

Eurachem

A focus for analytical chemistry in Europe

Words from the Chair....

Dear Eurachem members, 2019 marked the 30th anniversary of Eurachem. This was joyfully celebrated in Tartu, thanks to the hosting of the General Assembly by our Estonian members, as reported in this issue of the newsletter. Highlights of the celebration, beside a beautiful cake!, were the talk given by Alex Williams, Honorary Life Member of Eurachem, providing us with his insight about how Eurachem began, and a photo-show of more than 100 pictures, covering most of Eurachem life, put together by Kyriacos Tsimillis, Ricardo Bettencourt da Silva and Isabelle Verduyck, EC members. These pictures, taken together, provide a striking visual impact of how many people, from now 35 member Countries, have volunteered their time, efforts, competence and challenges to Eurachem, to implement its mission to provide a forum for discussing metrological traceability and quality issues in analytical sciences, from which new approaches could be developed.

Over the years, these efforts produced 13 authoritative guides and several short informative documents, made freely available to everyone interested. Most of this guidance was competently translated into several languages, due to the initiative of national representatives and even organizations outside Europe, thus helping to overcome language barriers hindering harmonised knowledge and good laboratory practices. Theory is good but

face-to-face discussions and practice are better. Only over the last 10 years, Eurachem held 15 workshops covering all aspects of analytical quality and more are planned. Increasingly, we see attendance also from countries outside Europe.

The celebration of the 30th anniversary is also a time to stop, look around us and think about the future. Over the last 10 years dramatic changes are affecting not only our economies, but the way we live, think and feel. The increasing impact of information technology promises countless benefits, however, its fast development may also generate new gaps in the understanding and managing of processes at all levels.



Marina Patriarca, Vicki Barwick and David Milde cutting the Eurachem 30th Anniversary cake.
Photo: A. Brzyski

On the other hand, new demands are born in the analytical community, since the complexity of the analytical output (the measurement results) increases and so do the questions expected to be

answered (the client's issue). Two of our latest workshops addressed the new challenges in assuring the quality of the production, analysis and interpretation of analytical data. Both occasions attracted a high number of young people. Next year, thanks to the kind invitation of Eurachem-Romania and the University Politehnica of Bucharest, the GA Workshop will again be an opportunity to attract young people. A new Eurachem generation is growing.

Last year, for the first time, Eurachem chose two ladies as Chair and vice Chair: another sign of the changes in the world around us. Beyond matters of principles, it has been shown that attracting more women into scientific education and leading positions has a positive impact on economic growth in the European Union. Beside other issues, the lack of role models is one of the reasons hindering women and girls from taking the lead. Thank you for your choice that contributes to fill this gap and demonstrates that Eurachem is ready for the future! Enjoy your reading!

Marina Patriarca

News

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Eurachem Week 2019

Workshop on „Validation of targeted and non-targeted methods of analysis”, 20-21 May 2019

The Eurachem Week 2019 (<https://eurachem2019.akki.ut.ee/>) took place in the Dorpat Conference Centre in Tartu, Estonia on 20-24 May. It was the first time that the Eurachem General Assembly (GA) and workshop were held in Estonia.

The workshop was organised by the University of Tartu along with the Eurachem Method Validation Working Group. The organisation work was conducted in the framework of the consortium Estonian Centre of Analytical Chemistry (AKKI, www.akki.ee) and was supported by the companies Quantum, LanLab, Ordior, Bipea, Bruker and Eurofins.

The workshop was relevant to people from a wide range of fields who work either with targeted or non-targeted methods of analysis. The aim of the workshop was to understand the current state of validation procedures used for targeted and non-targeted methods as well as to map the future challenges related to non-targeted methods. Approximately 160 people attended from 42 countries in Europe as well as Asia, North America, South America and Middle East. The farthest participants were from Fiji, the Philippines, Uruguay and Brazil.

We are particularly pleased by the large number of students attending: altogether close to 50! The international master's programmes Excellence in Analytical Chemistry (<https://www.analyticalchemistry.eu/>) and Applied Measurement Science (<https://ams.ut.ee/>) were both heavily represented: the majority of students of those programmes participated in the workshop.

The workshop included 13 oral presentations from established researchers, young scientists as well as industries. Together with 22 posters all presentations reflected the current and potential future developments related to methods validation. All the material is now available on the Eurachem website under the section «Completed events». Each day a Working Group session was organised with 3 topics in parallel. On the first day topics such as traceability, validation of non-targeted methods and recent instrument developments were covered. The second day focused on the technical aspects of method validation and data analysis as well as evaluating the limit of detection and limit of quantification. All sessions raised new issues and challenges related to non-target method validation. The workshop clearly was also very inspirational for Eurachem from the point of view of preparing new guidance – since the topics related to non-targeted analysis are still essentially not covered by official guidance documents.

The Workshop dinner was held on 20 May 2019 in the AHHA Science Centre to celebrate not only 30 years of Eurachem but also the World Metrology Day – a very special one, because the new definitions of the kilogram and mole became official on that day.

All presenters were encouraged to submit their work for publication in the journal Rapid Communications in Mass Spectrometry, which will publish a special issue for the Eurachem workshop.

*Ivo Leito & Riin Rebane
Eurachem Estonia*



Attendants of the workshop «Validation of targeted and non-targeted methods of analysis»
Photo: M. Viigimaa.



Scientific show at the workshop dinner, AHHA Science Centre.
Photo: M. Viigimaa.

The General Assembly, 23-24 May 2019



Eurachem General Assembly participants.
Photo: M. Viigimaa

Introduction

On the occasion of the 30th anniversary of Eurachem, 35 delegates from 23 countries attended the 35th General Assembly at the Dorpat Conference Centre in Tartu (Estonia) on 23-24 May 2019. Armenia, Croatia, Denmark, Greece, Hungary, Latvia, Lithuania, Norway, Serbia, Slovakia and Slovenia were not represented at the GA this year. The event was kindly organised by Prof. Ivo Leito and Dr. Riin Rebane (University of Tartu, AKKI). Dr. Alex Williams, co-founder and Honorary Life Member of Eurachem, described to an attentive audience how Eurachem was born and developed over the years. The Discussion Forum focused on the topic of “Metrological Traceability of Quantitative and Qualitative Analysis”, presented by the Chairs of the Measurement Uncertainty & Traceability Working Group and the Qualitative Analysis Working Group. Eurachem Full Membership was extended by GA vote to European countries having an Association Agreement with the European Union: Georgia, Serbia and Ukraine were welcomed as Eurachem Full Members. The GA also voted favourably to the candidature of the Dutch

association Fenelab to join Eurachem: The Netherlands is again part of the Eurachem family. Eugenia Eftimie Totu (Romania) and Bertil Magnusson (Sweden) were re-elected as members of the Executive Committee and Francesca Rolle, Eurachem Secretary, was confirmed as Treasurer for 2019. Caroline Laurent (France) was appointed as financial examiner for 2019-20.

Progress on Eurachem work items

The revised versions of the Eurachem Guides “Metrological Traceability in Chemical Measurement” and “Measurement Uncertainty Arising from Sampling” were presented to the GA members. Updates on other guides under review were also given: “Quality Assurance for Research and Development and Non-routine Analysis”, “Terminology in Analytical Measurement”, “Selection and Use of Reference Materials”.

Marina Patriarca, Eurachem Chair, with Nino Manvelidze, Georgia (right) and Ovsiy Levbarg, Ukraine (left).
Photo: F. Rolle

Presentations from Liaisons and Stakeholders

Besides national members' reports, the delegates received information on the current activities of the Eurachem WGs, of the EC JRC and of several Eurachem Liaisons and Stakeholders (CITAC, EA LC, EuChemS, Euramet TC-MC, ILAC/LC and ILAC/AIC, JCTLM, ISO REMCO and NMKL). After all this hard work, GA participants enjoyed a pleasant dinner at the restaurant “Polpo”! Many thanks to the organisers and to all Eurachem Members, Liaisons and Stakeholders for their contribution to this successful meeting! The Next General Assembly will be held in Bucharest, Romania, on 28-29 May 2020.

Eurachem Secretariat



Eurachem Workshop «Uncertainty from sampling and analysis for accredited laboratories»

BAM, Berlin (Germany), 21-22 November 2019

The two Working Groups, Sampling uncertainty and Measurement Uncertainty and Traceability, together with BAM and Eurolab Germany, organised this workshop in Berlin on 19-20 November 2019. The workshop was well attended, with over 130 participants from 37 different countries.

The workshop consisted of a mixture of plenary lectures, parallel discussion sessions and poster sessions; a total of about 45 oral and poster presentations.

The first day centred on uncertainty from sampling (UfS) and presentation of the revised guide published this year. The second day focused on estimation and use of uncertainty in general.

When taking into account sampling the relative expanded uncertainty, U can easily be very high. This was discussed in detail in many presentations. One way to handle this problem is to use the “uncertainty factor” described in the Sampling Uncertainty Guide; its application can be summarised below.

| Uncertainty | u % | U % | Handling |
|-------------|----------|----------|-----------------------|
| “Low” | < 15 | < 30 | As usual |
| “Medium” | < 40 | < 80 | $^F U$ or \log_{10} |
| “High” | > 40 | > 80 | $^F U$ or \log_{10} |

u is the standard relative uncertainty
 U is the expanded relative uncertainty
 $^F U$ is the uncertainty factor

Table: Summary on how to handle low, medium and high levels of relative uncertainty.

Note that different application areas may have different thresholds for what is considered “low” uncertainty. The ranges in Table 1 were, however, convenient for workshop discussions.

Another issue raised at this meeting was the real distribution of analytical results. Although a normal approximation is often assumed, a lognormal or other 'skewed' distribution is also possible. In practice, real chemical measurement results often fall somewhere between these two theoretical distributions. Fortunately, for a relative expanded uncertainty below about 30 % the difference is marginal. At higher uncertainties the distribution tends to be more clearly asymmetric. A typical example is microbiology where, although a Poisson distribution is theoretically expected, one often uses \log_{10} calculations for uncertainty as a convenient approximation. This results in a skewed reported

interval (e.g. -50 % to + 100 %).

This is very similar to the uncertainty factor ($^F U$) that is described for more general use in the Guide, except that the uncertainty factor is more simply calculated using the natural logarithm (\log_e).

Sampling and sampling uncertainty are more important than previously in the current ISO/IEC 17025:2017. There were two presentations from accreditation agencies describing the new requirements in more detail. It was clear that there is much to do to help laboratories understand the idea of uncertainty due to sampling; for many, this is a new idea.

Compliance assessment is also more stringent in ISO/IEC 17025 and one lecture and a well-attended parallel session considered this compliance issue.



The organisers, from left to right: Mike Ramsey (Eurachem), Silke Richter (BAM), Bertil Magnusson and Steve Ellison (Eurachem). Photo: BAM

Some items requiring further work were identified by the Workshop. These items included:

- further developing methods of estimating UfS to address the issues raised by measurements made in new situations (e.g. in situ, on site, and at the micro-scale) and also in new sectors of application (e.g. pharmaceuticals, microbiology);
- further development of the ways of expressing high levels of uncertainty;
- encouragement of integrated management of primary sampling as part of the whole measurement process;
- compile UfS estimates across different sectors to identify useful predictors of sampling uncertainty to inform regulation.

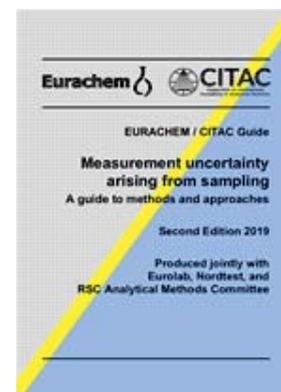
As usual, the presentations and posters from the workshop are available on the Eurachem website.

B. Magnusson, M. H. Ramsey and S. L. R. Ellison

New editions of Eurachem Guides

Second Edition of Eurachem Guide on Uncertainty from Sampling

The second edition of the Eurachem/CITAC Guide on Measurement Uncertainty arising from Sampling (UfS) has recently been published [1]. Preparation of this new edition was primarily initiated to explain several recent research developments, and to show how they can be integrated into good practise. It retains the same basic approach and structure as the first edition of 2007. Both editions are based on the general concept that primary sampling is the first part of the measurement process, and thus an important contributor to the uncertainty of any measurement value. The two main approaches for estimating UfS, are still based upon either empirical methods or numerical modelling. Six worked examples of both approaches are given across a range of application sectors, including the sampling of food, animal feed, soil and water. Two of these examples been partially updated to illustrate some of the research developments. Four main research developments in this area have been included in the second edition. One significant new development is the option of using the Uncertainty Factor as an alternative way to express measurement uncertainty. The upper and lower confidence limits of a measurement value are expressed by multiplying and dividing the measurement value by the uncertainty factor, rather than by the traditional approach of adding and subtracting the uncertainty. This approach is more accurate when the relative expanded uncertainty value is large, typically over 20 %, and also where the frequency distribution of the uncertainty is approximately log-normal rather than normal. These two conditions often apply to measurement uncertainty that arises from the sampling process, particularly when the spatial distribution of the analyte in the test material is substantially heterogeneous. The Guide also explains two options for how measurement uncertainty can be calculated by adding the component arising from sampling, expressed as an uncertainty factor, with that arising from chemical analysis, expressed in the traditional way as a relative uncertainty.



A second new development in the methods described in the Guide is the use of an unbalanced experimental design to reduce the cost of estimating UfS by the duplicate method. The first edition of the Guide described the use of a balanced design for the empirical estimation of the measurement uncertainty as a whole, and its two components in the sampling and analytical steps. This balanced design has analytical duplicates on both of the two sample duplicates. The new edition of the Guide stresses the advantage of using an unbalanced design, with an analytical duplicate on only one of the two sample duplicates. This design reduces the extra cost of estimating the uncertainty by 33 %.

The third development is a more comprehensive method for the estimation of UfS that uses measurements made in Sampling Proficiency Testing (SPT). In the first edition of the UfS Guide this approach was discussed in theory, but the new edition now refers to the first practical example of the use of SPT data for UfS estimation [2]. In this approach multiple samplers each apply whatever sampling protocol they consider appropriate to achieve the same stated objective for the same sampling target. Using a balanced design across all of the different samplers, it is then possible to include the 'between-sampler' bias in the estimate of UfS, in addition to the components that were previously included. The first practical SPT (concerned the measurement of the moisture content of a 20-ton batch of fresh butter) gave an uncertainty estimate that was factor of 2.2 larger than that from the duplicate method applied to just a single sampler.

The fourth development has been the application of UfS estimation to a wider range of measurement types. These include measurements made: (a) in situ (e.g. by field sensors without removing a sample) (b) on site (e.g. in a field laboratory on a removed sample) (c) passive measurements of radioactive decay, and (d) at the microscopic scale (e.g. PXRF in mm scale, and SIMS at micron scale).

*Prof. M. H. Ramsey
Chair, UfS Working Group*

[1] M H Ramsey, S L R Ellison and P Rostron (eds.) Eurachem/EUROLAB/ CITAC/Nordtest/AMC Guide: Measurement uncertainty arising from sampling: a guide to methods and approaches. Second Edition, Eurachem (2019). ISBN (978-0-948926-35-8). Available from <http://www.eurachem.org>

[2] M H Ramsey, B Geelhoed, A P Damant, R Wood (2011) Improved evaluation of measurement uncertainty from sampling by inclusion of between-sampler bias using sampling proficiency testing. *Analyst*, 136 (7), 1313–1321. DOI:10.1039/C0AN00705F



New Editions of Eurachem Guides

Eurachem publishes revised guidance on metrological traceability

Eurachem has recently issued an updated edition of the Eurachem/CITAC Guide "Traceability in Chemical Measurement". The Guide is intended to assist laboratories in meeting the requirements on traceability of results given in ISO/IEC 17025, giving principles and detailed guidance on establishing metrological traceability in quantitative chemical analysis. Metrological traceability links measurement results to reference values – usually fundamental units of measurement. Results can be compared through their relationship to that reference. Metrological traceability is accordingly important in almost all quality systems for measurement.

The fundamental principle of the Eurachem Guide is that, given a validated equation for the measurement result (however simple) and a list of conditions – times, temperatures etc. – that must be set for a valid result, all that is necessary to achieve metrological traceability is to calibrate or control the values in the calculation and the conditions of measurement to sufficiently small uncertainty for the purpose at hand.

The guide gives six key steps for establishing traceability:

- i) Specifying the measurand, scope of measurements and the target measurement uncertainty;
- ii) Choosing a suitable method of estimating the value, that is, a measurement procedure with associated calculation - an equation - and measurement conditions;
- iii) Demonstrating, through validation, that the calculation and measurement conditions include all the "influence quantities" that significantly affect the result, or the value assigned to a standard;
- iv) Identifying the relative importance of each influence quantity;
- v) Choosing and applying appropriate measurement standards;
- vi) Estimating the uncertainty.

Though aimed principally at testing and measurement laboratories, these principles are expected to apply from routine analysis to basic research.

This second edition is a minor revision and amends the Guide to reflect revised terminology introduced in the third edition of the International Vocabulary of Metrology (VIM).

What can we say about metrological traceability? A Eurachem survey

Metrological traceability is a well-known concept in metrology and accreditation. There is a newly revised Eurachem guide on the topic (see the sister article in this Newsletter). But while the concept of metrological traceability is simple in principle, it can become intricate in practice. These complexities often appear when we discuss whether a result is metrologically traceable or not, or ask to what reference, or references, a result can be considered traceable.

To explore the range of opinion and identify needs for further guidance, Eurachem has run a voluntary-response, scenario-based online exercise to probe perceptions of traceability in the metrology community. The survey used simple scenarios to probe views on traceability. For example, we proposed a simple scenario in which a test piece or sample is measured using a measuring instrument calibrated with properly certified calibration standards, and in addition uses a certified reference standard as a quality control (QC) check. We then asked participants about which of the two measurement standards the results would be considered traceable to. The survey attracted about 470 respondents, from a range of measurement sectors and organisation types.

The results confirm that different respondents can hold very different views. For example, for the scenario above, most respondents were split about equally between describing traceability as "Only to the calibration standard", and to "both the calibration standard and the QC standard" (see the figure below). Even the simplest scenario showed appreciable differences, and more complex scenarios showed greater disparity – perhaps reflecting substantially different views on the concept. Interestingly, different measurement sectors showed similar levels of disparity, though there were some clear differences in response profile for different organisation types (testing lab, calibration lab, accreditation body etc.). What does this mean? The responses do not call into question the implementation of traceability in working laboratories. But they do say a lot about possible statements of traceability. Clearly, there is work to do to understand the different views that motivated different answers. Different statements may be correct in the respondent's own framework. And at least for the moment we – and perhaps accreditation agencies – must acknowledge that different views could lead to different statements of traceability, an important issue for calibration and CRM certificates.

A summary of the survey responses will be available on the Eurachem website at <https://www.eurachem.org>; a critical review is planned for the future.

*S Ellison
Chair, Measurement Uncertainty and Traceability WG*

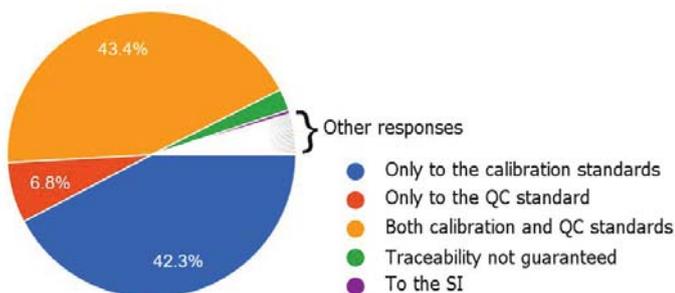


Figure: Respondents were asked to pick the best description of metrological traceability in a scenario where the equipment was calibrated with a traceable measurement standard and a different certified standard was used for quality control. 454 respondents replied to the question.

New supplements to the Eurachem Guide on the Fitness for Purpose of Analytical Methods published

The 2nd edition of the Eurachem 'Fitness for Purpose of Analytical Methods – A Laboratory Guide to Method Validation and Related Topics' was published in 2014. Since then the Method Validation Working Group has identified areas where extra guidance would be useful. These topics are being addressed through supplementary guidance documents which should be read in conjunction with the main Guide.

Blanks in method validation

Blanks are an important tool and are used in the determination of most performance characteristics during a validation process. They are also often included in each analytical run during routine use of the measurement procedure. The Method Validation Working Group have therefore prepared a document 'Blanks in Method Validation' which supplements the guidance already given in The Fitness for Purpose of Analytical Methods guide to method validation. In this document the different blanks which may be used during method validation (see figure) are described. They include reagent blanks, which may be used to determine or to correct for the effect of the reagents used during the measurement procedure, solvent blanks, which may be used to monitor carry over, or sample blanks which may be used during the determination of performance characteristics such as trueness, precision and selectivity. A laboratory analyst may consult this document to help them select the blanks they will use for their own particular validation needs. The document also recognises that, in certain situations, it can be very difficult to source a sample blank. The document discusses the use of blank correction, correction factors for calibration curves or the use of simulated blanks in situations where a sample blank is not available.

Helen Cantwell

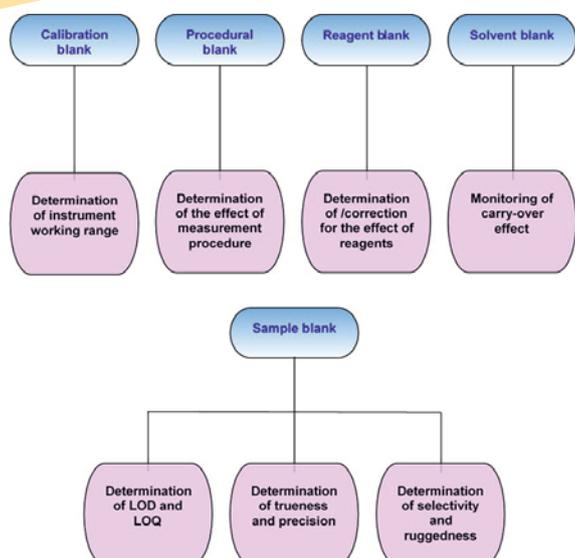


Figure: Types and uses of blanks in method validation.

Planning and reporting method validation studies

Planning is an essential stage in the validation process. Before starting any experimental work, the aim should be to have a clear plan for the entire validation study. This should cover the performance characteristics that will be studied, the target value for each performance characteristic, the materials that will be analysed, the level of replication and order of the experiments, any statistical analysis that will be used, and how the method will be judged as being fit for purpose. Careful planning can also minimise the effort involved through designing experiments that provide information on more than one performance characteristic.

The supplement provides guidance on the planning and reporting of validation studies. The document includes a template which can be used to assist with planning the evaluation of the chosen performance characteristics. The template is structured such that once the experimental work has been completed, the document can be easily converted into a validation report. The template includes the following sections:

- Title page: Includes the method title and reference, and an overview of the method status and purpose of study.
- Analytical requirement: To provide information on the required scope of the method and its application, the purpose of the study, the performance characteristics to be studied, the method performance requirements, any existing performance data and the materials available for the study.
- Performance characteristics: There is a separate section for each performance characteristic. These sections should include the detail of the validation study (the performance criteria, materials to be analysed, number and order of the measurements, how the data will be evaluated, and how the performance will be assessed).
- Summary: To provide a summary of the values and/or other information obtained for each performance characteristic and a final statement on whether the aims of the study have been achieved and whether the method is fit for purpose.
- Approval: Sign off of the validation plan and the validation report.
- Learning points: To highlight any key information that has arisen from the validation, such as critical steps in the method or requirements for future quality control.

The supplement also contains a checklist to assist with validation planning, and an example of a nested experimental design which can be used to evaluate a number of performance characteristics.

Vicki Barwick

Critical Issues of the Accreditation Standards - ISO/IEC 17025:2017 and ISO 15189:2012

On 21-22 February 2019, the first event of the Eurachem 30th anniversary year, a two-day training course on “Critical issues of the accreditation standards – ISO/IEC 17025:2017 and ISO 15189:2012”, took place in Nicosia (Cyprus), organized by the Pancyprian Union of Chemists, Division of Quality Assurance and Eurachem. Welcomed by the warm Cypriot hospitality, the 40 participants were actively involved in practical sessions and discussion as well as being given the opportunity to present their work, the problems they are facing and the solutions they give. Participants came from a number of countries, both from Europe and its neighbourhood, namely Belarus, Belgium, Georgia, Greece, Lebanon, Norway, Palestine as well as from Cyprus.

The speakers (Marina Patriarca, Ricardo Bettencourt da Silva, Brian Brookman, Despina Charalambous and Kyriacos Tsimillis) addressed the changes in ISO/IEC 17025 and their potential reflections on medical laboratories, illustrating some similarities with the current ISO 15189 and presented Eurachem guidance related to key technical issues of the new standard. The presentations were uploaded on Eurachem's website.



Participants in the training course. Photo: K. Tsimillis

Participants were encouraged to make their proposals for future training; some topics were:

- uncertainty and internal quality control in microbiological laboratories
- calibration certificates
- further elaboration on ISO 15189
- PT schemes with a small number of participants
- method validation
- uncertainty and measurement range
- practical aspects in risk assessments
- clinical microbiology.

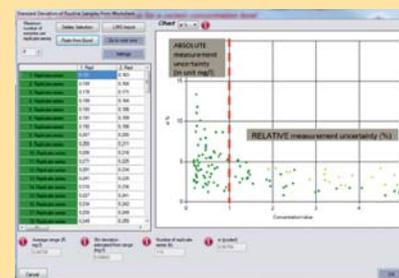
Kyriacos Tsimillis

New software for Measurement Uncertainty released

The Finnish Environment Institute (SYKE) has developed a computer program MUKIT for measurement uncertainty estimation based on quality control and validation data. The approach presented in the software program is based on the calculation methods presented in the Nordtest 537 report. The new version (v3.0) is now available for downloading free of charge on the Internet at www.syke.fi/envical/en and the Nordtest guide can be downloaded from the website www.nordtest.info.

In the updated version of MUKIT, the software calculates the repeatability component using the pooled standard deviation as presented in the latest edition (Ed.4) of Nordtest TR537 guide. The user is also able to choose the calculation approach in relative or absolute terms. This is a highly needed feature, since the measurement interval usually has to be divided into several ranges. In the lower concentration range for instrumental methods the absolute measurement uncertainty is usually constant while at higher concentrations the relative uncertainty is constant.

Teemu Näykki, SYKE



Membership News

- Eugenia Eftimie Totu (Romania) and Bertil Magnusson (Sweden) are appointed as Executive Committee members for two years.
- The Netherlands is back on board with Bernd Kroon as the new representative.
- Prof. Georgios Theodoridis succeeded Anna Stefanidou as the national representative for Greece.
- Helen Cantwell succeeded Barbara O'Leary as national representative for Ireland.
- Dr. Jan Sunderkötter is the second new representative for Germany, succeeding Rüdiger Kaus.
- Francesca Rolle has been confirmed as Treasurer until 2020.

Working Group Reports

Eurachem Education and Training Working Group

The Education and Training Working Group has held two successful meetings during 2019. During the year the group members have made progress on a number of activities. Revision of the guide 'Terminology in analytical measurement: Introduction to VIM 3' is nearing completion. A draft was circulated to the General Assembly members for approval in June. These comments are being addressed and it is hoped that the 2nd edition will be published in 2020. 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. The revision of the guide was the main focus of the Working Group meeting held in January. Development of the 4th edition of the guide will be a key activity for the WG over the coming year.

Two leaflets produced by the Working Group are available on the website (on terminology and on the revision of ISO/IEC 17025). These have both been translated into a number of languages. Templates are available from the Working Group chair for any members wishing to prepare a translation.

The Working Group is supporting two events during the coming year. The group collaborated with the Eurachem Cyprus Committee to deliver a two day training course on accreditation of analytical, microbiological and medical laboratories – ISO/IEC 17025:2017 and ISO 15189:2012, in February 2020 in Nicosia. The group is also working with Eurachem Romania to deliver a workshop on 'Quality Assurance for Analytical Laboratories in the University Curriculum' in Bucharest in May 2020 (in conjunction with the Eurachem General Assembly).

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 – the latest revision was published in January 2019.

The current members of the Working Group are listed on the Education and Training Working Group page on the website. During the year we have welcomed Emanuela Gregori (Italy) and Nino Manvelidze (Georgia) to the

group. If you are interested in joining the group, please get in touch!

*Vicki Barwick
Chair, Eurachem ETWG*

Method Validation Working Group

At present, the MVWG consists of 26 members from 15 European countries (recently 2 new members from Greece), with a "core group" of around 15 persons being the main active ones, participating in the discussions and contributing with written material.

This year the MVWG has met twice, on February 14 – 15 in Rome (8 attendees) and on October 3 – 4 in Paris (12 attendees), mainly focusing on the following tasks:

Revision of the 2nd ed. of the FfP Guide:

- discussing the extension of a revision (e.g. including the new supplements or leaving them as separate documents);
- elaborating and distributing a survey on the needs for revision (too few and mainly non-European responses were received in the first step (Sep. 19). The survey has been extended to end of 2019);
- starting the process of letting group members suggest changes to assigned part(s) of the guide;
- Editors appointed (Guy Lamon, Belgium and Helen Cantwell, Ireland)

Finalization of two supplements to the FfP Guide:

- "Blanks in method validation"
- "Planning Method Validation studies"

Available on website (stay as supplements?)

Discussing supplement on Bias:

- Lengthy discussions (over several meetings)
- Final draft to be prepared for next meeting, probably to be issued as a separate supplement

Other activities:

- Discussing checklist for selection of appropriate (valid) test kits, to be included as an annex in next revision of the guide.
- Starting work on new supplement on validation of microbiology methods
- Discussing leaflet on "The

importance of Method validation"

- Co-arranging Workshop on "Validation of targeted and non-targeted methods of analysis" in Tartu, Estonia, May 20 – 21, 2019 (Member of Scientific Committee, Assisting on setting up program, Contributing to program)
- Contributing to joint AOAC-E & NMKL symposium on "Speeding towards –omics... Chemical and microbiological food analysis", June 3 – 4 in Oslo, Norway. (Planning and accomplishing a 1.5 h workshop on "What is "Fitness for Purpose" of an analytical method?" with approx. 60 participants)
- Establishing an internal strategy for dealing with draft documents, based on an agreed scope for a new draft and appointment of a task group.

More subjects related to Method validation are "in the pipeline" for further elaboration, but focus during the next period will probably be on the revision of the guide.

*Lorens P. Sibbesen
Chair, Eurachem MVWG*

Measurement Uncertainty and Traceability Working Group

Principal activities

The main activities since May 2019 have been:

- Publication of the revised Traceability guide;
- Review and initiation of revision of the compliance guide;
- Continuing development of the Guide for Uncertainty using trueness and precision data;
- Completion and publication of an information leaflet on Setting Target Uncertainty;
- Background work relating to large relative uncertainties;
- Preparation of a summary report on the 'perceptions of traceability' survey carried out in early 2019
- Preparation (with the sampling uncertainty WG) for the November 2019 workshop on uncertainty from sampling and analysis (see below).

Workshop on uncertainty from sampling and analysis

The workshop proved successful, attracting approximately 130 attendees from 37 countries. The workshop included over 30 technical presentations and 20 contributed

Working Group Reports

posters. The local organisation was excellent and the WG are grateful to the staff at BAM and at Eurolab-DE who managed facilities, financial administration and social events. Following up the workshop, the WG have agreed with the editors of the journal "Accreditation and Quality Assurance" to invite manuscripts for a special issue of the journal in 2020.

Meetings

The WG met in May 2019 in conjunction with the GA, in September 2019, jointly with the Sampling Uncertainty WG, to finalise the programme for the 2019 workshop on uncertainty from sampling and analysis, and on 2019-11-18 to finalise workshop management and agree the next steps for the Compliance guide (now under revision) and the draft guidance on measurement uncertainty from in-house precision and trueness information. The WG will next meet in March 2020 in the UK, with dial-in options for those unable to attend in person. The meeting will progress technical work on the compliance guide, now under revision, and the guidance on uncertainty evaluation using precision and trueness data, particularly on bias.

Guides

The Eurachem Working Group on Measurement Uncertainty and Traceability is responsible for four current Eurachem guides and is developing further guidance:

- Quantifying Uncertainty in Analytical Measurement (2012);
- Traceability in Chemical Measurement (2019);
- Use of uncertainty information in compliance assessment (2007);
- Setting target measurement uncertainty (2015);
- Evaluation of measurement uncertainty from in-house precision and trueness tests (in development).

The revised Traceability guide was approved by the GA and Exec in May 2019 and published on the website in June.

The uncertainty compliance assessment guide from 2007 has been reviewed, resulting in a decision to revise the guidance to take account of new international guidance, changes in terminology and (following the WG meeting on 2019-11-18) to add basic guidance on the consequences of different decision rule choices for false decision rates. The other two current guides, on

uncertainty in analytical measurement and on target uncertainty, are not currently due for review.

The provisions on use of precision data in the draft guide "Evaluation of measurement uncertainty from in-house precision and trueness tests" have progressed; the WG next hope to focus on the technical provisions for use of trueness data.

Liaisons

The WG has now established formal liaison with ISO TC69/SC6/WG 7 (statistical methods to support uncertainty evaluation); the named contact is B Magnusson. This will allow the WG to review and contribute to relevant ISO documents.

*Steve Ellison
Chair, Eurachem MUT WG*

Proficiency Testing Working Group

The Eurachem Proficiency Testing Working Group (PTWG) has continued to make progress on a number of work activities:

- A paper/article is being drafted based on the results from a survey carried out, along with a literature search, on performance evaluation in qualitative and interpretative PT schemes, to discuss the issue of needing greater harmonization of approaches. The aim would be to present as a poster at the next Eurachem PT Workshop followed by publication in ACQUAL.
- Two new leaflets have been published on the Eurachem website:
 - Use of surplus proficiency test items;
 - How to investigate poor performance in proficiency testing;
- Translations of these new leaflets, and those the previously published continue;
- Plans are well underway for the 10th Eurachem PT Workshop, to be held 12th to 15th October 2020 in Windsor, UK.

*Brian Brookman
Chair, Eurachem PTWG*

Reference Materials Working Group

After the kick-off meeting in Rome, 28 March 2018, attended, either in person or via a web connection, by 15 members out of 19, work slowed down owing to unforeseen additional work commitments of the Chair overlapping with the responsibilities of

Eurachem Chair. These difficulties were later overcome and the following activities have taken place.

- The webpage of the RMWG is now active. It contains the Terms of Reference of the RMWG and the list of members.
- The draft minutes of the kick-off meeting were distributed.
- A draft timetable for the revision of the Eurachem Guide "Selection and use of Reference Materials" (to become Eurachem/CITAC Guide "Selection and use of Reference Materials") over a period of two years (June 2019 – May 2021) was prepared and distributed for comments.
- A draft list of topics to be covered for the revision was prepared, based on the structure agreed at the kick-off meeting and circulated to members for comments and to indicate their preferences, on which basis "Task Groups" will be formed to write the corresponding sections of the revised Guide.
- Information on the RMWG activities was sent to three more interested persons (Dr. Mike Sargent, Dr. Ernst Halder, Dr. Silvia Orlandini).

*Marina Patriarca
Chair, Eurachem RMWG*

Qualitative Analysis Working Group

The Qualitative Analysis Working Group is still working on the draft guide on "Assessment of the performance and uncertainty in qualitative chemical analysis". During the last year it was revised the introductory part of the guide, namely the division of qualitative analysis in three types: Analysis based on qualitative information, quantitative information or both types of information. This revision had an impact on the subsequent sections of the guide. At this moment, the guide is being finalised to be submitted to GA members for comments in autumn 2019.

The working group met in Dublin (05/2018), London (03/2019) and Tartu (05/2019).

Ricardo Bettencourt da Silva and Steve Ellison were elected for leading the activity of this group, for the next two years, as chair and secretary, respectively.

*Ricardo Bettencourt da Silva
Chair, Eurachem QAWG*

Uncertainty from Sampling Working Group

The Second Edition of the UfS Guide has now been published (*as discussed here on page 5), and the content has been discussed at the workshop in Berlin in November (discussed on page 4).

*Ramsey M. H., and Ellison S. L. R. (eds.) (2019) Eurachem/EUROLAB/ CITAC/ Nordtest/ AMC Guide: Measurement uncertainty arising from sampling: a guide to methods and approach, Second Edition, Eurachem, ISBN 978-0-948926-35-8

Available from the Eurachem website.

*Mike Ramsey
Chair, Eurachem UfSWG*

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 you know, a velvet revolution took place in the Republic of Armenia in 2018, as a result of which the representatives of all the authorities were replaced and the regulatory activity temporarily suspended for a while, however in Armenia we have provided following activity:

1. Translated and implemented following ISO standards ISO 15194-2018 "Medical Equipment for In Vitro Diagnosis. Measurement of magnitude in biological origin samples. Certified standard specimens and accompanying documents. "
ISO 15195-2018 "Laboratory Medicine. Reference Measurements Requirements for laboratories".
ISO 13485-2018 "Medical devices. Quality management systems. Requirements for regulatory purposes."
2. Within the framework of the project „Strengthening quality infrastructure in the countries of the Southern Caucasus“, country Armenia, Azerbaijan, Georgia, 95333-3, PTB VH-No.: 2018.2107.3 PTB organized Quality Infrastructure Awareness Workshop 15 – 17 April 2019 in Tbilisi Georgia. During this workshop, speaker Karen Darbinyan emphasised the importance of Eurachem guides for understanding the requirements of ISO 17025, regarding fulfilment of the requirements on traceability and calculation of measurement uncertainty. During presentations Quality assurance in testing laboratories and quality

infrastructure development in south Caucasus region by reporter Karen Darbinyan presented importance of Eurachem guides in these fields. Within this year we will start active promotion of Eurachem in Armenia. We hope starting from 2019 we can implement more standards and plan more activities.

Levon Melikyan

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 57 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 Vercruyssen (LMI). Philippe Maesen (Uliège) is vice chair. On the General Assembly of BELAB in May 2018, Johan Kluyckens (Executive director BELAC) presented the objectives of Belac for 2019.

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.

In June 2019, BELAB will organize a brainstorm session together with BELAC about the new ISO17025 (2017). This is a result of BELAC audits which were already performed in 2019 on this new ISO17025 (2017). Members are asked to send in points and cases with which they struggled on their audit.

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

Isabelle Vercruyssen

BULGARIA

The Union of Metrologist in Bulgaria and Bulgarian Institute of Metrology represent Eurachem in Bulgaria by established section 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:

- The new version of BDS EN ISO/IEC 17025:2018 - major changes and review of requirements for laboratory activities (together with the Bulgarian Accreditation Service) – in March (50 participants)
- The new version of BDS EN ISO/IEC 17025:2018 - major changes and review of requirements for laboratory activities (for Executive Environment Agency) – in May (35 participants)
- Uncertainty related to sampling. Practical examples and guideline - in June (22 participants)
- Resource management according to BDS EN ISO/IEC 17025:2018 and related risks and opportunities. Practical examples – in October (30 participants)
- Target uncertainty - establishment and application. Characteristics of methods for measuring and proving their validity according to the requirements of BDS EN ISO / IEC 17025: 2018. Applicable international documents on the subject - in November (25 participants)
- Requirements of BDS EN ISO/IEC 17025:2018 Technical and metrological aspects - in December (25 participants)
- Uncertainty related to sampling. Practical examples and guideline - in December (60 participants)

Discussion on:

- Harmonization of the requirements under BDS EN 14181 - implementation of procedures QAL 2 and AST – together with the Bulgarian Accreditation Service in June 20 participants
- Metrology profession - requirements and career realization, South-West University Neofit Rilski, Blagoevgrad – in October 27 participants;

Translation of Eurachem publication in Bulgarian:

- Two leaflets are translated and published on the websites of Eurachem and Union of Metrologist in Bulgaria:
 - ISO/IEC 17025:2017 - A New Accreditation Standard
 - Proficiency testing - how much and how often?
- 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 of Chemists

(PUC); it was designated to undertake the role of the Cyprus Eurachem Committee which had been active since 1997. 22 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

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. Despina Charalambous and Kyriacos Tsimillis were the trainers.



Training on the ISO/IEC 17020:2012 and ISO/IEC 17065:2012

Kyriacos Tsimillis was the invited tutor in a three-day training (4, 5 and 10 July) on ISO/IEC 17020:2012 and ISO/IEC 17065:2012. 20 participants from the Ministry of Agricultural Development, Natural Resources and the Environment attended the programme.



Training programme for laboratories - ISO/IEC 17025:2017 and ISO 15189:2012

Following the successful events of the last years, the Division of Quality Assurance of the Pancyprian Union of Chemists and Eurachem organised a two-day training programme on

"Accreditation of Analytical, Microbiological and Medical Laboratories - ISO/IEC 17025:2017 and ISO 15189:2012". The programme was hosted in Nicosia on 20-21 February 2020. It was the second time for such a training to be coorganised by PUC and Eurachem. 45 participants came from Armenia, Belarus, Germany, Greece, Italy, Montenegro, North Macedonia, Lithuania, Palestine, Singapore and Cyprus.



Involvement in the work of Eurachem

There was active involvement in the work of Eurachem, the EC and some of the WGs, mainly the ETWG and PTWG.

Discussion on draft legislation

The Division participated in the discussion held in the competent parliamentary committees on the proposed draft legislation regarding the criteria for the inclusion of medical laboratories in the National Health System that has been operational as from 1 June 2019.

EA WG Healthcare

The autumn meeting of the EA WG Healthcare meeting was hosted by the Cyprus Accreditation Body (CYS-CYSAB) in Limassol, Cyprus, on 29-30 November 2018. 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.

EuChemS

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

Website

The activities of the Division appear on the website of the PUC (<http://chemistry.org.cy>).

General Assembly of the Division

The General Assembly of the Division was held on 15 May in connection with the General Assembly of the Pancyprian Union of Chemists.

The Secretariat of the Division...

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

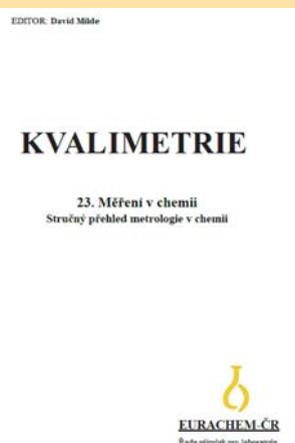
The Secretariat of the Division

CZECH REPUBLIC

Eurachem Czech Republic has been an independent organisation (legal entity) since 1993, currently with 70 members, mainly analytical laboratories and university departments.

Our activities are still focused mainly on education and training. Last year we published a textbook entitled *Measurement in Chemistry – Brief overview of Metrology in Chemistry as the 23rd volume of edition KVALIMETRIE (Qualimetrics in English)* as our main activity. On 100 pages this book addresses all key topics such as metrological traceability, reference materials, instruments in the laboratory, validation, measurement uncertainty, sampling and quality control not only from theoretical perspective but also with examples and recommended literature for further studying. The textbook was prepared by 8 experts from Eurachem-CZ and was co funded by Czech Office for Standards, Metrology and Testing. The textbook is freely available in pdf format on our website.

Recently we translated two Eurachem leaflets into Czech – Proficiency testing – How much, and how often and Setting target measurement uncertainty. Both of them are available on Eurachem website.



Our organisation issued two Newsletters with 8 pages of text for our members. The summer 2018 edition focused on the revised standard ISO 17025. The winter 2019 edition informed about redefinition of SI units. Our members can find up-to-date information about our activities as well as many freely accessible leaflets, on our website – www.eurachem.cz.

Members of the Executive Committee of Eurachem-CZ have closely cooperated with Czech Institute for Accreditation contributing to several technical committees.

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 strongly connected to the network called Estonian Centre of Analytical Chemistry (AKKI, <https://www.akki.ee>) which is coordinated by University of Tartu and includes EERC, Tallinn University of Technology and from the end of 2018 also National Institute of Chemical Physics And Biophysics. AKKI has been set up in order to focus on sharing resources for high quality chemical analysis and chemistry education in Estonia.

Education is a large part of the Eurachem activities in Estonia. Ivo Leito is responsible for annually organizing two Massive Open Online Courses (MOOC): “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 six and three times, respectively, and attract hundreds of participants from all over the world every year.

We have also have translated three leaflets into Estonian: “Using repeated measurements to improve the standard uncertainty”, “Treatment of an observed bias” and “A new ISO/IEC 17025 for laboratories”.

Estonia is hosting the Eurachem week 2019 on the 20th-24th of May in Tartu. The topic of the workshop is „Validation of targeted and non-targeted methods of analysis“ (<http://eurachem2019.akki.ut.ee>) and at the time of writing this report there are more than 160 registered participants from more than 40 countries.

Riin Rebane

FINLAND

Finntesting Association/Eurachem Finland informed members about Eurachem activities, quality issues, organised two annual meetings in 2018 and encouraged members of the association to participate in discussions aiming at planning activities for future. Lately there have been many changes in the laboratory field affecting to activities of Finntesting Association as well. Thus during the past year the focus was put on planning and development of activities to find the new way forward. After gathering views and considering the situation from different points of view, at first, the main focus was decided to put on education aspects - also taking into account the most recent developments in the field. As a result cooperation with teachers in

universities of applied sciences was taken as a starting point. It promotes educational needs and is an on-going activity in the near future.

As an organization the Association has an executive board and nominated members in Eurachem General Assembly, Eurachem Executive Committee and Eurachem working groups. The Association cooperates nationally and internationally through EuroLab and CITAC activities. The Association continued a tradition to encourage students by delivering them awards based on their meritorious thesis where quality assurance aspects were taken into account. The award was granted to Mr Tuomo Niilahti from University of Jyväskylä. In his master's thesis he used different methods for the analysis of rocks investigating their applicability for the analysis of elements and minerals.

Anna-Liisa Pikkarainen

FRANCE

BIPEA is a scientific nonprofit 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:

In 2018, BIPEA has organized 5 training sessions:

- For “Uncertainty of measurements and exploitation of data from the report” 3 sessions were planned (January, March and September 2018)
- For “Method validation” 2 sessions were planned (June and November 2018)

These training courses were very well appreciated by the participants and included lectures, practical exercises and learning evaluation.

- Participation in Working groups and General Assembly:

Ms Caroline LAURENT, Director of BIPEA demonstrates her implication/involvement in participating in the PT Working group and the General Assembly organized by Eurachem.

Mr Abdelkader BOUBETRA, Scientific and Technical manager of BIPEA

demonstrates his implication/involvement in participating in the Eurachem working group "Method Validation".

• Website:

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

Caroline Laurent

GEORGIA

Georgian Laboratory Association

(GeLab) was founded 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 the requirements of ISO/IEC 17025, correspondingly on aid to Accreditation, education and training. Trainings are mainly conducted by members of the national TrainMic team. During such events, materials from Eurachem guidelines and leaflets are actively used.

Last year GeLab organized several trainings in various regions of Georgia, covering different topics of ISO/IEC 17025 and ISO/IEC 17020 standards. More than 130 participants attended training courses, which included lectures and a practical exercises (during 2018).

GeLab closely cooperates 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.

GeLab representatives actively participated in the GEOSTM Technical Committee in the translation and adaptation processes of ISO/IEC 17025:2017 into Georgian.

In 2018 GeLab has organized several meetings between laboratories and GAC representatives to conduct open discussions. Such meetings are very useful and important for a smooth transition to the new ISO/IEC 17025.

GeLab has been a member of Eurachem since 2014. It distributes the latest news from Eurachem among the members.

Recently, leaflets on "A new ISO/IEC 17025 for laboratories" and "Proficiency testing –How much and how often?" were translated and further translations of Eurachem guides and leaflets into Georgian are planned.

For GeLab, it would be very desirable to work closely with the Eurachem working groups in the future.

Nino Manvelidze

GERMANY

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

Eurachem activities. The Committee 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.

In almost all Eurachem Working Groups delegates from Germany are involved. The translation of the Eurachem leaflet on "Setting Target Measurement Uncertainty" into German is currently in its final stage.

The supplement to the Eurachem Guide "The Fitness for Purpose of Analytical Methods" about "Blanks in Method Validation" will be translated in the near future.

A workshop on „Uncertainty from sampling and analysis for accredited laboratories“ will be organized in November 2019 by Eurolab-Germany on behalf of the respective Eurachem Working Groups.

In a joint working of Eurolab-D and DGSens (German Society for Sensory Testing) best practice methods for "Sensory Testing of Food Contact Materials" are elaborated and published in German and English language.

Michael Koch

HUNGARY

At the end of 2018, the Cluster of Hungarian Accredited Organisations (ASZEK) undertook the task to act as the Hungarian national Eurachem organization. ASZEK is a network of accredited organisations from a wide range of activities in Hungary. Its main objective are to help improve accreditation practices, to represent member organisations at national and international level and to provide a platform for cooperation and sharing of experience in the Hungarian analytical community in general.

To these aims, ASZEK issued the long-awaited Hungarian translation of VIM3 – Vocabulaire International de Métrologie 3e édition – in 2018. In addition, ASZEK organised the conference "Changes in Accreditation 2018 – e-accreditation, ISO 17025 and risk-based approach", which attracted over 160 participants. In order to facilitate the transition to the new ISO/IEC 17025:2017 standard for accredited laboratories, The National Accreditation Authority (NAH) has also held several seminars throughout the year, to which ASZEK experts have actively contributed sharing their experience on the conversion.

Two delegates are active in the Proficiency Testing Working Group, Dr. Erika Sárkány (also representative of EQALM) and Dr. Csilla Bélavári. Dr. Sárkány is additionally delegated to EEE-PTWG "Proficiency Testing in Accreditation. In April 2019, a short presentation was given about Eurachem activities at the ASZEK general

assembly, which sparked interest in other working groups as well.

Csilla Bélavári

ICELAND

Eurolab-Iceland (<http://icelab.123.is/>) is the association of Icelandic laboratories. Eurolab-Iceland is a member of Eurachem and Eurolab. The association has a board with 5 members. The 16 members are testing, analytical and pharmaceutical laboratories.

The main activity has been organizing a yearly visit to one of our member companies. The quality manager of the company will give us insight into their quality system and if possible show us their organization. In parallel professional speaker will give the Eurolab-Iceland members lecture of different topics of good quality practices and standards.

Eurolab-Iceland have been focusing on the new revised version of ISO/IEC 17025 and tried organizing workshop for one day for our members. The offers for course regarding ISO/IEC 17025 have been too expensive so far.

The annual general meeting will be held by the end of this month where further decisions will be made about activities over the next months.

Elísabet Sólbergisdóttir

IRELAND

The Eurachem Ireland committee comprises people interested in analytical chemistry from the public sector, private sector and the academic sector. In May 2018 the committee was delighted to host Eurachem Week 2018 at Dublin Castle. This included the Eurachem General Assembly and associated meetings, preceded by the International Eurachem Workshop Data - Quality, Analysis and Integrity. The workshop was organised by Eurachem Ireland and the Education and Training Working Group in conjunction with Dublin City University and the State Laboratory. The workshop aims were to understand the importance of scientific data integrity and how to achieve it; to understand risks and opportunities related to data; and to discuss the impact of new developments and future challenges in data quality, analysis, integrity and compliance. Approximately 120 delegates, from 28 of the member countries in Eurachem as well as Asia, North America and South America attended. The workshop was deemed a resounding success with 96 % of respondents to the anonymous feedback survey reporting that the workshop exceeded their expectations. Eurachem Ireland congratulate Dr. Máire Walsh who was among the first

recipients of the new award of 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 Chairman 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. The popular Eurachem Analytical Measurement Competition (EAMC) took place on 12th April 2019. This annual event is organised and run by the EAMC Committee, Eurachem Ireland Secretariat, and by a host Institute of Technology or University. EAMC 2019 was hosted by Institute of Technology Carlow. The judges were Tom Hannigan from Forensic Science Ireland and Shonagh Masterson from the State Laboratory. This year a total of 26 teams from 14 academic institutions took part, with the host institute enjoying success as Institute of Technology Carlow emerged as winners. Joint runners up were Institute of Technology Sligo and Dublin City University. Congratulations to all the winners and thank you to the generous sponsors.



EAMC 2019 winners Valerija Goga and Zsanett Antal from Institute of Technology Carlow, with team mentors and event organisers Dr. David Phelan and Dr. John Cleary.

Ireland is well represented on Eurachem Working Groups and members attended various Working Group meetings throughout the year. Eurachem Ireland communicates with its members via

- Mailing list
- Website www.statelab.ie/eurachem.html
- LinkedIn group.

Hugh Fay

ITALY

Italy is represented in Eurachem by the National Institute of Health (ISS) and

the National Institute of Metrological Research (INRIM), institutes that are sharing the responsibilities in the current Eurachem chairpersonship, being Marina Patriarca, the current Eurachem chair, from ISS and the Secretary, Francesca Rolle, from INRIM. In this framework, the Executive Committee meeting was hosted by ISS in Rome on 13-14 September 2018. 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 mainly 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 and Training, Proficiency Testing, Method Validation, Reference Materials, Measurement Uncertainty and Traceability as well as the joint EA-EuroLab-Eurachem WG on Proficiency Testing in Accreditation. The meeting of the Method Validation Working Group on 14-15 February 2019 took place in Rome, at ISS.

The "Training session: Metrological traceability of analytical measurements and how to achieve it", based on the Eurachem Guide and other material, was organized as part of the Annual Workshop of the European Union Reference Laboratory for Chemical Elements in Food of Animal Origin – held in Rome, 5 October 2018, attended by representatives of the National Reference Laboratories designated by the EU Member States in this area of testing. Eurachem activities were also presented in two meetings of laboratories and other interested parties in the areas of food safety (VIII Workshop of the Italian Reference Laboratories for Metals in Food and Feed and Additives in Feed, Turin, Italy, 13 – 14 December 2018; Annual Meeting of the Italian National Reference Laboratory for Mycotoxins, Rome, Italy, 15 April 2019). The MVMG workshop "Are MS-based methods fit for purpose?" was hosted at the XXII International Mass Spectrometry Conference, organized by the Division of Mass Spectrometry of the Italian Chemical Society jointly with the International Mass Spectrometry Foundation, held in Florence, Italy, on 26-31 August 2018. ISPRA organized a one-day workshop on "Production, use, accreditation and need of reference materials: issues and solutions

compared", held in Rome, Italy, on 11 December 2018, where speakers from ACCREDIA, Eurachem and UNI (the Italian Standardization Body) addressed an audience of laboratories and reference material producers presenting their questions. During the event "Regulatory and technical-scientific developments in the field of water intended for human consumption", organized by ISS, the Italian Ministry of Health and ACCREDIA, in Rome, Italy, on 10 April 2019, Eurachem guidance on method validation, as a critical issue for their accreditation, was presented to an audience of laboratories, operators of the health and environmental sector and water managers engaged in the prevention and supervision of the integrated water cycle.

Information on Eurachem activities, such as the two day training event on Laboratory Accreditation "Critical issues of the accreditation standards - ISO/IEC 17025:2017 and ISO 15189:2012" (Nicosia, Cyprus, 21-22 February 2019) and the Eurachem Workshop on "Validation of targeted and non-targeted methods of analysis" (Tartu, Estonia, 20-21 May 2019), 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. Printed copies of the latest Eurachem Newsletter and of Eurachem leaflets were also distributed to interested parties. Plans are under development to undertake some more translation work, focusing on the relevant guides and leaflets addressing various aspects linked to measurement uncertainty.

Marina Patriarca, Michela Segal

POLAND

Presently, 67 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 led 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 XXVI POLLAB Symposium (2018) was "Data analysis in the laboratory". In two rounds of the symposium was attended by over 430 participants. We organized also a special section's meetings, including invited lectures dedicated to selected subjects. In 2018 there was one meeting, where participants discussed about "A Laboratory management system based on the requirements of the standard PN-EN ISO/IEC 17025:2018. We have started to organize training

courses for our member 3 years ago. These courses are very popular, many people attending them. We work with the Polish Center for Accreditation to improve the management system in laboratories. Eurachem-PL will be continue present policy to support laboratories in 2019. Our members will be attend in Symposium POLLAB, section meetings and new ILC/PT programs.

Andrzej Brzyski

PORTUGAL

In 2018, the Portuguese delegates have been actively involved in the activities of the "Measurement Uncertainty and Traceability" and "Qualitative Analysis" Working Groups.

The dissemination of Eurachem activities and guidance have been performed in teaching Metrology in Chemistry at the University of Lisbon, "International Summer School on Analytical Science, Metrology and Accreditation" 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

Eurachem România is a professional, non-profit organization, a legal entity established in 2000 comprising actually 78 active members. The active members represent different Universities across the country, national research institutes, and accredited laboratories, local agencies for public health or environment monitoring. The main core of Eurachem România is coming from universities staff, in consequence, the organization's activities are specifically directed towards education and training side. Therefore, members of Eurachem Romania have been involved in translating leaflets and Eurachem documents.

Within the collection of "Tehnici experimentale in bioanaliza"/ "Experimental techniques in Bioanalysis" have been published chapters dedicated to method validation and uncertainty evaluation for non-routine analysis applied in bioanalysis laboratories. Also, Eurachem members are directly involved in the Proficiency Testing Group and Validation Group from the National Romanian Accreditation body – RENAR.

Eurachem România issued the newsletter 2018 bringing into attention the recent information activities of

Eurachem, aspects of the newly revised standard 17025. We encouraged our members to access the national organization website at www.eurachem.ro. Our organization continued to organize the Analytical Chemistry Students Contest where students have to solve in limited time 3 specific applications of analytical chemistry with practical application. The competition is popular among students and is successful. In addition, Eurachem was involved in the organization of the Students' Scientific Communications for the Analytical and Instrumental Analysis Section.

Gabriel-Lucian Radu

RUSSIA

The publication of the new version of ISO / IEC 17025:2017 is an event that was expected by all accreditation bodies and accredited laboratories all over the world and in the Russian Federation.

The release of the national and interstate version of ISO / IEC 17025:2017 is an important event for Russian laboratories. By April 2019, the interstate standard GOST ISO/IEC 17025 resides in the final voting stage of the member countries; in the summer of 2019, after the completion of all formalities, the official version of the standard will be available for laboratories in Russia.

Therefore, despite the fact that the release of the national version of the international standard was delayed for a long time, Russian laboratories have already successfully mastered the principles of the process approach in the organization of laboratory activities and the risk-oriented approach in the planning and implementation of their work. The Association of Analytical Centers «Analitica» (the main representative of Eurachem in Russia) conducted a series of seminars and trainings in the framework of the Association's annual meeting, the 17th International Exhibition of Laboratory Equipment and Chemical Reagents in Moscow, as well as in many Russian cities based on analytical laboratories and centers. Some experts of the Association were trained in the new standard and ISO 17011 under the auspices of EA and ILAC/APLAC.

In view of the new standard, the topic of traceability of analytical measurements becomes particularly relevant. For the first time in Russia, in UNIIM, to ensure the comparability of the results of measuring the ash content in the analysis of food products, a primary reference measurement method was developed and validated, which allows to obtain measurement results without further demonstrating their traceability.

The same primary reference method was developed and validated to measure the mass fraction of fat in food and food raw materials.

In 2019, under the auspices of IUPAC in St. Petersburg, the XXI Mendeleev Congress on General and Applied Chemistry will be held

<http://mendeleev2019.ru> from 9 to 13 of September. It will be one of the main events of the International Year of the Periodic Table of Chemical Elements, proclaimed by the UN. This event is organized by the Russian Unions of chemists, the Russian Academy of Sciences, the Ministry of Science and Education, the Russian Foundation for Basic Research on the basis of St. Petersburg State University.

Over the past period, official translations of the Guide «Quantifying Uncertainty in Analytical Measurement», 3rd Edition (2012) and Information Leaflet «ISO/IEC 17025:2017 - A New Accreditation Standard». were prepared and published by the national representatives of Russia in Eurachem.

*Vasilisa Baranovskaia
Maria Medvedevskikh*

SPAIN

During 2018, 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 into Validation WG.
 - b. Pedro Pablo Morillas into Education and Training WG.
 - c. Raquel Murtula into Proficiency Testing WG.
 - d. Estibaliz Sastre into Reference Material WG.
 - e. Irache Visiers into Uncertainty WG.

4. Through FELAB there have been several meetings with the National Accreditation Entity (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. Special mention to the course "Transition Plan of ISO/IEC

17025:2005 to ISO/IEC 17025:2017" of which we have made two editions, due to the large number of attendees.

7. XIV SIMPOSIUM FELAB. Celebrated in Madrid on March 8th, 2018.

8. EUROLAB-Spain and FELAB, have collaborated with RELACRE in the organization of the V Congress of Ibero-American Laboratories and I International Congress of the Evaluation of Conformity that took place in Lisbon, on October 17, 18 and 19, 2018.

*Alfonso González del Rey,
Pedro Pablo Morillas*

SWEDEN

The national organisation has about 25 members and we have 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).

*Bertil Magnusson,
Elvar Theodorsson*

TURKEY

The national representatives of EURACHEM GA and EURACHEM WGs are mainly from TUBITAK UME, which is the National Metrology Institute of Turkey and the institutional representative on EURACHEM. There are also delegates from universities in EURACHEM Method Validation and Measurement Uncertainty WGs. In 2018-2019, 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 is a member of TURKAK PT committee, and has been involved in the activities within the committee.

Two leaflets, ISO/IEC 17025:2017 - A New Accreditation Standard and Metrological Traceability of Analytical Results, were translated into Turkish and published on the EURACHEM web page. Few more translated leaflets are waiting to be published. Translated guide "The Fitness for Purpose of Analytical Methods – A Laboratory Guide to Method Validation and Related Topics" have been published on the web page.

EURACHEM ETWG members attended the ETWG meetings on 15 May 2018 in Dublin and 29 January 2019 in

Teddington. He participated to the preliminary studies during the meeting and declared the intention of getting involved in the task group for the revision of "Guide to Quality in Analytical Chemistry: An Aid to Accreditation". One of the members in ETWG involved in the scientific committee of EURACHEM Workshop: Data-Quality, Analysis and Integrity. An oral presentation "Importance of sampling step to interpret analytical results in food safety analysis" and a poster presentation "Quality control procedures in food microbiological testing" were given in the workshop. EURACHEM Turkey continued to contribute the revision of "Guide to Terminology in Analytical Measurement (TAM)". Members were involved in the revision of "Reading List".

EURACHEM MVWG members participated to the meeting in Rome on 14-15 Feb 2019. They also contributed to MVWG by commenting on the supplementary guides (blank supplement) and enrolled in the task group for guide to the validation of microbiologic methods. EURACHEM MVWG delegate participated actively in the workshop which was held in conjunction with IMSC2018 congress. She presented a study titled as "An example of validation of an MS-based method" in the workshop. She is involved in the preparation of the document "Draft checklist guide on selection of appropriate test kit". EURACHEM MUWG member attended the meeting held on 16 May 2018 in Dublin and commented on the guides being revised/prepared by the working group.

Two university seminars were organized in Kocaeli University in December 2018 and Uludag University in May 2019, mainly for graduate students and the faculty members. In these seminars, the subjects covered were quality of chemical measurement results, method validation, uncertainty calculations, traceability and quality control. There were also attendees from industrial laboratories. In addition, two workshops were organized in collaboration with Turkish Biochemical Society in a university in Ankara and a hospital in İstanbul.

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 addition to these trainings, Method Validation, Evaluation of Measurement Uncertainty in Chemical Measurements and ISO/IEC 17043 Conformity Assessment - General

Requirements for Proficiency Testing" trainings were given to the participants from Rwanda.

Fatma Akçadağ, Oktay Cankur

UKRAINE

For our metrological community the most important event of 2018 was joining Metre Convention by Ukraine. For sure, it will promote the progress, among other areas, in metrology in chemistry. Later on Ukrmetrteststandart, which is the institution responsible for this metrology area in Ukraine, has applied for the membership in the Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM). Thus, we expect to expand and intensify our participation in the global metrology system.

The representatives of Eurachem-Ukraine went on contributing to the international standardisation related to metrology in chemistry by active participation in developing the international standards in the ISO technical committees: ISO/TC 158 Analysis of Gases, ISO/TC 193 Natural Gas, and their working groups. It is worth mentioning that some of those standards, e.g. on calibration methods or requirements for the purity analysis, may be applied not just to gas analysis, but also to other analytical areas. Ukraine is represented in the ISO/REMCO committee on reference material as an O-member. There we have taken part in the discussions on terminology issues, including the definitions of the "reference material" and "certified reference material". We have also continued participating in the technical committees of the Regional Metrology Organisation COOMET: TC 1.8 "Physico-chemistry" and TC 1.12 "Reference materials", as well as 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.

At the international conference "Metrology-2019" in Minsk, Belarus, the paper was presented on the metrological traceability for laboratory medicine. Our representatives also took part in the International Seminar "Mathematics, Statistics, and Computation to Support Measurement Quality" in St. Petersburg, Russia, and Conference "Reference Materials in Measurement and Technology", Ekaterinburg, Russia.

At the local level, we have organised or taken part in different events, e.g. a workshop on Current issues of metrological support for laboratory activities at the 11th "LABCompLEX. Analytics, Laboratories, Biotechnologies, Hi-Tech" international exhibition, conference "Medical laboratories practice and global

standards of quality processes assurance", and workshops on current problems of the laboratories working in food and pharmaceutical industries. Ukrainian representative is a member of the Eurachem Uncertainty and Traceability WG.

*Mykhailo Rozhnov,
Ovsiiy Levgarg*

UNITED KINGDOM

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

The AMC

(<http://www.rsc.org/Membership/Networking/InterestGroups/Analytical/AMC/>)

has various expert working groups including those concerned with sampling uncertainty/sampling quality and statistical methods (now including validation) 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 (including non-RSC members) 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>.

Technical Briefs are also published by the RSC journal "Analytical Methods" and can be found at. Six have been published in the year, including:

- No.84 – Beam sampling
 - No.85 – Analytical pyrolysis in cultural heritage
 - No.86 – Revision of the International System of Units
 - No.87 – The correlation between regression coefficients: combined significance testing for calibration and quantitation of bias
 - No.88 – Why do we need the uncertainty factor?
 - No.89 – Hand-held x-ray fluorescence spectrometry
- Members of the AMC regularly receive the Eurachem Newsletter and information on Eurachem activity. Eurachem information is also promulgated widely through the MyRSC online chemistry community.

Members of the AMC's Expert Working Group (EWG) on Sampling Uncertainty and Sampling Quality are active members of the Eurachem WG on Uncertainty from Sampling and have led the revision of the Eurachem/CITAC/EuroLab/Nordtest/AMC Guide 'Measurement uncertainty arising from sampling'. The second edition has been accepted by a unanimous vote of the Eurachem General Assembly, and is due to be published in the next month, subject to the agreement of the Executive Committee.

Activities associated with the UK

Chemical and Biological Metrology programme are described on the LGC website at <https://www.lgcgroup.com/uk-national-measurement-laboratory/>.

This work contributes to maintenance 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 2019 include a range of training courses, including courses on measurement uncertainty, analytical method validation and statistics for analytical chemists. The programme also provides guidance documents and reports; some of these can be found at

<https://www.lgcgroup.com/our-impact/>

- Eurachem UK members have also 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
- Reference materials.

*Andrew Damant
Steve Ellison*

Upcoming meetings



Eurachem Week 2020

Scientific Workshop and General Assembly 2020 25-29 May 2019 Bucharest (Romania)

You are cordially invited to the Scientific Workshop "Quality Assurance for Analytical Laboratories in the University Curriculum", which will be held at University Politehnica of Bucharest, Romania, between 25 and 29 May 2020.

The workshop will take place in connection with the Eurachem General Assembly 2020.

The events aim to present scientific contributions on Quality Assurance (QA) for an analytical laboratory which is an essential tool to ensure good comparability of data. Therefore processes are monitored and performance problems are systematically solved.

We will discuss how the adherence to QA guidelines, participation in inter-laboratory studies, use of reference materials (RM) and certified reference materials (CRM) which are means of achieving good data quality for determinations are found in the university curricula.

Important Dates:

Deadline for abstracts: **March 31, 2020.**

Notification of acceptance: **April 30, 2020**

Early bird registration rate closes on **March 20, 2020**

More information at:

<https://eurachem2020.ro/>

Upcoming meetings

10th Workshop on Proficiency Testing in Analytical Chemistry, Microbiology and Laboratory Medicine

Windsor (UK), 12 – 15 October 2020

The EURACHEM Proficiency Testing Working Group (www.eurachem.org), in cooperation with CITAC (www.citac.cc) and EQALM (www.eqalm.org), is organising the 10th event of a series of Workshops addressing current practice and future directions of proficiency testing (PT) and external quality assessment (EQA) in analytical chemistry, microbiology and laboratory medicine.

Venue

The workshop will take place at the De Vere Beaumont hotel in Windsor, a town on the River Thames in southeast England, just west of London. It is home to Windsor Castle, a residence of the British Royal Family, built by William The Conqueror in the 11th century. The story of De Vere Beaumont Estate in Old Windsor is a very British one; a tale of democracy, royalty, education and religion. At its heart, sits an 18th-century mansion, a chapel, 75 event spaces and a Georgian white house in 40 acres of parkland grounds. The original house was built for Lord Weymouth but it was during its time as a public school, from 1854 - 1967, that saw most of the estate's architectural developments.

Technical Programme

The workshop will be structured to include training sessions, keynote lectures, short presentations, working group discussions and poster sessions, to enable interactive participation and cross-fertilisation of ideas. The official language of the workshop will be in English. Invited lectures and accepted presentations/posters will be considered, through peer-review, for publication as full papers as a topical focus in an issue of Accreditation and Quality Assurance (Springer Verlag).

Training Sessions

Four training sessions, which are open to workshop delegates, will be held on the following topics:

- Basic statistics
- Further statistics
- PT scheme design
- Test item QC testing

Lectures and Working Group Topics

- Revision of ISO/IEC 17043
- Guidance on different methods for setting the standard deviation for proficiency assessment
- Collusion or falsification of results in PT – why does it happen and how can it be prevented
- Comparisons of synthetic vs real PT items
- Emerging trends in PT
- Risk analysis approach for PT participation



Who should attend?

The workshop will provide an excellent opportunity for PT/EQA scheme organisers, and end-users of PT/EQA (laboratories, accreditation bodies, regulators and the laboratories' customers) to come together and share their views.

Registration and more information at www.eurachem-pt2020.org.

*Brian Brookman
Chair Eurachem PT working group*

Workshop Secretariat

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Eurachem Week 2021

17-21 May 2021, Prague (Czech Republic)

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Eurachem countries in green.

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.

