIUM

BELAB is the association of Belgian Laboratories and organizations involved in accreditation. BELAB is member of Eurachem and Eurolab. The association has an Executive Board with 9 members and counts 56 members-laboratories in the GA. The laboratories are from different sectors (textile, water, clinical, ... pharmaceutical, calibration, inspection, ...) and different organizations (private, university, authorities, ...).

Members of the Executive committee of BELAB are represented in several boards of BELAC (Belgian accreditation authority): Commission of coordination (management of BELAC) and National Council (advisory board of Minister). BELAB is chaired by Isabelle Vercruysse (LMI). Philippe Maesen (Uliège) is vice-chair.

BELGIUM, cont.

On the General Assembly of BELAB in May 2017, Ellen Somers (Executive director Belac) presented the objectives of Belac for 2018.

In March 2018, BELAC organised together with BELAB a seminar for BELAC assessors and BELAC accredited laboratories on the new ISO17025 (2017) with 480 participants (290NL/200 FR), Brussels. This was the first time that laboratories and assessors could meet each other on the same seminar.

Every year the activities and information of Eurachem are diffused by a presentation on the General Assembly of BELAB, through the website and via mailings to the members of BELAB. The Eurachem Informative Bulletin is also distributed between the BELAB members. BELAB distributes also a newsletter twice a year by mail among the members with the latest news from BELAB and Eurachem.

Isabelle Verduytsse

BULGARIA

The Union of Metrologist in Bulgaria and Bulgarian Institute of Metrology represent

Eurachem in Bulgaria by established section BULCHEM. Presently 43 laboratories in the frame of Union of Metrologist in Bulgaria are members of BULCHEM.

BULCHEM continue to support analytical laboratories in the country. Main activities was the organization of training and translation of Eurachem publications.

Training events were organized covering the following topics:

- Method validation and Applied statistical methods in analytical chemistry – basic principles: Robust statistics, Regression analysis, ANOVA method, optimization of methods. Practical examples - in April and May 2017 (65 participants);
- Uncertainty of measurement arising in sampling - 1st module and Analytical chemistry - classical and instrumental analysis (AAS main area) - 2nd module in September (41 participants);
- In-house calibration of measuring instruments in the field of chemistry measurements. Case studies - in November (44 participants);
- Interlaboratory comparisons and proficiency testing schemes in support of valid measurement results - in December 2016 (24 participants);

Translation of Eurachem publication in Bulgarian:

- Eurachem/CITAC Guide Setting target measurement uncertainty (2015);
- Four Leaflets are translated and published in sites of Eurachem and Union of Metrologist in Bulgaria (www.smb-bg.org):

- Selection of PT schemes
- Frequency of PT participation
- Treatment of an observed bias in measurement uncertainty evaluation and
- Using repeated measurements to improve the standard uncertainty.

The Union of Metrologist and BULCHEM Section have a good collaboration with Bulgarian Accreditation Service and Non-governmental organizations such as CLUB 9000, Union of quality specialists in Bulgaria and etc.

Dimka Ivanova

CYPRUS

Introduction

The Division of Quality Assurance was established in spring 2014 to operate under the Pancyprian Union (PUC); it was designated to undertake the role of the Cyprus Eurachem Committee which had been active since 1997. 21 years later, the Division is very active with more and more young colleagues getting actively involved. The main activities during the last year were the following:

Training activities

- ISO/IEC 17025:2017

A two-day training course on the new standard for the accreditation of laboratories ISO/IEC 17025 was organised on 22 and 23 of February 2018. The two trainers were Kyriacos Tsimillis and Despina Charalambous. Among the 26 participants, six came from neighbouring countries, namely Armenia, Lebanon, Georgia and Iran. The scope of the training was to analyse the provisions of the new standard and present a detailed comparison with the 2005 version. During the event, the changes and new tasks for laboratories and how they can proceed smoothly within the transition period were discussed. Special issues were addressed, among others, risk and opportunities, measurement traceability, sampling as a stand-alone activity, the use of a decision rule and incentives provided additional possibilities for laboratories

operating in certified companies.



Another two, two-day training events were hosted in the Cyprus Academy of Public Management; A total of 35 participants from laboratories operating in the public sector attended the two events (on 3 and 10 and 5 and 7 December respectively). A follow-up activity was a one-day training on Risks and Opportunities which was held on 18 December.

- ISO 15189:2012

The Cyprus Accreditation Body (CYS-CYSAB) invited Kyriacos Tsimillis as a trainer to a two-day training course on ISO 15189 for assessors and technical experts; the training was held on 14 and 15 of June and due to the small number of participants was quite interactive providing the opportunity for a number of practical issues raising from the experience of CYS-CYSAB in medical laboratories accreditation.



Accreditation and public procurement

A half-day meeting was held on 5 October at the Water Developments Department to provide support to colleagues involved in public procurement. A number of questions relating to the use of accreditation of laboratories in tenders and the documentation required for those participating were discussed in detail.

Discussion on draft legislation

The Division participated in the dialogue on draft legislation regarding playgrounds and criteria for medical laboratories to join the National Health System to be soon established.

Involvement in the work of Eurachem

There was active involvement in the work of Eurachem, the EC and some

CYPRUS, cont.

of the WGs i.e. the ETWG and the RMWG. Further to this, there was a contribution to the Eurachem Newsletter with a report on Eurachem Week 2017 and a note on the ISO/IEC 17011:2017.

Contribution to the preparation of the Workshop 2018

The experience gained this year, especially some weak points, has been communicated to the Irish colleagues to support them in their effort to organise 2018 Workshop in Dublin.

EuChemS

The Division is also participating in the work of the Division of Analytical Chemistry of EuChemS.

EA WG Healthcare

The autumn meeting of the EA WG Healthcare meeting was hosted by the Cyprus Accreditation Body (CYS-CYSAB) in Limassol, Cyprus. Kyriacos Tsimillis, in his capacity as a member of the Executive Committee, attended the meeting on behalf of Eurachem and gave a presentation of its activities and the coming events..

Website

The activities of the Division appear on the website of the PUC: (<http://chemistry.org.cy>). The material referring to the Workshop and other activities during the Eurachem Week 2017 hosted in Nicosia appear on the website which was specifically constructed for the needs of the Eurachem Week (<https://www.ucy.ac.cy/eurachem2017>). It has been updated with the book of abstracts and the presentations made in the Workshop (lectures and posters) as well as photos from the whole week.

The Secretariat of the Division...

consists of Dr. Constantina Kapnissi-Christodoulou (University of Cyprus), Dr. Despina Charalambous (Frederick University) and Dr. Kyriacos Tsimillis.

The Secretariat of the Division

CZECH REPUBLIC

This year Eurachem Czech Republic celebrated 25 years of activities in our country, being founded in 1993 as an independent organisation (legal entity). Currently we have 70 members, mainly analytical laboratories and university departments.

Our activities have been focused mainly on education. In April we held a joint one-day workshop with Czech

Institute for Accreditation (our national accreditation body) entitled Reference Materials in Laboratories. This event took place in Prague and we had almost 70 participants.



Workshop – Reference Materials in Laboratories

The preparation of a new textbook in Czech entitled “Brief Overview of Metrology in Chemistry” was the main task for this year. This 105 page book addresses all crucial topics for quality assurance of results in analytical laboratory. It is going to be used at universities where analytical chemists are educated as well as by newcomers to accredited laboratories. This text book was published as the 23rd issue of our series called Qualimetrics.

Recently we translated and published on our website two Eurachem Leaflets, namely “PT – How much and how often?” and “Using repeated measurements to improve the standard uncertainty”.

Our national organisation issued two Newsletters with 8 pages of text for our members. The winter 2018 edition was dedicated mainly to risk analysis in chemical laboratories. The summer 2018 edition addressed the revision of standard ISO/IEC 17025. Our members can find up-to-date information about our activities as well as many freely accessible leaflets that has been recently revised, on our webpage – www.eurachem.cz.

Members of the Executive Committee of Eurachem-CZ closely cooperate with Czech Institute for Accreditation, Czech Metrological Institute, and EUROLAB-CZ within an association called 4E-CZ.

David Milde

ESTONIA

Eurachem activities in Estonia are coordinated by the Estonian Environmental Research Centre (EERC). Two national representatives are Riin Rebane from EERC and Ivo Leito from University of Tartu. Eurachem activities in Estonia are mostly related to the general activities of EERC and University of Tartu. Together with the Tallinn University of Technology these three partners form a network called Estonian Centre of Analytical Chemistry (ECAC,

www.akki.ee) with Ivo Leito as a chairman and Riin Rebane as a project manager. ECAC has been set up in order to focus on sharing resources for high quality chemical analysis and chemistry education in Estonia. ECAC is a distributed interdisciplinary scientific research infrastructure for the development and application of modern analytical methods as well as the quality assurance of chemical measurements in research, surveillance and industry laboratories.

Education is a large part of the Eurachem activities in Estonia. Ivo Leito is responsible for annually organizing Massive Open Online Courses (MOOC) such as “Estimation of measurement uncertainty in chemical analysis”

(<https://sisu.ut.ee/measurement/uncertainty>) and “LC-MS method validation” (https://sisu.ut.ee/lcms_method_validation/), which by now have been organized five and two times, respectively, and attract hundreds of participants from all over the world every year.

We have also started translation of most important leaflets into Estonian, starting with “Use of uncertainty information in compliance assessment”. And most importantly, Estonia is glad to announce that in 2019 on the 20-24 May we are hosting the Eurachem workshop („Validation of target and non-target analysis methods“ <http://eurachem2019.akki.ut.ee>) and General Assembly in year in Tartu.

Riin Rebane

FINLAND

Finntesting Association/Eurachem Finland organised two seminars. The first seminar was related to *method requirements in accordance with regulations from the point of circular economy*. Presentations focused on standardisation of methods used within environmental sector and interpretation of regulations. Examples on challenges were highlighted. The second seminar was about *an uncertainty of sampling in environmental measurements*. Uncertainty related to a sampling phase was pointed out:

- How to assure the representativeness of samples when developing automated systems/measurement stations;
- Practical examples on uncertainties related to continuous on-line measurements;
- How to assure the representativeness of samples in field conditions.

FINLAND, cont.

Members of the Association were informed about quality issues and activities during annual meetings and through web pages. A lot of emphasis was put to encourage members to present opinions and proposals to develop activities of the Association.

The Association has a tradition to encourage students by delivering them awards based on their meritorious thesis. This time the awards were pointed to two theses where quality assurance aspects were taken into account:

- Ms Tiina Hongisto Department of Health Science, University of Jyväskylä: *Differences in gut microbiota composition of the LCR and the HCR rats and association with the expression of genes in adipose tissue.*

- Ms Jenni Dudek, Metropolia University of Applied Sciences, Helsinki area: *Set up and selection of qRT-PCR kits for the diagnosis of human respiratory syncytial virus and influenza viruses.*

The Association has an Executive Board and nominated members in Eurachem General Assembly and Eurachem Working Groups. Concerning quality related issues there is cooperation nationally and internationally – like with Eurolab and CITAC activities.

Eurachem Finland gave a presentation on Eurachem's organisation, aims and activities in the field of quality issues at the annual meeting of Nordic Committee on Food Analysis, NMKL, held in Finland in August 2017.

Anna-Liisa Pikkarainen

FRANCE

BIPEA is a scientific non profit organization gathering more than 2500 laboratories concerned about quality control and analytical accuracy. BIPEA's main activities are focused on education, training and analytical accuracy.

We act in the field of laboratory analysis by providing proficiency testing programs under ISO 17043 accreditation (in the fields of food, water and cosmetics) and organizing training sessions on analytical topics. BIPEA is involved in standardization by collaborating with AFNOR, SNIAA and COOP DE FRANCE for standard validations, and participating in standardization commissions.

Within the framework of EURACHEM, main activities of BIPEA are:

- Education and Training:

Since June 2017, BIPEA has organized 2 training sessions (June 2017, September 2017) for "Uncertainty of measurements and exploitation of data from the PT report". These training courses of 12 people each were very well appreciated by the participants and included lectures, practical exercises and learning evaluation.

- Participation in Working groups : Ms Caroline LAURENT, Director of BIPEA take part in the PT Working group. In 2017, the main activity was the organization of the PT Conf in Slovenia. Bipea promoted the event to 8000 laboratories in Europe.

- Translations:

Leaflets produced by the PTWG were translated in French

- Website:

Workshops and Conferences organized by EURACHEM are posted on BIPEA website (www.bipea.org).

Caroline Laurent

GEORGIA

Georgian Laboratory Association (GeLab) was established in 2013. It has a Board with 5 members and counts more than 20 member labs. Most of them are involved in accreditation process. The main activities of GeLab are focused on consultancy on requirements of ISO/IEC17025, correspondingly on aid to Accreditation, education and training. During such activities we mostly use materials of Eurachem guidelines and practices. In the current year several trainings has been organized by GeLab in different regions of Georgia covering the different topics of the standards ISO/IEC 17025 and ISO/IEC 17020. More than 70 participants attended the training courses, which included lectures and a practical exercises. GeLab closely cooperate with Georgian Accreditation Center (GAC) and with Georgian National Agency for Standards and Metrology (GEOSTM) in order to efficiently address the needs and expectations of member labs. In 2018 GeLab has organized some meetings between laboratories and representatives of GAC for conducting of open discussions. We find such meetings especially important for nowadays – during the transition period to the new ISO/IEC17025. In current year GeLab representatives actively participated in the Technical Committee of GEOSTM in the translation and adaptation

processes of ISO/IEC17025:2017 in Georgian language.

GeLab is a member of Eurachem since 2014. It distributes the latest news from Eurachem among the members. Recently the translation of the leaflet on "A new ISO/IEC 17025 for laboratories" into Georgian language have been finalized and the translation of four other leaflets ("You talk, we understand – The way out of the tower of Babel", "Treatment of an observed bias", "Proficiency testing –How much and how often?", "Setting Target Measurement Uncertainty") is in progress.

Nino Manvelidze

GERMANY

The Committee on Chemical Analysis of Eurolab-D mirrors the European Eurachem activities.

The Committee usually meets twice per year to receive the reports of the German delegates, to provide input to the Eurachem working groups and to discuss issues with national importance.

Since the last General Assembly the Eurachem Method Validation Guide and the leaflet on "Treatment of an observed bias" have been translated into German.

Together with other committees of Eurolab-D and in cooperation with other organizations (e.g. the German accreditation body) a workshop "The new ISO/IEC 17025 – everything new in 2018" on the implementation of the new standard in the laboratory has been organized in November 2017. A tool for the transition from ISO/IEC 17025:2005 to ISO/IEC 17025:2017 has been developed within Eurolab-D. This EXCEL file was distributed via Eurolab and is available from Eurolab's website.

Eurolab-D is also heavily involved in the revision, creation and translation of Eurolab's cookbooks. In this context a "Handbook ISO/IEC 17025:2017" has been published on Eurolab's website, which describes the relevant changes in the new standard on some 30 pages.

Michael Koch

GREECE

The current Steering Committee of AGC/EEX has been elected in November 2015, for a three year term 01/01/2016-31/12/2018. During 2017 the following initiatives – among others – have been taken: 1. During the past year, the efforts to degrade

the role of chemistry in the Greek educational system have been intensified. At this point discussions concerning the teaching of chemistry- physics-biology as a consolidated module are taking place, by initiative of the Ministry of Education. The three associations of chemists, physics and biologists have reacted against this possibility, by issuing a joint communication.

2. During 2017 AGC/EEX continued its effort to present to the public unknown aspects of chemistry, used in everyday life. Athens, Thessaloniki and Patra hosted the "Science festival" and the "Night of the Researcher" events, at which the AGC/EEX was represented with great success.

3. The presentation of ISO 17025 was followed up by organized training seminars concerning (a) SANTE document and the requirements of method validation dedicated to analyze pesticide residues in foods and (b) the statistics used for the data analysis of Pts.

4. Other seminars took place as well, including "Verification of microbiological methods - Estimation of uncertainty - Internal quality control".

5. In 2017 several private schools asked for a presentation of the profession of chemist in some events organized for their students. Members of our Association have undertaken this task and the response of the students was overwhelming.

6. During the "National Chemistry Day" (March 11), AGC/EEX organized (i) a "Careers day" in Thessaloniki for the undergraduate chemistry students in collaboration with the Chemistry Department of Aristotelian University of Thessaloniki. There was a presentation from a chemist who owns an analytical laboratory and (ii) a chemist demonstrated an everyday life in the lab, as part of the "Workshop for Internships" program.

7. In 2017, one of the two teams which represented AGC/EEX took the second place in the European Chemistry Experiment Contest "CHEMISTRY REDISCOVERED", while students from the Greek team won two bronze medals at the 49th International Chemistry Olympiad in Thailand.

8. AGC/EEX also organized many workshops on various fields, such as: (i) the Research and Innovation related to the chemical industry, (ii) the food contact materials, (iii) the nutritional supplements, (iv) the circular economy and (v) important agricultural products.

9. Last, but not at all least, AGC/EEX

organized a two-day conference titled "INNOVATION and BUSINESS MAKING in the CHEMICAL INDUSTRY of the 21st CENTURY" in collaboration with (i) the Chemistry Departments of Athens and Ioannina, (ii) the Food Technology Departments of Athens and Thessaloniki and (iii) the Department of Dietetics and Nutrition of Thessaloniki (iv) the Association of the Greek Manufacturers of Packaging & Materials (AGMPM), (v) the Federation of Hellenic Food Industries (SEVT) and the (vi) Hellenic Association of Chemical Industries (HACI).

*Triantafyllia Sideri
Eugenia Lampi
Anna Stefanidou*

HUNGARY

Dr. Erika Sárkány (QualiCont) took part of the activities of the Proficiency Testing Working Group, initiating a cooperation agreement between EQALM and Eurachem PT WG as well as acting as a member of scientific committee of the "9th Eurachem Workshop on Proficiency Testing". Translation of the leaflet "Proficiency testing – how much and how often" is underway.

Csilla Bélavári

IRELAND

Eurachem Ireland welcomes the General Assembly members to Dublin!

The Eurachem Ireland committee met regularly throughout the year. The committee comprises people interested in analytical chemistry from the public sector, private sector and the academic sector.

The committee organised an Analytical Chemistry Workshop in Autumn 2017 Hyphenated Analytical Techniques – Fundamentals, Applications and Challenges. This took place on 19 October 2018 and approximately 50 people attended.

The committee was very active organising the International Eurachem Workshop Data - Quality, Analysis and Integrity taking place in Dublin Castle on 14-15 May. All members of the Eurachem Ireland committee are members of the Local Organising Committee and most are also on the Scientific Committee. Eurachem Week 2018 continues with meetings of the General Assembly, Executive Committee and Working Groups. Ireland is well represented on Eurachem Working Groups and members attended various Working

Group meetings throughout the year. The popular Eurachem Analytical Measurement Competition (EAMC) took place on 23 March 2018. The EAMC is held annually and the event is organised and run by the EAMC Committee, Eurachem Ireland Secretariat and by the host Institute of Technology / University. This year's EAMC competition was hosted by Letterkenny Institute of Technology. The judges were Tom Hannigan from Forensic Science Ireland and Darragh Cunningham from the Environmental Protection Agency. 23 teams from 12 colleges took part with a team from DIT Kevin Street taking first place. Joint runners up were a second team from DIT Kevin Street and a team from Dublin City University. Congratulations to all who took part. Eurachem Ireland communicates with its members via:

- Mailing list,
- Website, (www.statelab.ie/eurachem.html)
- LinkedIn group,
- Articles in Irish Chemical News.

Barbara O'Leary

ITALY

The National Institute of Health (ISS) and the National Institute of Metrological Research (INRIM) represent Italy in Eurachem.

Collaboration is in place with other relevant national organizations, such as the Italian Accreditation Body (ACCREDIA), the Agency for New Technologies, Energy and Sustainable Economic Development (ENEA), the Institute for Environmental Research and Protection (ISPRA) and a number of organizations at regional level.

Activities focus on contributing to Eurachem guidance and its promotion to analytical laboratories at all levels, in particular by making available translations into Italian of Eurachem Guides and leaflets and maintaining a dedicated website.

Experts from Eurachem Italy contributed to the Eurachem Working Groups on: Education&Training, Proficiency Testing, Method Validation, as well as the joint EA-EuroLab-Eurachem WG on Proficiency Testing in Accreditation and the newly formed Reference Materials WG. Meetings of the MVWG, PTWG and RMWG were hosted at ISS (Rome), in the first part of 2018.

Information on Eurachem activities, such as the 9th Eurachem Workshop on Proficiency Testing in analytical chemistry, microbiology and

laboratory medicine (Portorož, Slovenia, 9-12 October 2017) and the Eurachem Workshop on Data – Analysis, Quality and Integrity (Dublin, Ireland, 14-15 May 2018), was promoted through the distribution of their announcements and links to mailing lists and through their publication on websites of Eurachem-Italia, ACCREDIA and other interested organizations. A presentation highlighting aspects of Eurachem guidance on terminology, metrological traceability, method validation and reference materials was given at the event 2018 Analytica, Rome 14-15 March 2018. Printed copies of the latest Eurachem Newsletter and of Eurachem leaflets were also distributed to interested parties. Following the completion of the translation into Italian of the revised Eurachem guide “The fitness for purpose of analytical methods” (2nd Edition 2014) last year, plans are developing to undertake some more work, focusing on the relevant guides and leaflets addressing various aspects linked to measurement uncertainty.

Marina Patriarca, Michela Segà

POLAND

Presently, 68 laboratories are members of the Eurachem-PL, Section of Polish Chemical Laboratories in Club of Polish Testing Laboratories POLLAB. Since 18.12.2013 Eurachem-PL has been lead by Andrzej Brzyski (chair), Ewa Bulska (vice-chair), and the section secretariat is hosted by secretariat POLLAB.

Members of the Section are involved in organization of symposia organized every year by POLLAB. The main topic at XXIII POLLAB Symposium (2017) was “Process approach - a new challenge for laboratories”. In two rounds of the symposium was attended by over 400 participants. We organized also a special section's meetings, including invited lectures dedicated to selected subjects. In 2017 there was one meeting, where participants discussed about Results PT/ILC programs - Evaluation of PT/ILC results with a small number of laboratories. We have problem, because very often less than 10 laboratories attend in ILC programs. We organize special courses to improve the competencies of the coordinators.

We have started organize training courses for our member for 2 year. These courses are very popular,

many people attending them. We cooperate with Polish Accreditation Centre for better quality in laboratories. Eurachem-PL will be continue present policy to support laboratories in 2018. Our members will be attend in Symposium POLLAB, section meetings and new ILC/PT programs.

Andrzej Brzyski

PORTUGAL

In 2017, the Portuguese delegates have been actively involved in the activities of the “Measurement Uncertainty and Traceability” and “Qualitative Analysis” Working Groups. Some members of Eurachem PT participated in the revision of guidance on the evaluation of the measurement uncertainty published in Portuguese. The current draft was circulated for comments and merges algorithms presented in other documents such as VAM project reports, Eurachem/CITAC guides and Nordtest guides.

The dissemination of Eurachem activities and guidance have been performed in teaching Metrology in Chemistry at the University of Lisbon, Euromaster on “Measurement Science in Chemistry”, Erasmus Mundus on “Quality in Analytical Laboratories” and in TrainMiC training events. The publication of various papers on Analytical Chemistry and Metrology has also been used to publicize Eurachem guidance.

Ricardo Bettencourt da Silva

ROMANIA

The EURACHEM Romania Association has actually 78 active members from different institutions:

- teaching staff from universities (University of Bucharest, Politehnica University of Bucharest, Transylvania University of Brasov, Ovidius University of Constanta, University of Iasi, Technical University of Iasi etc.)
- researchers from research institutes (INCDSB, ICECHIM, INMR etc.)
- specialists from national and/or local agencies for environmental monitoring, for public health, etc.
- practitioners from specialized and accredited laboratories

The main activities of EURACHEM Romania Association developed in 2018 were:

- events: the annual FORUM, the

General Assembly, workshop - publications:

- a. EURACHEM Informative Bulletin (in Romanian)
- Translation of EURACHEM-leaflets
- Development of the web site <http://www.eurachem.ro> in order to assure a constant and dynamic information of our collaborators.
- Organizing the successful Students Professional Contest for Analytical Chemistry
- Supporting activity for enlarging the national organization base.

Gabriel-Lucian Radu

RUSSIA

The entire period of 2017 and early 2018 in Russia, as well as in many other countries, was held under the aegis of waiting for the release of the new ISO / IEC 17025 standard. The smooth transition of Russian laboratories to the requirements of the new standard has already begun. The official translation of the standard into Russian is expected during this year. For the better understanding of the new standard's paradigm, the Association of Analytical Centers of Russia “ANaLiTiCa” (AAC-the main representative of Eurachem in Russia) has already held two seminars and trainings with a large number of participants within the framework of the Annual Meeting of the Association and the 16th International Exhibition of Laboratory Equipment and Chemical Reagents in Moscow (April, 2018). Such seminars will be held in many cities of Russia during the year. In June 2017, at the 39th Meeting of the APLAC MRA in Bangkok, the APLAC Mutual Recognition Arrangement by the AAC was signed. AAC “ANaLiTiCa” not only has confirmed its competence in the field of accreditation of testing laboratories (ISO / IEC 17025) and reference material producers (ISO / IEC 17034) again, but also gained recognition in the field of accreditation of Proficiency Testing Providers (ISO/IEC 17043). Since June 21, 2017, the Federal Accreditation Service “RusAccreditation” has become a signatory of the APLAC MRA Agreement, and since July 11, 2017, “RusAccreditation” is a full member of ILAC and a signatory of the Mutual Recognition Arrangement of ILAC MRA. The Federal Agency on Technical Regulating and Metrology (Rosstandart), the Scientific Methodological Center of the State Service for Reference Materials of the

RUSSIA, cont.

Composition and Properties of Substances and Materials of Ural Scientific Research Institute of Metrology (UNIIM) invite to participate The III International Scientific Conference "Reference Materials in Measurements and Technologies" (11 – 14, September 2018) in Ekaterinburg, Russia.
<http://www.conference.gssso.ru>. There is an agreement with the Springer publishing house about a special issue of articles on the subject of the conference.

*Vasilisa Baranovskaia
Maria Medvedevskikh*

SERBIA

The national representative (NR) of EURACHEM and EURACHEM WG is from DMDM, which is national metrology of Serbia and the institutional representative on EURACHEM. In 2018 the NR EURACHEM Serbia participated in legislation process of the new Serbian law on metrology sending an analysis and comment to a proposed draft of the law in the process of annotation. The NR EURACHEM Serbia comment was focused on the chemical measurements and metrology parts of the drafted law. NR EURACHEM Serbia also actively participated in the work of Institute for Standardization of Serbia, as a member of Technical committees for Air quality, Medical devices, Petroleum fuels and Natural gas. The translation of several ISO standards was carried out in 2018. In 2018. the translation of "The Fitness for Purpose of Analytical Methods – A Laboratory Guide to Method Validation and Related Topics" document have been finalized and waiting for the approval to be published on the website. Estimation of measurement uncertainty in chemical measurements method validation and selection and use of reference materials in chemical measurements trainings were given to the end users and laboratories related to the chemical measurements by EURACHEM representatives and other technical personnel from DMDM. The hard copies of Eurachem Newsletter were distributed to analytical laboratories in Serbia.

Jelena Bebić

SLOVAKIA

National Group EURACHEM Slovakia – one of the expert groups of the Slovak Society of Industrial Chemistry, Bratislava came back into its activities in the middle of the year 2016, after a nearly 4 years of its hibernation. Shortly after the reopening the new National Group (NG) EURACHEM Slovakia was formed and a new national 2017 plan of NG EURACHEM Slovakia was conceived as a frame focused mainly on the training, publishing and consultation activities.

According to the 2017 plan of activities NG EURACHEM Slovakia created and proposed the program of education for the Slovak Accreditation Body (SNAS) to train accessors and specialists of chemical testing laboratories. After the committee of the NG EURACHEM Slovakia signed an agreement of understanding with the director of SNAS to deliver special trainings for the leading accessors, accessors and specialists to implement the EURACHEM published documents and knowledge into the evaluation laboratory accreditation process. The program of education for the SNAS accessors was concentrated into 6 main training areas:

- A. Terminology in metrology and in the metrology legal acts (2 topics based on BIPM VIM:2012 and Slovak law on metrology revised in 2017)
- B. Methods of calibration or testing and measuring instruments (3 topics)
- C. Metrology (7 topics – traceability and calibration processes according to EURACHEM, ILAC, EA and OIML documents)
- D. Uncertainty of measurements (4 topics - model of measurements, evaluation processes in chemical and microbiology testing etc.)
- E. Results of testing (5 topics - application of PC programs, acceptance criteria and their implementation, reporting of the testing, etc.)
- F. Accreditation (3 topics – rules of accreditation in testing and calibration laboratories, requirements of the new ISO documents, etc.).

In May 2017 NG EURACHEM Slovakia offered an active co-operation to the Slovak Institute of Metrology, Bratislava in dissemination of the EURACHEM working group documents and recommendation for the chemical measurements and metrology into the chemical testing laboratories. No positive or negative reply was received from the head of the institute.

In September/October 2017 the NG EURACHEM Slovakia in cooperation with the Slovak National Office for Standardization, Metrology and Testing, Bratislava participated in legislation process of the new Slovak law on metrology sending an analysis and comment to a proposed draft of the law in the process of annotation. The NG EURACHEM Slovakia comment was focused on the chemical measurements and metrology parts of the drafted law, but there are still unsolved part of the legislation which the NG EURACHEM Slovakia is working on to be ready for the next lower level legislation process.

Within the proposed education program and in cooperation with the SNAS the NG EURACHEM Slovakia delivered a special one-day training for the leading accessors, accessors and experts specialised in evaluation of the chemical, microbiological and clinical testing laboratories in October 2017.

To transfer the EURACHEM working group documents and recommendation the NG EURACHEM Slovakia organized a special seminar on the Quality in Analytical Chemistry – an aid for accreditation In November 2017. Altogether 25 participants from accredited testing laboratories took part at the training. On the occasion of the event the Slovak translation of the EURACHEM/Citac Guide: Guide to Quality in Analytical Chemistry – An aid to Accreditation, 3rd edition (Slovak version) was published. Since January 2018 the Slovak version Guide has also been ready to be distributed to the chemical testing or calibration laboratories.

Dušan Kordik

SPAIN

During 2017, Eurachem Spain was involved in the following activities:

1. EURACHEM Spain, is integrated into the daily operations of EUROLAB-Spain and FELAB, the activities carried out by EURACHEM Spain should be understood as those carried out within the framework of the Spanish associations mentioned.
2. All EUROLAB-Spain partners have been regularly informed of all the information generated by EURACHEM, through circulars and newsletters.
3. Working Groups:
 - a. Pedro Pablo Morillas and Francisco Raposo into Validation WG.
 - b. Raquel Murtula into Proficiency Testing WG.

SPAIN, cont.

- c. Vicente Catalán into EEE-PT. Meeting in Alicante (May 2017)
- d. Estíbaliz Sastre into Reference Material WG.
- e. Pedro Pablo Morillas and Irache Visiers into Uncertainty WG.
4. Through FELAB there have been several meetings with the National Accreditation Body (ENAC) about different complementary documents that are applicable in the accreditation processes of the different sectors.
5. Legislative amendments have been made by both EUROLAB-Spain and FELAB, to different legal provisions of the Ministries and Autonomous Communities prior to their publication.
6. The training activities have continued, as well as informative activities, that affect the testing and calibration laboratories.
7. XIII SIMPOSIUM FELAB. Celebrated in Madrid on March 2nd, 2017.
8. EUROLAB-Spain and FELAB, are collaborating with RELACRE in the organization of the V Congress of Ibero-American Laboratories and International Congress of the Evaluation of Conformity that will take place in Lisbon, on October 17, 18 and 19 of 2018.

Alfonso González del Rey, Pedro Pablo Morillas

SWEDEN

The national organisation has about 25 members and we have had 2 meetings annually, one together with SWEDAC. Members of the national organisation takes part in the following groups

- EUROLAB: GA, TC Quality Assurance including WG ILC/PT, ad-hoc WG on ISO/IEC 17025
- Eurachem: GA, EC, WG on: Traceability and Uncertainty, Qualitative analysis, PT, Method validation, Uncertainty in sampling
- ISO CASCO: WG 44 Revision of ISO/IEC 17025
- ILAC: Laboratory Committee (ILAC LC), - EA Laboratory Committee (EA LC), Accreditation Committee (ILAC AIC), - Swedac - Two committees

This year an XRF user meeting - see further under NEWS (p. 8).

Bertil Magnusson, Elvar Theodorsson

TURKEY

The national representatives of EURACHEM GA and EURACHEM WGs are mainly from TUBITAK UME, which is national metrology of Turkey and the institutional representative on EURACHEM. There are more delegates in MVWG and MUWG from universities. In 2017- 2018, EURACHEM Turkey has been involved in the activities of the Education & Training Working Group, Method Validation Working Group, Measurement Uncertainty and Traceability Working Group. EURACHEM Turkey contributed to the work being carried out by EURACHEM ETWG on the revision of "Guide to Terminology in Analytical Measurement (TAM)" and on the revision of EURACHEM reading list. The translation of "The Fitness for Purpose of Analytical Methods – A Laboratory Guide to Method Validation and Related Topics" document have been finalized and waiting for the approval to be published on the website. EURACHEM MVWG delegate attended the meetings twice on 30 January, 2017, in Rome and 8 June, 2017. In the first meeting a presentation was done on "Introduction on the issues of need for validation of test kit" where information given in relevant standards and guides on the requirements of method validation and verification during the use of kits were provided. The preparation of the document "Draft checklist guide on selection of appropriate test kit" was decided. In the second meeting the presentation on the document, still on the preparation stage, was given. In the next MVWG meeting held on 13 February, 2018 in Rome, Italy, a presentation was done on more developed form of the document. In the same meeting it was requested to present a study in EURACHEM MVWG Workshop will be held during the IMSC2018 congress and TUBITAK UME will join to the workshop by presenting a study titled as "An example of Validation of an MS-Based Method". EURACHEM Turkey is a member of TURKAK PT committee, and has been involved in the activities within the committee. The documents "Proficiency testing – How much and how often?" and "Selecting the right proficiency testing scheme for my laboratory" translated into Turkish and published on EURACHEM web site. Estimation of measurement uncertainty in chemical measurements method validation and

selection and use of reference materials in chemical measurements trainings were given to the end users and laboratories related to the chemical measurements by EURACHEM representatives and other technical personnel from TUBITAK UME. In a 4th National Symposium and Exhibition on "Laboratory Accreditation and Safety", several presentations by EURACHEM delegates were done on method validation and use of reference materials and calibration certificates in laboratories.

Fatma Akçadağ, Oktay Cankur

UKRAINE

In 2017 Eurachem-Ukraine has organised a workshop on Legal and Organisational Basics of Metrological Activities within the frame of the 10th "LABCompLEX. Analytics, Laboratories, Biotechnologies, Hi-Tech" international exhibition. Our representatives have taken part in a number of other events related to areas of interest to Eurachem, including the conference Development of Quality Assurance Systems for Clinical Laboratory Examinations in Ukraine. Also the representatives of Eurachem-Ukraine continued participating in the international events related to metrology in chemistry, including meetings of ISO/TC 158 "Analysis of Gases", ISO/TC 193 "Natural Gas", technical committees of the Regional Metrology Organisation COOMET – TC 1.8 "Physical chemistry" and TC 1.12 "Reference materials", working groups of the Metrology Commission of the Inter-State Council on Standardization, Metrology, and Certification: on reference materials; interlaboratory testing; unity of measurements in healthcare. Terminology issues are still in focus. With regard to this subject, the following may be mentioned:

- ongoing discussion on Ukrainian metrological terminology;
- Eurachem-Ukraine's contribution to the discussion on the proposed expansion of the term "measurement" definition in the next edition of the VIM;
- translation of the Eurachem leaflet You talk, we understand – The way out of the tower of Babel. Another Eurachem leaflet translated recently into Ukrainian is Treatment of an observed bias. Further translations of Eurachem guides and leaflets are planned. Ukrainian representative is a member of the Eurachem Uncertainty and

UNITED KINGDOM

Eurachem activity in the UK is coordinated between the Analytical Methods Committee of the Royal Society of Chemistry (AMC) and LGC which leads the UK Chemical and Biological Metrology programme.

The AMC

(<http://www.rsc.org/Membership/Networking/InterestGroups/Analytical/AMC/?e=1>) has sub-committees concerned with sampling uncertainty/sampling quality, statistical methods and validation [of analytical methods] all of which complement interests and concerns of Eurachem. The AMC continues to publish Technical Briefs which reach all members of the Analytical Division of the RSC and are on-line for all to access and use. Briefs can be found by following the 'Technical Briefs' link:

<http://www.rsc.org/Membership/Networking/InterestGroups/Analytical/AMC/TechnicalBriefs.asp>.

Briefs are also published within the RSC Analytical Methods Journal. Six new Technical Briefs have been published in the year, including:

- three on method/techniques used within heritage science;
- the assessment of data normality;
- the proficiency testing of sampling; and,
- a periodic table of terms used within mass spectrometry.

Members of the AMC regularly receive the Eurachem Newsletter and information on Eurachem activity.

Activities associated with the UK Chemical and Biological Metrology programme are described on the LGC website at www.lgcgroup.com/nmi. This work forms part of the UK National Measurement System (see

<https://www.gov.uk/government/publications/national-measurement-strategy> for details).

Activities of particular interest to Eurachem in the year ending May 2018 include a range of training courses, including courses on measurement uncertainty, analytical method validation, statistics for analytical chemists and design of experiments. The programme also provides guidance documents and reports; these can be found at <https://www.lgcgroup.com/our-science/national-measurementlaboratory/publications-and-resources/#.WucSN9IrlCs>

Eurachem UK members have contributed actively to the following working groups:

- Education and Training (Chair)
- Measurement Uncertainty and Traceability (Chair)
- Proficiency Testing (Chair)
- EEE Proficiency Testing - "Proficiency Testing in Accreditation" (Chair)
- Qualitative Analysis (Acting Secretary)
- Uncertainty from Sampling
- Method Validation

Andrew Damant

Eurachem Week 2019



Eurachem General Assembly 2019, 23 – 24 May 2019 Tartu (Estonia)

From Thursday 23 May 2019 to Friday 24 May 2019 Eurachem Estonia is delighted to warmly invite you to the Eurachem 2019 scientific workshop and General Assembly in Tartu, Estonia. The location will be the Dorpat Hotel Conference Centre, Tartu, Estonia.

Full information about location and registration is available at the workshop website, <http://eurachem2019.akki.ut.ee/>.

A scientific workshop on the topic of "Validation of targeted and non-targeted analysis methods" will also take place on 20 and 21 May, in conjunction with the Eurachem General Assembly 2019. The workshop is dedicated to the **30th anniversary of Eurachem**.

Overview of the program is available at:

<https://eurachem2019.akki.ut.ee/scientificworkshop/>

and registration is open at <https://eurachem2019.akki.ut.ee/>.

Other upcoming meetings

Eurachem workshop on "Uncertainty from sampling and analysis for accredited laboratories" 19-20 Nov. 2019, BAM, Berlin, Germany

The workshop will cover uncertainty from sampling, uncertainty in analytical measurement, and new provisions for decision rules in ISO/IEC 17025:2017. The recently revised Eurachem Guide "Measurement uncertainty arising from sampling" will be presented and new approaches for uncertainty estimation, focussing on both high uncertainty and asymmetry will be discussed as well as conformity assessment and decision rules."

Eurachem Week 2020: 25 – 29 May 2020 Bucharest (Romania)

10th PT workshop: 12-15 October 2020, Windsor (UK)

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Eurachem Member Countries



Eurachem countries in green,
Associate Members Armenia and
Georgia not displayed

To get involved in Eurachem in your nation, contact the Eurachem secretariat for details on how to contact your national representatives or visit the Eurachem website www.eurachem.org.

