



Words from the Chair

Isabelle Vercruysse

As Chair of Eurachem I'm very proud to introduce this Newsletter.

These past months, Eurachem was again very active in organising meetings and events. In addition, the working groups were also very busy in realising new guides and leaflets or updating existing guidance. Meanwhile, several interesting activities were also organised by the Eurachem member countries.

The Eurachem 5 year strategic plan was approved at this year's General Assembly. This is an important document which sets out Eurachem's goals and mission for the coming years. The strategic plan is explained in further detail in this Newsletter.

In March 2023, a training event entitled "ISO 15189:2022 – The new Standard for the competence of Medical Laboratories" was organised by Kyriacos Tsimillis and colleagues from the Pancyprian Union of Chemists, together with the Eurachem Education and Training Working Group, in Nicosia, Cyprus. The interest from national and international participants shows that Eurachem remains an important player at this level.

In May 2023, I was able to witness the very large attendance at the workshop "Ensuring reliable and accurate results from analytical processes" organised by Eurachem Switzerland delegates Hanspeter Andres and Ernst Halder at METAS, Switzerland. At this workshop the 'GxP world' came nearer to the

'ISO world'. It was interesting observing that although two different languages were sometimes spoken, it is important to keep the dialogue between the two worlds open in order to get to know each other's world better and be able to strengthen each other's expertise. In addition, the informal discussions at the coffee and lunch breaks were enriching and an ideal opportunity to enhance the networks of the participants.

It was an honour for me to chair the 39th General Assembly 'live' in Bern after 3 years of online General Assembly meetings due to the covid pandemic. It is hard to describe what a difference in interaction and ambiance this gave because participants could finally interact directly face to face.

After the interesting discussion forum on "Equipment qualification" led by

Ernst Halder, there was an agreement to start a new Eurachem working group "Equipment Qualification". This working group will provide an opportunity to capture the need for clear guideline related to EQ. A need that posed itself in recent years in the laboratory world to meet the ever increasing demands of ISO and/or GxP auditors.

The reports from the national delegates and the European and international liaisons/stakeholders at the General Assembly once again stressed the importance of exchanging experience and knowledge at the international level. It remains undeniably important that this interaction and exchange of expertise is sustained. The reports on website usage and social media engagement once again made clear the important role Eurachem plays with disseminating its

expertise via guides, leaflets and events in the world of laboratories, authorities and universities.

In the meantime, Eurachem looks forward to its next activities: the PT workshop in September 2023 at Windsor (UK); a new training event in March 2024 in Cyprus; and also the events linked to the GA in May 2024 in Lithuania and in May 2025 in Romania.

This newsletter reports all Eurachem's activities in the past year in more detail. I remain grateful for all the wonderful teamwork achieved year after year by the entire Eurachem family.

Enjoy your reading.

Isabelle Vercruysse

Eurachem Chair

IN THIS ISSUE

Eurachem General Assembly 2023



Image copyright Xavier Rappo/METAS

This 39th GA-meeting was attended by 32 participants, including national delegates from 24 member countries.

The Eurachem General Assembly (GA) 2023 was organised by the delegates of Eurachem Switzerland, Hanspeter Andres and Ernst Halder, on May 25-26 in Bern at METAS, the Swiss National Metrology Institute.

It was the first time since the Coronavirus pandemic that the GA could be organized as an 'in person' event again.

As usual at the GA, the topics discussed included the approval of the minutes from the previous GA and reports from the secretariat, treasurer and financial auditor. These topics were followed by the elections of two EC members: Anna-Liisa Pikkarainen from Finland and Michael Koch from

Germany. Riin Rebane (Estonia) had decided not to stand for re-election to the EC on completing her term in May and she was thanked for her efforts in the Executive over the past 3 years. Philippe Maesen (Belgium) was appointed as treasurer for 2024 and Jelena Bebic (Serbia) was appointed as the financial examiner for the financial year 2024.

A very important point on the agenda at this GA was the approval of the

revised "Eurachem 5 year strategic plan". This plan did not happen overnight. At the previous GA38, the discussion forum, organised by Vicki Barwick, was fully dedicated to this topic. After several input sessions conducted by the Executive Committee, the plan was submitted to this General Assembly for voting. This plan defines Eurachem's mission and goals for the next 5 years and is an important guide for the operation of the network.



At the start of the meeting, Bertil Magnusson (above right) and Wolfhard Wegscheider were thanked with a small gift and warm applause for all their years of service as members of the Executive Committee and as previous Chairs of Eurachem.

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The reports on the Eurachem guides which are under revision were presented (Quality Assurance for Research and Development and Non-routine Analysis, Fitness for Purpose of Analytical Methods, Selection and Use of Reference Materials, Quantifying Uncertainty in Analytical Measurement and Quality in Analytical Chemistry: An Aid to Accreditation) as well as on a guide under development: "Guidance on evaluation of measurement uncertainty from in-house precision and trueness tests".

The recent releases of the revised versions of the guides "Accreditation for Microbiological Laboratories" and "Terminology in Analytical Measurement" received extra attention. An additional word of thanks went to those who assisted in the creation of these guides.

The discussion forum on Equipment Qualification (EQ) was facilitated by Ernst Halder. He guided the members of the GA through the various concerns that are important in EQ and sparked a spirited discussion on the importance

of starting a new Eurachem working group on EQ. Afterwards, a vote was organised which supported the creation of a new working group.

In the second part of the GA there was a focus on reporting the activities of the Eurachem working groups: Education and Training, Measurement Uncertainty & Traceability, Method Validation, Qualitative Analysis, Proficiency Testing, Reference Materials, Sampling Uncertainty and the Joint Task Group on Validation of Sampling Procedures. All working groups continue to actively work on guides, events and leaflets.

Subsequently, there was the reporting of the activities of the Communications Task Group and the report on the website, social media and e-news mailing list. It is interesting to be informed how Eurachem's mission can be further propagated and promoted and the ways in which people from all over the world find the information about events and guidelines/leaflets. In this regard, the update of the Eurachem poster and Eurachem

PowerPoint and latest news on the Newsletter are also of interest.

Great attention was paid to the reports of the member countries. It is always worth hearing how other countries go about communicating the Eurachem mission to their members. This provides inspiration for the other members.

Furthermore there were also the reports of European and international stakeholder/liaison organisations (EA/LC, EA LC WG Healthcare, EEE Proficiency Testing, EUROLAB; EURAMET/TC-MC, EuChemS, NMKL, AOAC-E, MATHMET, JRC, BIPM JCTLM, CITAC, CCMAS, ILAC/AIC and LC, IUPAC, ISO-TC344, ISO/TC 69/SC 6/WG 7).

At the end of the GA meeting, future Eurachem workshops & meetings were discussed. Lithuania (Evaldas Naujalis) invited the Eurachem members for a Eurachem week in Vilnius in May 2024. Romania (Eugenia Eftimie Totu) invited the Eurachem members for a Eurachem week in Bucharest in May 2025.

Finally, words of thanks went to Ernst Halder and Hanspeter Andres for the organisation of the very successful Eurachem week at METAS and also for the organisation of the nice social program with a guided walk in Bern and a delicious buffet at a cosy venue near the Aare river. At this event, it was again obvious: the Eurachem family was back together in person and this once again led to unforgettable warm memories of an enjoyable get-together.
Philippe Maesen | Isabelle Vercrusse

Eurachem Secretariat

Scientific Workshop during GA week 2023: Ensuring reliable and accurate results of analytical processes (22-23 May 2023, METAS, Bern, Switzerland)

The workshop with the overarching theme “Ensuring reliable and accurate results of analytical processes” was divided into four sessions: method validation; equipment and software validation; internal and external quality controls; and uncertainty and traceability of results. In each session four national and international experts presented specific aspects of the session topic. Each session finished with a moderated 30 minute panel discussion. Key points from the sessions are highlighted below.



- Method validation is key to assure reliable and accurate results of analytical processes. Yet, approaches and terminology differ in different fields of application. The expert panel agreed that it is key to listen to each other and develop common terminology as the common goal is to assure the quality of the analytical measurements for the customer.
- Equipment and software validation becomes more and more important. The traditional measurement equipment is now digital and interconnected. The experts highlighted that it is always the user who is responsible to assure that equipment and software is fit for purpose.

- Internal and external quality controls are routine tasks of each analytical laboratory. The speakers showed how these controls are imposed and applied in their fields. The panel discussion revealed a controversial view of the need to impose the ISO 15189 standard in medical laboratories.
- In the final session on uncertainty and traceability of results, experts gave insights into statistical models and uncertainty calculations, and showed how traceability to the International System of Units (SI) is assured by the use of certified reference materials.

After each session participants had the opportunity to hold informal discussions

over refreshments, visit the METAS laboratories and view the posters.

Around 80 scientists and experts from 22 countries and 4 continents attended the workshop. After many years of online meetings due to the pandemic, participants enjoyed the possibility to have a physical exchange. It resulted in lively panel discussions and exchanges during the breaks, laboratory tours and poster sessions.

Hanspeter Andres

Eurachem Switzerland

Workshop

ISO 15189:2022 – The new standard for the competence of medical laboratories (16-17 March 2023, Nicosia, Cyprus)

Following the successful events of the years before the pandemic, the Division of Quality Assurance of the Pancyprrian Union of Chemists and the Education and Training Working Group of Eurachem, organised a two-day training programme in Nicosia.

The scope of the training was to:

- Present the new standard ISO 15189:2022;
- Discuss critical issues of interest to medical laboratories with regard especially to changes and new requirements;
- Update the awareness for additional needs;

- Present recent publications (Eurachem guides and others);
- Based on the experience of laboratories, discuss problems and solutions.

Up to 50 medical scientists, including colleagues from Cyprus, Greece, Palestine and Poland participated in the event which was highly appreciated, particularly for the interaction following the presentations by Mike Ramsey, Elvar Theodorsson, Irini Leimoni, Vicki Barwick, Leontios Kostrikis, Despina Charalambous and Kyriacos Tsimillis. Leontios Kostrikis was invited to give his lecture reflecting his wide experience on SARS-CoV-2. Two exercises were included in the programme. Exercise 1 was introduced by Elvar Theodorsson and was based on the document

“Questions and answers for enhancing the understanding of metrological traceability” (authored by Elvar and reviewed by the JCTLM Traceability Education & Promotion Working Group and by other beneficiaries of the JCTLM). Exercise 2 addressed the risks issue.

Thanks to everyone involved in the successful delivery of the workshop. The Division of Quality Assurance of the Pancyprrian Union of Chemists and the Education and Training Working Group are currently planning another training event for March 2024.

Kyriacos Tsimillis

Eurachem Cyprus

Online workshop

Trends & challenges for Non-Targeted Methods. Part 2: NTMs – qualitative or quantitative? (6 June 2023)

This online event, jointly organised by Eurachem and AOAC Europe, was the second event in a series of webinars on the use of Non-Targeted Methods (NTMs).

This series of webinars is planned to deal with the concept of NTMs (terminology, possible approaches, data processing etc.) and how such methods can be validated to give reliable results.

This event covered:

- The concept of semi-quantitative non targeted methods;
- The use of fingerprints for non-targeted analysis;
- Traceability and uncertainty for qualitative analysis;
- Non-targeted method development, including adaptations for targeted analysis and comparison of quantitative non-targeted methods.

For this webinar, about 120 participants registered, from 34 different countries, including many from outside Europe.

Lorens P. Sibbesen

Eurachem Denmark
Chair, Method Validation Working Group

Guides and leaflets

All guides and leaflets are available from the Eurachem website, www.eurachem.org/index.php/publications

New guides

Accreditation for Microbiological Laboratories (2023) – 3rd edition

Thanks to the work of an ad-hoc working group on microbiology, a substantially revised 3rd edition of the guide “Accreditation for Microbiological Laboratories” was published in May 2023.

The aim of this guide is to provide microbiological laboratories with guidance on how to fulfil the requirements of ISO/IEC 17025. The content will also be useful for organisations seeking accreditation or certification against the requirements of standards such as ISO 15189, GLP (Good Laboratory Practice), GMP (Good Manufacturing Practice), and GCP (Good Clinical Practice).

The principal changes in the 3rd edition are:

- Update on recent trends in microbiology, e.g. PCR (polymerase chain reaction) techniques for the detection of microorganisms;
- Addition of a list of abbreviations and symbols;
- Addition of a section on risk-based thinking;
- Updated sections on method verification and validation to reflect current ISO standards;
- References to the use of a decision rule;
- Updated Annex A on terminology relevant to microbiology;
- New Annex C on reporting confidence intervals;
- New Annex D on estimation of uncertainty from sampling;
- The order of sections in adherence with ISO/IEC 17025:2017.

Kyriacos Tsimillis

Eurachem Cyprus
Chair of the Ad-hoc Working Group



Terminology in Analytical Measurement: Introduction to VIM 3 (2023) – 2nd edition

The Education and Training Working Group published a new edition of the introduction to the terminology of metrology: “Terminology in Analytical Measurement — Introduction to VIM 3” in May 2023.

In this 2nd edition the scope and structure, and the terms and concepts discussed, remain unchanged from the first edition. However, all sections have been reviewed and, where necessary, the text has been revised to improve clarity and ensure consistency with current guidance.

The guide discusses a selection of the concepts in VIM 3, focusing on those most likely to be encountered in analytical laboratories. It aims to cover chemical,

biological and clinical measurements and gives examples over and above those in the notes accompanying the definitions in VIM 3. The guide is intended for laboratory staff, accreditation bodies, for those commissioning measurements and for those using measurement results. Lecturers and trainers may also find this guide useful when teaching aspects of metrology.

Vicki Barwick

Chair, Education and Training Working Group

Updated leaflets

An updated version of the leaflet “You talk, we understand – The way out of the tower of Babel” was released by the Education and Training Working Group in May. The leaflet highlights some terms which are commonly confused or misunderstood and introduces the Eurachem Guide on Terminology in Analytical Measurement.

This 2nd edition updates the leaflet to align with the latest edition of our Guide “Terminology in Analytical Measurement: Introduction to VIM 3”.

New translations of guides and leaflets

All translations are available from the publications section of the Eurachem website.

Guides

Measurement uncertainty arising from sampling, 2nd edition	Italian
Selection, use and interpretation of proficiency testing (PT) schemes by laboratories, 3rd edition	Czech
Assessment of performance and uncertainty in qualitative chemical analysis	Czech

Leaflets

Proficiency testing	Farsi
Selecting the right proficiency testing scheme for my laboratory	Farsi
How to investigate poor performance in proficiency testing	Farsi
Let's call a PT scheme a PT scheme!	Farsi
How can PT help my laboratory?	Farsi
What is the uncertainty factor?	Farsi
Use of measurement uncertainty in compliance assessment	Ukrainian

News

Revised Eurachem strategy published

Eurachem's strategic objectives and work plans are set out in a strategy document, published on the Eurachem website. The strategy is reviewed periodically, typically every five years. In late 2021 the Executive Committee (EC) began the review process, aiming to have the revised strategy ready for approval at the General Assembly in May 2023.

Keen to involve members and other stakeholders in the review process, the EC agreed that the discussion forum at GA38 in May 2022 would focus on developing Eurachem's future strategy. The forum began with a short presentation on the purpose of the strategy document, the revision process and timelines. The remainder of the session was devoted to a three-part discussion and prioritization activity.

- **Part 1** – initial brainstorming of drivers impacting Eurachem's activities. Participants allocated to one of three virtual breakout rooms.
- **Part 2** – mapping and prioritisation (in groups).
- **Part 3** – feedback and next steps.

For the activity, participants were allocated to one of three groups each with a facilitator. Each group was asked to identify the drivers that could influence Eurachem's activities over next five years, grouped under three headings.

- Technological (e.g. increase in non-targeted analysis, increased use of molecular biology techniques).
- Regulatory (including accreditation) (e.g. revision to standards, focus on particular areas in accreditation).
- Sectoral (issues that would impact a particular sector, e.g. health, environment, forensics).

Feedback was captured using Google "jamboards".

The groups were then asked to allocate the drivers identified in Part 1 to quadrants, depending on how important the groups thought each driver was, and how certain they were that it would impact

on laboratories.

Finally the groups were asked to focus on items in the top-left quadrant (most important/most certain) and identify their top three priority items.

Themes/topics that emerged from the discussions included:

- Ensuring the quality of measurements made outside of the laboratory;
- Information technology, cyber security, data integrity and digital issues;
- Bio measurements;
- Increased focus on qualitative and interpretive analysis;
- Revisions to regulatory and other documents (e.g. VIM4, ISO 15189, ISO/IEC 17043).

The outcomes of the discussion forum gave the Executive Committee valuable information which greatly assisted the final drafting of the revised strategy. The updated document was submitted to the GA members for voting in February 2023. Following some minor editorial changes it received final approval at the General Assembly in May 2023. The document is available in the "About Eurachem" section of the website. Thank you to everyone who contributed to the revision.

Vicki Barwick

Eurachem Past Chair

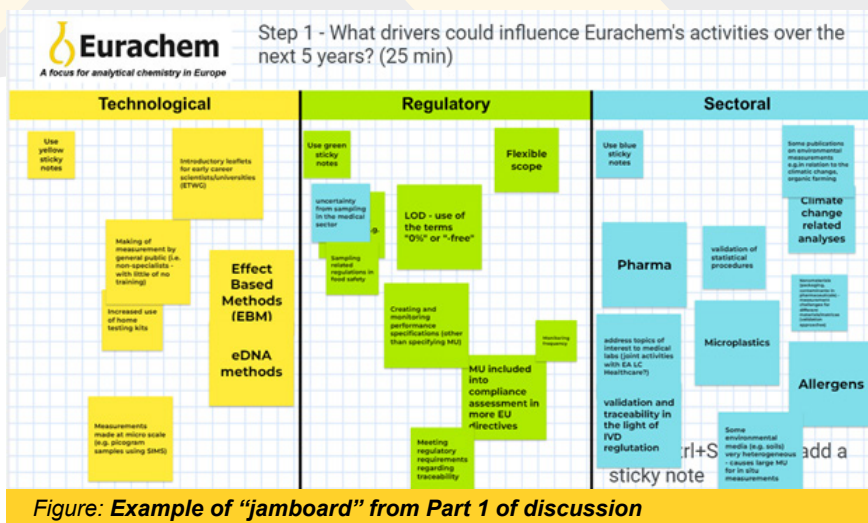


Figure: Example of "jamboard" from Part 1 of discussion

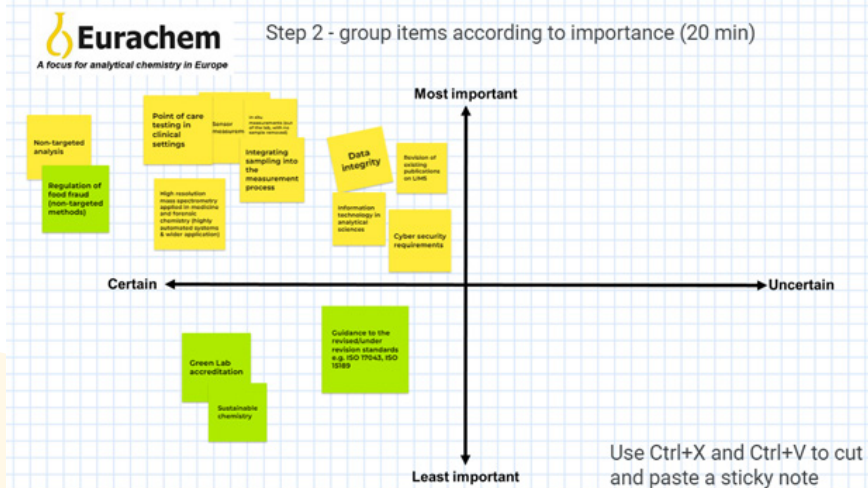


Figure: Example for outcome of mapping and prioritization exercise (Part 2)

Communications Task Group Update

Since its formation in May 2020, the Communications Task Group (CTG) has focussed on developing and delivering Eurachem's marketing and publicity plan. The aim is to raise awareness of and increase engagement with Eurachem activities, while harmonising the "look and feel" of communications. To achieve these aims the CTG distributes regular e-newsletters, produces this annual newsletter, manages the Eurachem website and social media channels, and develops marketing material and templates.

One of the best ways to keep in touch with Eurachem activities is via social media – @EurachemEurope

on X (formerly known as Twitter) and <https://www.linkedin.com/company/eurachem/> on LinkedIn. Eurachem also has a YouTube channel (<https://www.youtube.com/@EurachemEurope>) which contains a number of videos from recent online workshops.

If you haven't yet done so, you can subscribe to the e-newsletter at <https://www.eurachem.org/subscribe>.

The CTG also coordinates Eurachem's activities in support of "World Days". These range from social media posts highlighting relevant Eurachem guidance, through to videos and blogs – a great way to promote Eurachem as a focus for analytical chemistry in Europe. In May 2023 Steve Ellison (Chair of the Measurement Uncertainty and Traceability Working Group) published a blog on "How chemical measurement supports the global food system" in support of World Metrology Day.

7 June is World Food Safety Day which in 2023 was chosen as a key date for celebrating the 60th anniversary of the Codex Alimentarius. Eurachem marked the occasion with a blog "Eurachem proudly supports Codex at 60 – Sixty years of the Codex Alimentarius" by Marina Patriarca, Eurachem Liaison to Codex Alimentarius.

In April 2023 the CTG produced a four-page leaflet promoting Eurachem and its activities. Eurachem members can download a copy from the members area of the Eurachem website.

Vicki Barwick

CTG Chair and Eurachem Past Chair



Analytical Equipment and System Qualification Working Group (EQWG)

During the General Assembly in May 2023 it was agreed to form a new Working Group – the Analytical Equipment and System Qualification Working Group (EQWG). The WG, which will be chaired by Ernst Halder, will develop guidance in accordance with the "Procedure for the development of Eurachem Guidance". The Terms of Reference for the EQWG are outlined below.

- Any Eurachem member country may nominate expert members to the EQWG.
- The Chair or an assigned member of the EQWG will report to the Eurachem Executive Committee and the guidance will be subject to the approval of the Eurachem General Assembly.

- The EQWG will provide guidance on Equipment Qualification (EQ). The guidance will be applicable to all chemical and microbiological analytical laboratories and meet the requirements for the applicable quality standard and system.
- The EQWG will deal with questions of data integrity, computer validation and risk assessment exclusively within the framework relevant to EQ.
- The EQWG shall make arrangements for appropriate publication and promotion of the above guideline. This includes the possibility to publish information leaflets.
- Supplementary guidance may be issued. These contain specific recommendations and examples on a particular category of equipment, e.g. analytical balances. They serve the purpose of illustration and clarification.
- The EQWG shall organise, support and participate in international seminars and workshops on EQ issues in analytical sciences.
- The EQWG will collaborate and provide input on equipment qualification into other Eurachem Working Groups.

- The EQWG will follow and discuss new developments within analytical science, which may require new approaches regarding EQ or the modification of the guidance.
- The EQWG will contribute to the "Reading List" with relevant references on EQ in analytical science.

Member countries interested in nominating experts to join the EQWG should contact the WG Chair via the Secretariat. You can read more about the issues relating to equipment qualification in the 'In Focus' article on page 11.

Ernst Halder

Chair, Eurachem EQWG

People news

Thank you to our departing EC member

Riin Rebane



On completing her 3-year term in May 2023, Riin Rebane (Estonia) decided to step down from the Executive Committee.

Riin has been a representative of Estonia at the General Assembly since 2014 and organised the Eurachem week in Tartu in 2019. Riin will continue as a National Representative for Estonia and is an active member of the Communications Task Group, having recently taken on the role of newsletter

editor. The Executive Committee thanks Riin for her contribution to the EC over the past 3 years and for her ongoing support for Eurachem activities.

Vicki Barwick

Eurachem Past Chair
Chair, Communications Task Group

Eurachem welcomes ..."new" EC members



Anna-Liisa Pikkarainen

Elected member of the Eurachem Executive Committee Dr Anna-Liisa Pikkarainen has been Eurachem Finland's national representative at Eurachem meetings since 1998. She has a PhD degree in analytical chemistry and MSc degree in organic chemistry from the University of Helsinki.

Her professional experience covers quality, research and regulatory fields. As quality manager she developed and audited quality systems. In addition to forensic and marine research and method development on chemical substances she has expertise related to evaluation and approval of active substances in plant protection products (PPPs), biocidal products and feed additives, as well as product authorisation and enforcement regarding PPPs. She has participated in the preparation phase of legislations. She has provided support to stakeholders on implementation of EU legislation. Currently she is working as an external at the European Chemicals Agency (ECHA).



Michael Koch

Michael studied Chemistry at the University of Stuttgart and is now a senior staff scientist at the Institute for Sanitary Engineering, Water Quality and Solid Waste Management.

He is the head of the working group on Hydrochemistry and Analytical Quality Control and the scientific director of AQS Baden-Württemberg, a PT scheme for water analyses. Michael is chair of the German Eurachem mirror group and a long-standing member of the Eurachem PT Working group. He is involved in training on QA issues in Europe as well as in developing countries.

Current EC members

Front row from the left: Helen Cantwell, Anna-Liisa Pikkarainen, Kyriacos Tsimillis, Isabelle Vercruysse (Chair), Eugenia Eftimie Totu (Vice Chair), Vicki Barwick (Past Chair)

Back row from the left: Marina Patriarca, Stephen Ellison, David Milde, Hanspeter Andres, Michael Koch, Lorens Sibbesen, Brian Brookman, Ricardo J. N. Bettencourt da Silva, Michael H. Ramsey

Top: Philippe Maesen (Secretary)



A new Working Group on Equipment Qualification

In the early 1980s, analytical equipment requirements appeared in various documents on analytical laboratories. These were rather vague. Many laboratories introduced formal quality systems, generally implemented in accordance with one or more of the three main internationally recognised quality standards: the ISO 9000 series of standards, Good Laboratory Practice (GLP) and ISO Guide 25.

However, these standards are intentionally very broad so that they are as widely applicable as possible, and they go into great detail on many topics. They contain general requirements, such as that equipment must be fit for purpose, properly maintained and calibrated to national or international standards, but they are not specific about what is actually required or how it should be achieved.

Against this background, LGC (then known as the Laboratory of the Government Chemist) established an Instrumentation Working Group under the auspices of Eurachem-UK with the support of the UK Government's Valid Analytical Measurement (VAM) programme. The working group brought together a broad cross-section of instrument manufacturers, representatives of accreditation bodies and regulatory authorities, and users of analytical instruments.

Their publications introduce the concept of Design Qualification (DQ), Installation Qualification (IQ), Operational Qualification (OQ) and Performance Qualification (PQ).

This concept was quickly adopted and consistently implemented in the pharmaceutical world. Over time, the concept was extended to pharmaceutical manufacturing and infrastructure facilities. In the ISO standards world, the concept received little attention.

The concept remained stable for a very long time. However, some ambiguities soon became apparent. The first step, the DQ, raised questions. So was DQ now the responsibility of the manufacturer? But where were the buyer's requirements defined? After all, the instrument has to fulfil predefined

requirements of the user. Similarly, the completion of the PQ could be understood as the completion of the process of qualification. But what follows afterwards? The instrument must be maintained and its suitability for the given purpose must continue to be guaranteed. Nowhere was there any mention of decommissioning and archiving data and metadata. The scope of the qualification was also not clearly defined.

Since the introduction of the DQ/IQ/OQ/PQ scheme, instruments in laboratories have increasingly evolved from single instruments to complex systems. At the same time, digital electronics took over the control and evaluation of the measurement signals. Topics such as data integrity and computer validation emerged. Of course, these topics were not taken into account in the original scheme.

An improvement was achieved by the United States Pharmacopeia (USP) with the new general chapter USP 1058 Analytical Instrument Qualification in 2008. The instruments and thus the scope of qualification were divided into three categories, from simple equipment such as stirrers to complex systems such as LC/MS/MS with sophisticated data evaluation systems. Great emphasis is placed on the role of software. The life of an instrument is understood as a process. It starts with the thoughts of acquisition and ends with the decommissioning of the instrument.

Since its foundation, Eurachem has published widely recognised guidelines on topics such as method validation and proficiency testing. A few years ago, it was noted that, in the context of method validation, the qualification of devices needed more attention. At

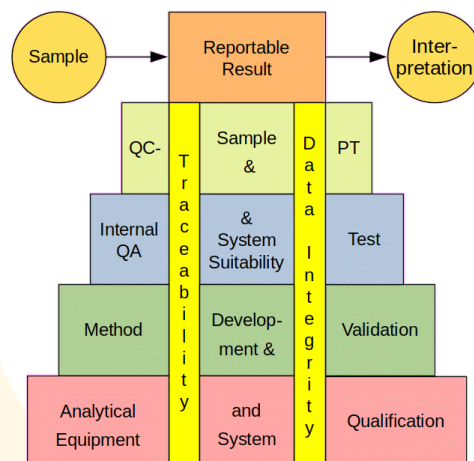
the same time, a proposal emerged to develop a guide for device and system qualification. It was noted that such a guide was missing from the relevant ISO standards.

In order to be able to conduct the discussion in a well-founded manner, a draft was drawn up. This has already been subjected to various reviews. Based on this draft, the GA in May 2023 decided to establish a working group to finalise the guide. The title of the working group is "Working Group on the Analytical equipment and system qualification". As follow-up actions, the working group plans to develop documents with concrete examples of the life process of certain types of equipment, on data integrity, computer validation and on currently emerging issues in IT.

Persons interested in participating in the working group are invited to contact the Eurachem Secretariat.

Ernst Halder

Analytical Equipment and System Qualification Working Group



Working Group reports

Period May 2022-May 2023

EDUCATION AND TRAINING WORKING GROUP (ETWG)

The Education & Training Working Group met online on 26 September 2022 and 6 February 2023, and in person in Bern on 24 May 2023.

Chair and Vice-Chair/Secretary

According to the current Terms of Reference of the ETWG, the Chair and Vice-Chair/Secretary serve for two-year terms. David Milde completed his term as Chair in May 2022 and announced that he did not wish to stand for a further term. The WG did not have a Vice-Chair/Secretary during the period 2020-2022. Nominations were requested from WG members for the two vacant positions. Vicki Barwick was nominated for the role of Chair, and Elena Sanchez for Vice-Chair/Secretary. These appointments were approved by the WG members and confirmed by the EC in September 2022.

Revision of Eurachem reading list

The ETWG is responsible for the maintenance of the Eurachem reading list. The aim is for the list to be reviewed annually (the latest revision was published in February 2022). The 2023 revision has been completed and was published on the website in June. New sections relating to sampling and qualitative analysis have been added.

Revision of guides and leaflets

The 2nd edition of the Guide "Terminology in Analytical Measurement: Introduction to VIM 3" was published on the Eurachem website in May 2023. The accompanying leaflet on terminology has also been updated to bring it into line with the revised guide.

Over the next few months the ETWG will focus on the revision of the Guide to Quality in Analytical Chemistry with the aim being to have a draft ready for review by the General Assembly members in May 2024.

The leaflet on what was then the new ISO/IEC 17025 standard was published in 2018. The ETWG reviewed the leaflet and decided to retain it in its current form. It will not be updated but will be retained on the Eurachem website as the information provided is still correct and the leaflet remains popular.

New leaflet

The ETWG is proposing to develop a new leaflet covering the revision of ISO 15189.

Video

The ETWG is planning to produce a short video highlighting the importance of having a common language in analytical measurement and introducing the revised terminology guide.

Workshop on ISO 15189:2022

Thanks to the efforts of Kyriacos Tsimillis and colleagues in the Division of Quality Assurance of the Pancyprian Union of Chemists (PUC), a successful two-day training event, "ISO 15189:2022 – The New Standard for the Competence of Medical Laboratories" was held in Nicosia, Cyprus on 16-17 March 2023. The face-to-face event (the first since the pandemic) attracted 47 participants from 4 countries. Planning for another training event in Nicosia in spring 2024 is at an early stage.

Vicki Barwick

Chair, Eurachem ETWG

METHOD VALIDATION WG (MVWG)

The MVWG now has 29 members (7 of which are "corresponding members" – i.e., not necessarily participating in meetings, but (occasionally) contributing by commenting on documents etc.), representing 14 European countries. Lorens Sibbesen (Denmark) and Helen Cantwell (Ireland) are still chair and vice-chair/secretary respectively.

Since the last GA (May 2022) there has only been one (online) MVWG meeting, as the usual autumn meeting for the full WG was replaced by some meetings in the beginning of October 2022 between the two editors of the revised version of the Fitness for Purpose (FfP) Guide and the chair, dealing with the latest comments from the Task Groups (TGs) on revision 3 of the various sections of the guide. The various TGs have held a number of separate online meetings. The regular (online) MVWG meeting was held over two days in February 2023 (12 participants).

During the last year (since May 2022), the WG members have mainly been engaged in the following tasks.

- Revision of the 2nd ed. of the FfP Guide:
 - » 'The work of the various TGs, contributing to the revision process was ended by October 2022. Some general issues related to the overall principles of the guide were discussed at the February meeting (see below), but from there the editor is assembling all the inputs in a final draft of version 3.

- » A new sub-section 6.2 on “The calibration function” has been included (to precede all the subsections requiring some kind of quantification). It is recognized that establishment of a proper calibration function for a given method is part of method development, but it is seen as crucial to verify that the calibration function is fit for purpose as part of method validation/verification. The sub-section under 3.1 “Definitions” may be supplemented by a new subsection on the “basic concepts”, focusing on ensuring validity (fitness for purpose) of a method by providing objective evidence for relevant requirements being fulfilled (through validation or verification to a necessary extent).
- » A new, compiled draft of version 3 of the guide is under final editing and will be presented to the full MVWG before the planned meeting in beginning of October 2023.
- The subject of instrument qualification has been discussed in the MVWG before as an important “precursor” for validating/verifying a method, and the idea has been to possibly include an annex to the guide for information on the subject. Ernst Halder from the WG has now elaborated a rather extensive and detailed document on the subject, and it has been decided to suggest a totally new Eurachem WG on this as it goes beyond what could just be an annex to the FfP guide.
- The new Joint Task Group (JTG; with the UfSWG and participants from EUROLAB), on the subject of validation in relation to sampling, has held four meetings in the period.
- The JTG is still discussing the possible approaches for validation of sampling – which ideally should be integrated (including the subsequent measurement in the laboratory; as described in the UfS Guide) or isolated (looking at the sampling as a “stand-alone” process). Both approaches give some challenges by either including quite some extensive work for the routine laboratories or by the difficulties in providing objective evidence for validity, respectively. The JTG has started drafting elements to a guidance document on the subject.
- Task Group on “Use and validation of Non-Targeted Methods” has been involved in the planning of a series of joint half-day webinars in cooperation with AOAC-E under the main heading, “Trends & challenges for Non-Targeted Methods”. So far two events have been launched:
 - » 1) 15 November 2022 with the theme “Quo Vadis? What, How and Who?” Well attended by 120+ participants from all over the world.
 - » 2) 6 June 2023 under the theme “NTMs – qualitative or quantitative?”
- The work on a new supplement to the guide on the challenging subject of “Extent of Method Validation” is still ongoing.
- The work on another supplement “Method Validation/ Verification and assessment of response curves” is still ongoing.
- The WG is currently discussing relevant (and illustrative) examples of following the FfP Guide (and the template recommended in the supplement “Planning and reporting of method validation studies”), hoping to have some uploaded on the Eurachem website at some point (after formal approval).
- The WG is continuing communications with the WG on Qualitative Analysis on possibly starting some joint work on validation of such methods.
- The WG has contributed to the revised text in the new Eurachem five-year strategy and to the Eurachem “Reading List”
- Members of MVWG occasionally contribute to training and workshops with input on the principles of method validation.

Lorens P. Sibbesen

Chair, Eurachem MVWG

Helen Cantwell

Vice-chair and Secretary of MVWG



The aim of establishing a liaison with a CEN/TC 460, “Food authenticity” and their WG preparing an EN Standard for validation of NTMs has unfortunately not been achieved yet.

MEASUREMENT UNCERTAINTY AND TRACEABILITY WORKING GROUP (MUTWG)

Membership

The MU and Traceability working group is a joint working group with CITAC. The group currently has 34 members.

Meetings

The WG has held three full meetings and two task group meetings, all online, since the last General Assembly. A further meeting was held in person in May at Bern.

MU & Traceability guidance

The Eurachem working group on Measurement Uncertainty and Traceability is responsible for four current Eurachem guides and six information leaflets, as follows:

Guide	Publication year	Review due
Quantifying uncertainty in analytical measurement	2012	See report
Traceability in chemical measurement	2019	2024
Use of uncertainty information in compliance assessment	2021	2026
Setting target measurement uncertainty	2015	2025

Information leaflet	Publication year	Review due
Information leaflet for lab customers concerning the quality of chemical analyses*	2001	2024
Traceability of Analytical Results	2019	2024
Use of uncertainty information in compliance assessment	2021	2026
Using repeated measurements to improve the standard uncertainty	2015	2025
Treatment of an observed bias	2022	2027
Target uncertainty	2018	2023

* Owned by RISE Research Institutes of Sweden. Eurachem has permission to prepare translations.

In addition to these, the group is preparing a guide on evaluation of measurement uncertainty using validation data to complement the existing measurement uncertainty guide (see work programme, below).

As reported at the last Executive meeting, the measurement uncertainty guide (QUAM:2012) was circulated for internal review by the WG in 2022; a decision on any amendments was deferred until 2023 to accommodate the findings of the task group on asymmetry and any updates needed after publication of the 'Uncertainty from in-house validation data guidance' (see below).

An unusual addition to the WG's collection of guidance documents was the preparation of a PDF of the first Eurachem Guide, on measurement uncertainty, which was originally distributed in 1995 hard copy only. A PDF version of this document can now be found in the Eurachem website publication archive for historical interest.

Current work programme

Comments were addressed on the latest draft guidance on the evaluation of uncertainty from in-house validation data. Drafts of examples were circulated to the WG for comment in January 2023 and comments on these are to be considered at the next full WG meeting.

The working group has an informal task group on handling asymmetry in the context of compliance assessment, led by Alex Williams. Computation work to date has shown that, for two-sided compliance intervals, asymmetry does not greatly affect the overall producer and consumer risk, but the risks of incorrect conformity decisions at the upper and lower end of the interval can change considerably. Further computation work is under way to examine the effect on one-sided compliance intervals.

At recent meetings the group has also discussed the need for further guidance on 'bottom-up' uncertainty evaluation for chemical measurement, and is collecting examples of measurement uncertainty evaluation using 'bottom-up' approaches with a view to possible publication or preparation of supplementary guidance. The WG has also contributed to the 5-year strategy for Eurachem and details of future strategy can be found there.

Workshops

The MU & Traceability WG ran a two-day online workshop on 25-26 October 2022 to present the principles of the draft guide on uncertainty from in-house validation data. Approximately 600 participants joined for some or all of the meeting, with a peak attendance of about 515 on the first day and up to 330 on the second day. A technical issue impeded participation early on the second day, reducing participation on the second day. Complete session videos were subsequently placed on YouTube, using link-only access, for participants to catch up on missed content, and all participants who had subsequently contacted Eurachem via the web contact form or other email addresses were

contacted to give information about availability of slides and video recordings of the event.

An online feedback form was provided at the end of the event. The feedback form also provided for certificates of attendance as the only certificate source. Approximately 350 participants provided feedback. Despite the technical issues on day 2, feedback was generally positive. A small number of participants (c. 20) did not receive certificates automatically, probably owing to organisational email filters; those who contacted the organisers were sent individual certificates.

Individual videos of all presentations were published for open access on the Eurachem YouTube channel from 12-16 December 2022, publicised via Twitter and LinkedIn. The workshop also generated over 500 new contacts for the Eurachem mailing list, via opt-in on registration for the event.

Steve Ellison

Chair, Eurachem MUTWG

QUALITATIVE ANALYSIS WORKING GROUP (QAWG)

The Working Group met three times online and once in a hybrid format since May 2022 to plan future activities. It was planned the elaboration of leaflets on specific technical details of the recently published guide, a collaboration with the Method Validation Working Group on the validation of qualitative analysis methods and contributing to the ongoing debate concerning the reporting of traceability statements of qualitative analysis results. In June, the chair will present a communication on "Traceability and uncertainty of qualitative analysis results" in the second event of webinars on the use of Non-Targeted Methods jointly organised by Eurachem and AOAC Europe

Ricardo Bettencourt da Silva

Chair, Eurachem QAWG

PROFICIENCY TESTING WORKING GROUP REPORT (PTWG)

The Eurachem Proficiency Testing Working Group (PTWG) has continued to make progress on several work activities.

- An expanded task group, consisting of PTWG members, along with some other invited experts, has been established to continue the work on reviewing and investigating practices for performance evaluation in qualitative and interpretative PT schemes. The objectives of future work are:
 - » Update current practices in non-quantitative PTs through another survey

- » Following the survey, identify elements for harmonisation
- » Provide guidance on this issue for the related standards and guides or the outcome of the survey could be a guide for non-quantitative PT assessment.
- The guide "Selection, Use and Interpretation of Proficiency Testing (PT) Schemes" has been translated by Eurachem-CZ into Czech.
- Following the recent revision of most of the PT leaflets, the WG is undertaking translations of the revised leaflets, as well as translating the leaflet "Let's call a PT scheme a PT scheme!"
- Work continues on two new leaflets:
 - » Understanding PT Statistics
 - » Understanding PT Performance Assessment.
- Two further leaflets are under discussion, one a check list for participants enrolling in a PT scheme and the other on PT logistics.
- Arrangements for the 10th Eurachem PT Workshop, now moved to 2023 is ongoing. The new dates for the workshop are 25-28 September 2023 in Windsor, UK.

Brian Brookman

Chair, Eurachem PTWG



REFERENCE MATERIALS WORKING GROUP (RMWG)

The WG had previously agreed on the table of contents of the revised Guide. Task groups were formed to outline the content of each chapter.

The outcome of this work will be discussed at the next (virtual) meeting in June.

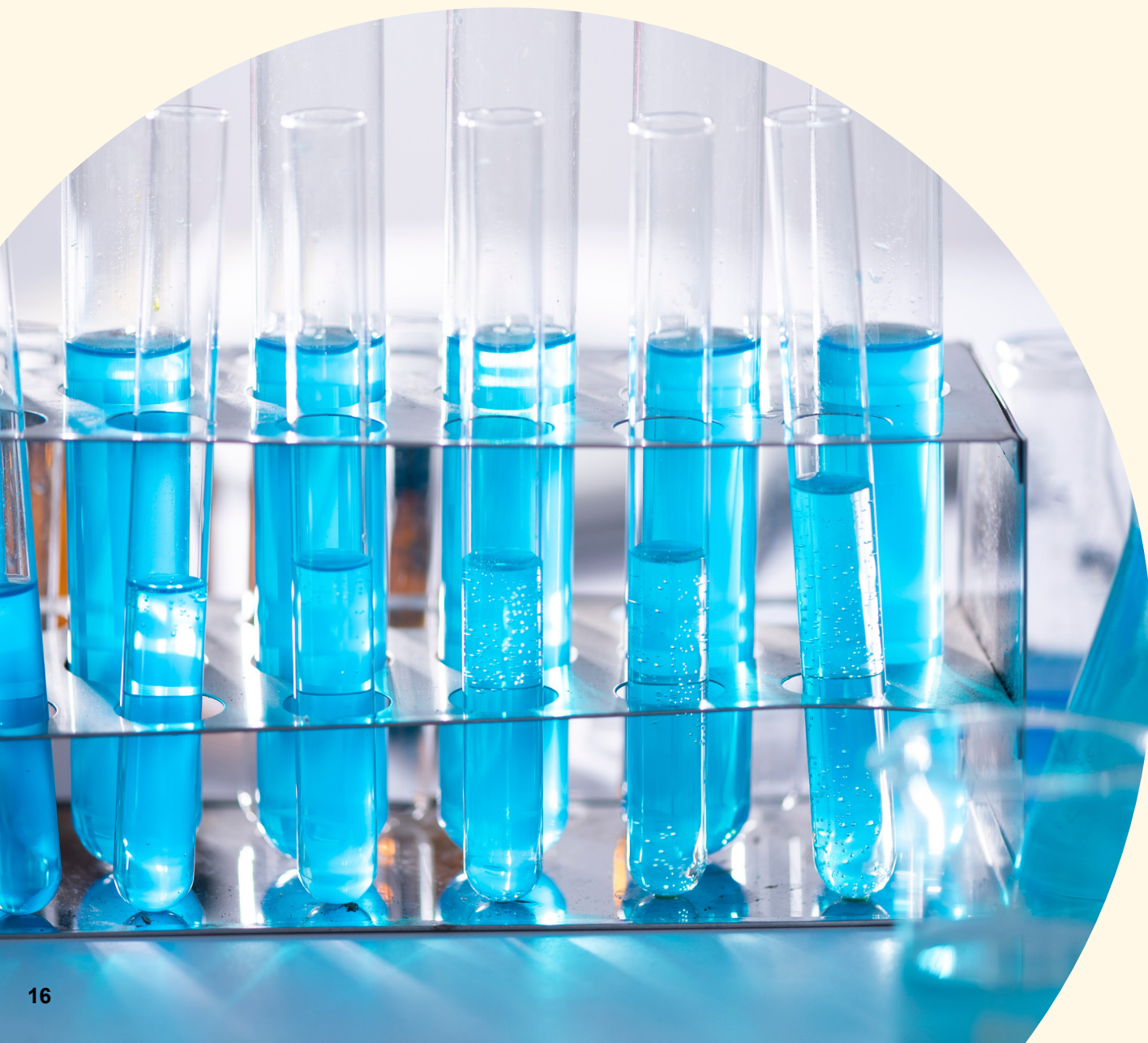
The current membership of the WG is of 27 members.

The WG webpage has been updated with the current list of members.

The WG contributed to the revision of Eurachem five-year strategy.

Marina Patriarca

Chair, Eurachem RMWG





UNCERTAINTY FROM SAMPLING WORKING GROUP (UfSWG)

The Eurachem-UfS-WG (jointly with RSC/AMC UfS-EWG) last met on 1 March 2023.

The UfS-WG has been participating in the Joint Task Group (JTG) with the Eurachem Method Validation Working Group on VaMPIS (Validation of Measurement Procedures Including Sampling). The main focus of the JTG is to prepare supplementary guidance (SG) on VaMPIS. At the last meeting of the JTG on 17 April (on-line), first drafts of several sections of the SG document, prepared by various subgroups, were discussed. Further comments will be submitted via email and revision made to the sections by these subgroups. The resultant revised drafts will be discussed at next JTG meeting in mid-June.

One “leaflet” (actually a Technical Brief*) on Comparing Uncertainty Values was prepared by the joint UfS-WG and published by the RSC.

A new paper entitled “Improved coverage factors for Expanded Measurement Uncertainty calculated from two estimated variance components” has been submitted to ACQUAL. As first author, Peter Rostron also plans to draft a shorter derived AMC/Eurachem Technical Brief, and release new AMC application software (RANOVA.v4) that enable users to implement this approach.

Presentations of the methods and approaches in the Eurachem UfS Guide and VaMPIS-SG have recently been given at two Eurachem events. One event in Rome marked the launch of the Italian translation of the Guide**, and had over 600 participants receiving instantaneous Italian

translation. At the second event (on ISO 15189:2022) in Cyprus, the presentation considered how these UfS ideas can be applied in the medical sector***, particularly to measurements made in situ (i.e. called Point of Care Testing, POCT, in this sector). A third presentation on UfS and its role in validation will be given at the Eurachem Workshop with the GA in Bern in May.

*Comparing measurement uncertainty values. AMC-Eurachem Technical Brief No. 112. Anal. Methods, 2022, 14, 4025-4028. <https://doi.org/10.1039/D2AY90114E>

**Ramsey, M.H. (2023). Overview of Eurachem guide on measurement uncertainty arising from sampling. Invited lecture at ISS Workshop “Uncertainty associated with sampling in chemical analysis: Presentation of the Italian Edition of the Eurachem/CITAC Guide”. 9-10 March 2023, Rome. <https://www.accredia.it/webinar-iss/>

***Ramsey, M.H. (2023). Uncertainty arising from sampling. Invited lecture at “Training event: ISO 15189:2022 – The New Standard for the Competence of Medical Laboratories”. 16-17 March 2023, Nicosia, Cyprus. <https://www.eurachem.org/index.php/events/workshops/457-wks-trn15189-2023>

Mike Ramsey

Chair, Eurachem UfSWG

National Reports

Period May 2022-May 2023

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

AUSTRIA

As one of the original twelve signatories of our MoU the Austrian Society for Analytical Chemistry (ASAC, <https://www.goech.at/asac>) quickly formed the mirror group, Eurachem-Austria, to bring together all the scattered initiatives in analytical quality assurance at the time. Two major activities are currently being pursued on a regular basis: the Proficiency Testing Scheme in Tulln and the University Course "Quality Assurance in the Chemical Laboratory" in Leoben.

The Austrian Proficiency Testing Scheme (<https://www.ifatest.eu>) is run in cooperation with the Environment Agency Austria (<https://www.umweltbundesamt.at/en/>) and focused on water quality monitoring laboratories as required by EU regulations and commissioned by the Austrian Ministry of Agriculture, Regions and Tourism. The program has been accredited in accordance with EN ISO/IEC 17043 by the Austrian National Accreditation Body "Akkreditierung Austria" (<https://www.bmaw.gv.at/en/Services/Accreditation.html>) since 2020.

The University Course (<https://weiterbildung.unileoben.ac.at/en/quality/quality-assurance-in-the-chemical-laboratory>) that was founded more than twenty years ago has produced several hundred graduates during this time. The course is headed by T. Prohaska and is well established as an almost integral part of PhD-curricula in analytical chemistry for all Austrian Universities. The course has seen a conversion from 15 % to about 90 % distance learning. This transformation has gone very smoothly due to the excellent cooperation of all instructors and students. The next cycle is planned to start in July 2023.

Wolfhard Wegscheider

BELGIUM

Belab is the association of Belgian Laboratories and organizations involved in accreditation. Belab is a member of Eurachem and EUROLAB. The association has an Executive Board with eight members and counts 50 member-laboratories in the General Assembly. The members are laboratories 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 different boards of Belac (Belgian accreditation authority): Commission of coordination (management of Belac) and National Council (advisory

board of Minister of Economy). Belab represents the laboratories in the Belac Board of Appeal.

Belab is chaired by Isabelle Vercauysse (APB). Philippe Maesen (University of Liège) is vice-chair.

Belab organised in March 2022 during the online General Assembly an informative session for members: Maureen Logghe (Director Belac) presented the future plans of Belac and Ellen Somers (Belac) and Nicolas Di Cintio (Belac) presented the recently updated Belac application forms.

Belab organised in February 2023 an online informative session for their members. The following items were covered:

- "Organization and Structure of Belac" by Thomas De Jonghe (Belac-B);
- "Module E" (CAPA plan) by Ellen Somers (Belac-B);
- "History and impact of digitalization on analytical instruments, their qualification and data integrity" by Ernst Halder (Lonza-CH);
- "Building a global culture of sustainability in science" by Pernilla Sörme (Green Lab-UK/USA);
- "Cybersecurity Certification and Laboratories: A world of new opportunities !" by Dirk De Paepe (Center of Cybersecurity-B).

During the period 2022-2023, Belab was asked by the Flemish Ministry of Education to give advice on drawing up new professional profiles.

Every year the activities and information of Eurachem are diffused by a presentation at the General Assembly of Belab, via the website and by emailing newsletters to the members of Belab at regular intervals.

Isabelle Vercauysse

BULGARIA

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

In 2022 BULCHEM's activities were related to the organization of courses and workshops and the translation of a Eurachem Guide.

Training events were organized covering the following topics:

- Calibration of measuring instruments in accordance to EN ISO/IEC 17025 (June 2022);
- Processing of measurement results and assessment of uncertainty when performing metrological activities (June 2022);
- Alternative methods for applying the model approach to estimating measurement uncertainty (October 2022);
- An empirical approach to estimating measurement uncertainty (October 2022).

Translation of Eurachem publication into Bulgarian:

- Use of Uncertainty Information in Compliance Assessment, Second edition (2021).

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

Dimka Ivanova

CROATIA

The Association of Croatian Laboratories (CROLAB) aims to enhance the infrastructure of Croatian laboratories to support the development of production and economy in the competitive open market.

It is achieved through using shared potential and synergistic effects of the association and its members.

CROLAB is the largest association of conformity assessment bodies in the Republic of Croatia, which connects testing, analytical, measurement and verification laboratories, certification and inspection bodies and external members (agencies and state administration bodies, etc.).

CROLAB's 17th International Conference "Laboratory Competence 2022" was held in Cavtat, Hotel Croatia, from 9-12 November 2022. More than a hundred participants took part, and among them were about twenty participants from neighbouring and other European countries.

The conference began with a ceremonial opening and plenary lectures: Kai Stoll-Malke (PTB Germany), "*The role of the CIPM-MRA for the economy – The perspective of the NMI*"; Branka Ivančan-Picek (DHMZ) with the lecture "*Climate changes and risk management*", and Davor Zvizdić (FSB) with the lecture "*Why humidity is important*".

The CROLAB clubs, headed by their presidents and colleagues, delivered scientific presentations during the conference. Sixteen lectures were given in sections dedicated to analytical, measurement, and testing laboratory clubs. Additionally, eleven posters were presented in the poster section. The conference concluded with a forum discussing accreditation's latest news and challenges. This forum included two lectures and a regional-level discussion involving accreditation bodies from neighbouring countries such as ATS, BATA, and IARNM.

The CROLAB's Food Section (SEH) meeting was held on 23 January 2023, at the company Podravka in Koprivnica. The main goal was to present an immunoenzymatic test to determine acrylamide, so the participants were mainly food laboratories.

Next event: CROLAB's 18th International Conference "Laboratory Competence 2023".

The annual international conference on Laboratory Competence is scheduled to take place in Vinkovci

from 27-30 September 2023. This year's conference will focus on the important role that laboratories play in the economy, specifically in testing, analytical and measurement laboratories, inspection, and certification bodies. The conference aims to define the position and role of laboratories in the EU and to establish partnerships with state administration bodies, faculties, institutes, and agencies. If you are interested in attending, visit www.crolab.hr for more information and registration.

Marija Trkmić

CYPRUS

Cyprus joined Eurachem in May 1997; during the General Assembly hosted in Dublin it became an Associate Member. Three years later (2000) it was upgraded to a Full Member, during the General Assembly hosted in Berlin. Since then the Cyprus Eurachem Committee was very active within the framework of the Pancyprian Union of Chemists (PUC), both locally and on the European level; in spring 2014, its role was undertaken by the then established Division of Quality Assurance under PUC.

The last year as the restrictions due to the pandemic were extensively withdrawn, a number of activities were carried out and the communication with the members was improved.

Participation in Eurachem activities

The Division was extensively involved in the activities of Eurachem, at various levels, namely the General Assembly, the Executive Committee, some of the Working Groups (mainly ETWG) as well as the EA LC Healthcare Working Group. Furthermore, there was a contribution to the Newsletter and other publications as well as to the ongoing work on the revision of the Guide for Quality Assurance in Analytical Laboratories (QAC). Another task, namely the revision of the Guide "Accreditation for Microbiological Laboratories" has recently been completed. Three members of the Cyprus Eurachem Committee had an active role in the competent Task Force Group. The revision of ISO 15189 for medical laboratories published in December 2022 was another important topic. Presentations (both oral and posters) were made at the virtual workshop organised by Eurachem-Georgia (May 2022) and the current workshop in Bern (May 2023).

Training activities – regional cooperation

The Division is promoting cooperation in the region; this is mainly achieved via training events hosted in Cyprus with the participation of colleagues from neighbouring countries. Two very successful activities on the new ISO 15189:2022 were organised.

National Reports

16-17 March 2023: Following the successful events of the years before the pandemic, the Division of Quality Assurance of the Pancyprian Union of Chemists and the Education and Training Working Group of Eurachem, organised a two-day training programme in Nicosia. Up to 50 medical scientists, including colleagues from Cyprus, Greece, Palestine and Poland participated in the event which was highly appreciated mainly for the interaction following the presentations by Mike Ramsey, Elvar Theodorsson, Irini Leimoni, Vicki Barwick, Leontios Kostrikis, Despina Charalambous and Kyriacos Tsimillis.

2 and 8 May 2023: An 8-hour on-line introductory training was provided after a request by DAP, the Albanian Accreditation Body. A small group of DAP assessors and technical experts attended the event.

Kyriacos Tsimillis

Despina Charalambous

CZECH REPUBLIC

Eurachem Czech Republic (Eurachem-CZ) has been working as an independent organisation since 1993, currently with more than 60 members. On the other hand, we have been closely cooperating with the national accreditation body, EUROLAB-CZ, and the national metrological institute. Local experts have continued to contribute to the technical board for physical and chemical testing of the Czech Accreditation Institute.

In November 2022 we published a new textbook as the 27th volume of the KVALIMETRIE edition (Qualimetrics). This volume brings the official Czech translation of three recent guides: Eurachem/CITAC Guide: Use of uncertainty information in compliance assessment (2nd ed. 2021), Eurachem Guide: Selection, *Use and Interpretation of Proficiency Testing (PT) Schemes* (3rd ed. 2021), and Eurachem/CITAC Guide: *Assessment of performance and uncertainty in qualitative chemical analysis* (1st ed. 2021). All translated guides are available also on Eurachem website and on the website of Eurachem-CZ. The translation and issuing of this textbook was funded by the Czech Office for Standards, Metrology and Testing as well as by the Ministry of Education Youth and Sports.

We also translated four revised Eurachem information leaflets into Czech – *Traceability of analytical results*, *Use of uncertainty information in compliance assessment*, *How can Proficiency Testing help my laboratory?*, and *Pre-and post-analytical proficiency testing*.

Eurachem-CZ members contribute to activities of the ETWG and RMWG.

Our organisation distributed among our members two issues of the Eurachem-CZ Newsletter. Our members can find up-to-date information about our activities as well as many freely accessible leaflets, on our website – www.eurachem.cz.

David Milde

DENMARK

EUROLAB-DK based activities

Members meeting, 17 November 2022. Agenda: Flexible scope accreditation; cross border accreditation; method validation; sustainable laboratories.

Network for Microbiology. Meeting planned for 26 October 2022. Subjects: Determination of Scatol; method validation. Meeting postponed to January or February 2023.

Members meeting and General Assembly, 30 March 2023. Agenda:

Info from EUROLAB-DK; the Danish Environmental portal; analysis of PFAS – PFOS; internal calibration; digitization of calibration certificates.

Eurachem based activities

25-26 October 2022. Eurachem/CITAC online Workshop; Measurement uncertainty evaluation based on in-house validation data (online). Contribution from DK: Experimental validation of the evaluated measurement uncertainty. Participants from DK (mainly EUROLAB members): 10-20 persons.

Generally, EUROLAB-DK is representing the accredited laboratories in Denmark in relation to the Danish Accreditation Body, DANAK (appointing/supporting members for the various advisory groups within DANAK). Especially the discussions in the advisory groups related to Environmental Testing and another related to Food Testing are followed closely in the Network for Analytical Chemistry, as well as in the board for EUROLAB Denmark.

Anders K. Svaneborg

ESTONIA

Eurachem activities in Estonia are coordinated by the Estonian Environmental Research Centre (EERC). The two national representatives are Riin Rebane from EERC and Ivo Leito from University of Tartu. Riin Rebane is also an Executive Committee member and participates in the Communication Task Group, and Ivo Leito is part of the Measurement Uncertainty and Traceability Working Group. Ivo Leito also made a presentation at the “Measurement uncertainty evaluation based on in-house validation data” workshop organized by Eurachem/CITAC.

Education is one of the main tasks in 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 including Riin Rebane “LC-MS method validation” (https://sisu.ut.ee/lcms_method_validation/), which by now have been organized nine and six times, respectively, and attract hundreds of participants from all over the world every year. Moreover, there is a web-based free software for validation ValChrom (<http://www.valchrom.ut.ee>) for chromatographic that is ready and also contain Eurachem

validation guideline. It is expected to have a Design of Experiments possibility in summer 2023.

Eurachem activities in Estonia are strongly connected to the network called Estonian Centre of Analytical Chemistry (AKKI, <https://www.akkiee>) which aims for high quality chemical analysis in Estonia. This is also where all the information related to Eurachem activities in Estonia are disseminated.

Riin Rebane

FINLAND

Finntesting Association/Eurachem Finland had two annual meetings with seminars in 2022. During the spring seminar Mrs Hanna Niemikoski (Finnish Environment Institute) gave a presentation on marine research where she utilised mass spectrometric methods of analysis. The autumn seminar focused on challenges of climate change and chemical measurements.

During the autumn seminar Eurachem Finland celebrated its 30 year anniversary which was introduced in the opening of the seminar by Mr Teemu Näykki, the chair of Finntesting Association. Eurachem Finland invited and welcomed Eurachem to provide an on-line presentation at the seminar: Ms Vicki Barwick, the past Eurachem chair, highlighted Eurachem's history and activities.

The Association awarded students on their thesis where quality criteria were fulfilled. The students presented the outcome of their theses in the autumn seminar.

Mr Juho Louhisalmi (University of Eastern Finland) gave a presentation on his Master's thesis entitled "Measurement of particulate emissions from small-scale wood combustion: a comparison of particulate mass concentration measurement methods".

Mrs Mari Oravamäki and Mrs Mirva Tuominen (Tampere University of Applied Sciences) presented the results of their Bachelor's thesis on the "Effect of the abnormal ratio of EDTA and blood on the results of a complete blood count".

The Executive board of Finntesting Association had virtual meetings to promote and organise quality related activities. Quality related information was disseminated via seminars and the Association's website. The document on quality related terminology is an on-going activity.

The Association has nominated members in Eurachem General Assembly and Eurachem Working Groups. The Association cooperates nationally, and internationally through Eurachem, EUROLAB and CITAC activities.

Anna-Liisa Pikkarainen

FRANCE

BIPEA is a scientific nonprofit organization gathering more than 2500 laboratories concerned about quality control and analytical accuracy. BIPEA has been a member of Eurachem since 2014.

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, the main activities of BIPEA are:

Education and Training

From July 2022 until June 2023, BIPEA set up an annual plan of eight training sessions by Visio conference:

- 3 training sessions for "Method Validation" (November 2022, January 2023, June 2023);
- 2 training sessions for "Uncertainty of measurements and exploitation of quantitative data from PT report" (September 2022, March 2023);
- 1 training session for "Exploitation of qualitative data from the PT report" (June 2023);
- 1 training session for "Validation method in food microbiology according to ISO 16140" (February 2023);
- 1 training session for " Concepts and tools to understand and apply ISO 17025 standard" (June 2023);
- 1 training session for "Internal Auditors" (June 2023).

These training courses of 12 people each are 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 takes part in the PT Working Group.

M. Abdelkader Boubetra, Scientific and Technical Manager takes part in Validation Method Working Group.

Translations

Leaflets, Guides and other important documents were translated in French.

Caroline Laurent

National Reports

GEORGIA

Organized an online event of Eurachem GA 2022 and the scientific workshop: "Quality assurance challenges of measurements from field to laboratory with a focus on ISO/IEC 17025:2017 requirements".

Online training events were conducted in connection with the UNIDO-GQSP project in Georgia ("Terminology in analytical measurement", "Introduction to Statistics for Analytical Scientists", Microbiology Method Validation and MU", "Chromatographic techniques: HPLC and GC").

GeLab Training Center was established based on the ToT to increase the competence of national experts of Georgia on training Metrology in Chemistry (ToTMiC).

"Strategic Roadmap for Sustainable Laboratory Infrastructure Development in Georgia" developed and published (under the UNIDO-GQSP) https://hub.unido.org/sites/default/files/publications/V7_online_Georgia_GQSP_roadmap.pdf.

Close cooperation with Georgian government institutions on the development of a National Laboratory Policy, based on the UNIDO document: "Laboratory policy: a guide to development and implementation", https://www.unido.org/sites/default/files/files/2021-04/LP_publication_22042021_FINAL.pdf.

Cooperation with the European Neighbourhood Program for Agriculture and Rural Development (ENPARD IV) in Georgia to develop an evidence-based strategic document for the sustainable development of the Georgian (agri-food) laboratory infrastructure.

Continual training events related to the requirements of accreditation standards (ISO/IEC 17025, ISO15189, ISO/IEC 17020).

Nino Manvelidze

GERMANY

The EUROLAB-D Chemical Analysis Committee, the German Eurachem mirror committee, met twice since the last Eurachem GA, in November 2022 and in April 2023. All meetings were again held in person.

There, reports were given on Eurachem activities, in particular on the General Assembly, the Executive Committee and the Eurachem Working Groups.

The German editions of the Eurachem PT leaflets have been revised and eventually the first draft of the Uncertainty from Sampling guide in German could be presented and will be discussed in the coming period.

In addition to the translation of Eurachem publications, the following main topics were discussed.

- Measurement uncertainty from sampling and validation of sampling protocols.
- How can we increase the awareness of EUROLAB-D and

Eurachem in order to recruit more young members? The possibility of a more intensive cooperation with GDCh, The German Chemical Society and other laboratory associations that are members of EUROLAB-D, is to be explored.

Michael Koch

GREECE

Eurachem Greece team was active as follows.

Greece's representative, Professor Georgios Theodoridis Department of Chemistry, Aristotle University Thessaloniki, National, is hosting a blog to establish communication with the team and other Greek scientists.

Method Validation Working Group: Helen Gika, Aristotle University, and Marios Kostakis, Athens University. Participation in online meetings of the WG, collaboration in editing documents.

Measurement Uncertainty and Traceability Working Group: Zonaras Vasileios, Benaki Phytopathological Inst.

Participation in online meetings: 05/2022, 06/2022, 08/2022, 10/2022, 02/2023, 03/2023.

Co-working on the draft Guide "Evaluation of the Measurement Uncertainty from in-house Precision & Recovery Studies".

Sampling Uncertainty Working Group

Achilleas Iakovakis, Veltia Labs Sindos, and Zonaras Vasileios, Benaki Phytopathological Inst.

Participation in online meetings: 06/2022, 10/2022.

Method Validation & Uncertainty from Sampling Joint Task Group: Zonaras Vasileios, Benaki Phytopathological Inst.

Participation in online meetings: 09/2022, 04/2023.

Co-working on the draft Guide "Supplementary Guidance for Validation of Measurement Procedures that Include Sampling".

Reference Materials Working Group

Dr Christina Virgiliou, Aristotle University

Our plans for the future aim to keep our involvement in Eurachem actions with active involvement in the Eurachem Working Groups.

Overall, the Greek participants are active in various fields of analytical chemistry, validation and metrology.

- The Hellenic Metabolomics Network and FoodOmicsGR_RI consortium which are headed by G. Theodoridis co-organised a number of on-line meetings in 2022-2023 with participation reaching an average of 60 researchers.
- We also took part in Omics Science events organised by EpilipidNet Cost Action and MetrofoodRI.

- G. Theodoridis and H. Gika are active members in the Metabolomics QA & QC Consortium (mQACC), an international think tank aiming to develop collaborative efforts to address key quality assurance (QA) and quality control (QC) issues in untargeted metabolomics. G. Theodoridis is co-chair of the Best Practices work group of the mQACC.

H. Gika and her team edit a Book on Metabolomics Analysis (Springer).

H. Gika is also coordinating a Horizon Europe Training network on harmonization of analytical methods for metabolomics of blood (project HUMAN; <https://human-dn.eu/>).

Georgios Theodoridis

HUNGARY

Since the end of 2018, the Cluster of Hungarian Accredited Organisations (ASZEK) acts as the Hungarian national Eurachem organization. ASZEK plays a central role in disseminating information to and gathering feedback from the Hungarian accredited community on materials circulated by Eurachem and other international organisations in the field of accreditation.

The annual “Accreditation – current trends” conference was held in December 2022, organised in co-operation with ASZEK and the National Accreditation Authority (NAH). The event concentrated on the theme of World Accreditation Day 2022, i.e. Sustainability in Economic Growth and the Environment as well as related questions in accreditation. The main issues included accreditation in product and technology certification and supporting tests, environmental management systems, claims and markings, practical issues in eco-label certification procedures. Relevant national and international standards and regulations were discussed, together with related difficulties in accreditation and solutions. Workshops allowed for discussion and formulation of proposals on specific topics by participants in smaller groups. Over 90 participants attended the conference.

The “Environmental sampling and measurement” conference was organised in May, together with the Hungarian Association of Environmental Enterprises. This event focused on practical issues and innovations in measurement techniques, with a heavy emphasis on networking opportunities among organisations active in environmental sampling/analysis, end-users of analytical results as well as regulators.

The National Accreditation Authority also held several online trainings and seminars throughout the year, predominantly aimed at accreditation assessors, experts, and opponents.

Similarly to previous years, ASZEK members have been active in offering comments and advice on various documents, standards and guides related to accreditation. ASZEK also offers the possibility to accredited organisations

to anonymously evaluate the individual performance of assessors, experts and opponents involved in their accreditation process. This feedback helps the competence management program of the National Accreditation Authority. The number of evaluations has reached 88.

Two delegates are active in the Proficiency Testing Working Group, Dr Erika Sárkány (also a representative of EQALM) and Dr Csilla Bélavári. Dr Sárkány is additionally delegated to EEE-PTWG “Proficiency Testing in Accreditation”.

Csilla Bélavári

IRELAND

The Eurachem Ireland Committee comprises people interested in analytical chemistry from the public sector, private sector and the academic sector. Our work focusses on promoting interest in Analytical Chemistry in line with Eurachem objectives. This is done through conference prize sponsorships, workshops and our university Eurachem Analytical Measurement Competition.

Sponsorships

Eurachem Ireland sponsored a prize at the Environ 2022 Conference of the Environmental Sciences Association of Ireland in Ulster University in June 2022, which was attended by 175 delegates. The winner of the **Eurachem Best Analytical Chemistry Poster** was Padraig McDonagh from ATU Donegal for his poster presentation In-situ electrochemical determination of 2,5-diformylfuran from the photocatalytic oxidation of 5-hydroxymethylfurfural.

We also sponsored a prize at the 33rd Irish Environmental researchers Colloquium prizegiving. The event was co-hosted by ATU Donegal and Environmental Sciences Association of Ireland and held on Letterkenny campus on 3-5 April. 215 delegates attended with 50 posters and 70 oral presentations delivered. The winner of the student competition for the **Eurachem Best Analytical Chemistry Poster Presentation** was Ms. Aicha Tasaout, Dublin City University for her poster presentation In-situ design of molecularly imprinted polymer interfaces for electrochemical sensing of contaminants in water.

Eurachem Analytical Measurement Competition

The popular Eurachem Analytical Measurement Competition (EAMC) took place on 21 April 2023. This annual event is organised and run by the EAMC Committee, Eurachem Ireland Secretariat, and by a host University. EAMC 2023 was hosted by Technological University Dublin Tallaght. This year a total of 46 students from 12 academic institutions took part. The competition entailed two practical tests of laboratory analytical skills of two-hours duration each and a short questionnaire focusing on errors and uncertainty in analytical measurements. The winners were Karina MacDuff and Madalina Burduv from the host university (TUD Tallaght).

National Reports

Workshop

On 17 May Eurachem Ireland were delighted to host a workshop on **Planning and Evaluating Method Validation Studies** by Vicki Barwick and Steve Ellison of LGC, held in the State Laboratory facilities.

Working Groups

Ireland continues to be well represented on Eurachem Working Groups.

Communication & Publicity

Eurachem Ireland communicates with its members via:

- Mailing list
 - » This is an important tool for our communication. Eurachem Ireland publicises all Eurachem notifications, courses, webinars, workshops, newsletters and items of general analytical interest (in a GDPR compliant manner) to people on the mailing list;
- Website www.statelab.ie/eurachem.html;
- LinkedIn group <https://www.linkedin.com/groups/8259308/>;
- Twitter @EurachemIreland.

Hugh Fay

ITALY

Italy is represented in the Eurachem General Assembly by Emanuela Gregori, from the National Institute of Health (ISS) and Francesca Rolle, from the National Institute of Metrological Research (INRIM).

For many years, collaboration has been 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), EUROLAB-ALPI and a number of organizations at regional level.

Activities of Eurachem Italy mainly focus on contributing to Eurachem guidance and its promotion to analytical laboratories at all levels, in particular by translating into Italian Eurachem Guides and leaflets and providing training on specific topics, based on Eurachem guidance.

Experts from Eurachem Italy participate in the Eurachem Working Groups on Education and Training, Proficiency Testing, Method Validation, Reference Materials, Measurement Uncertainty and Traceability, Uncertainty from Sampling and Qualitative Analysis. Members of Eurachem Italy are also involved in the Task Group for the revision of the Eurachem Guide “Accreditation for microbiological laboratories” and in the Joint Task Group on “Validation of sampling procedures”. This new Joint Task Group aims to draft a guidance document whose general objective is to

help users ensure that the entire measurement process is validated for the intended purpose. A member of Eurachem Italy is involved in two subgroups working to the draft document.

Finally, Marina Patriarca and Giulia Suriani, from Eurachem Italy are, respectively, the Chair and Vice Chair/Secretary of the RMWG. Members of Eurachem Italy also participate in events organized jointly by Eurachem and CITAC, such as the online workshop “Measurement uncertainty evaluation based on in-house validation data”, organized in 2022 (two members of Eurachem Italy contributed as session Chairs).

During the last year, Eurachem Italy completed the translation of the Eurachem/CITAC Guide on “Measurement uncertainty arising from sampling” (UfS Guide), undertaken jointly with the national accreditation body (ACCREDIA), EUROLAB-ALPI, INRIM, ISPRA and ISS. These Institutions also organized, on 9-10 March 2023, an online event to present the Italian translation of the Guide to a wide audience of laboratories and auditors operating in the analytical chemistry and quality assurance sectors. Prof. Mike Ramsey, chair of the UfSWG and Dr Ricardo Bettencourt da Silva kindly agreed to explain the concepts behind the UfS Guide, including the uncertainty factor, and the current activity for the development of a Eurachem Guide on the evaluation of measurement uncertainty from validation data. The event was very successful with more than 600 participants. Information, presentations and recordings are available at the link: <https://www.accredia.it/publicazione/incertezza-associata-al-campionamento-nelle-analisi-chimiche/>.

Other activities concerned the finalization of the publication of the translation of the two supplements to the Eurachem Guide “The fitness for purpose of analytical methods”, dealing with the aspects of “Planning and reporting method validation studies” and “Blanks in method validation studies”.

New on-going projects are the translation into Italian of the revised Eurachem Guide “Selection, use and interpretation of proficiency testing schemes (PT) by laboratories”, to be followed by the translation of two other documents, developed jointly by the EEE-PT WG. Other on-going translation projects include the Eurachem Guides “Metrological Traceability in Chemical Measurement” (rev. 2019) and “Setting and Using Target Uncertainty in Chemical Measurements”.

Two presentations of Eurachem recent developments and future meetings were given, as part of an update on international activities related to quality assurance, at the XI and XII Workshops of the “National Reference Laboratories for metals and nitrogenous compounds in food and feed, feed additives and process contaminants”, (Virtual events on 23-24 May 2022 and 23-24 March 2023), (<https://www.iss.it/Inr-mcaa-metalli-eventi>).

In 2022, information on Eurachem initiatives, new guidance and upcoming events was promoted through distribution of information to a mailing list and to relevant organizations. Printed and electronic copies of the latest Eurachem

Newsletter were also distributed to interested parties. The new website of Eurachem Italy (www.iss.it/eurachem), has been online from 2021.

Emanuela Gregori

Francesca Rolle

LITHUANIA

A brief summary of the activities of Eurachem-Lithuania during the year 2022. Our main activities are organisation of trainings and seminars, consultation of routine laboratories, cooperation with national organisations such as metrology, accreditation and standardisation bodies, etc.

During last years the COVID-19 pandemic has affected many activities in common life and in laboratories. Last year we started face-to-face meetings and trainings. Four training events were organized in Vilnius, covering the following topics:

- Quality and competence requirements guidelines for medical laboratories (ISO 15189);
- Metrological traceability of the measurement result;
- Quality management systems and quality assurance in laboratories;
- The implementation of the requirements of LST EN ISO/IEC 17025:2018 standard.

In June 2022 the two-day workshop “Improving the Quality of Measurements in Laboratories” was organised in Palanga.

Next year we are planning to organise more training events for the national laboratories. In order to work more efficiently we will attract more colleagues from universities and scientific research institutes for collaboration with Eurachem-Lithuania.

Evaldas Naujalis

POLAND

Presently, 124 laboratories are members of the Eurachem-PL, Section of Polish Chemical Laboratories in Club of Polish Testing Laboratories POLLAB. Since 18 December 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. In 2022, we returned to work standards from before the covid-19 pandemic. We started to organize courses and symposium.

In 2022 we organized same courses for laboratories and two round symposium (May and September). The main topic at XXVII POLLAB Symposium (2022) was “Development of the Laboratory through improvement”. In two rounds, the symposium was attended by 336 participants (online and on site). Most of them attended on site.

We organized only online a section’s meeting, including invited lectures dedicated to selected subjects. In 2022 participants discussed about the requirements for laboratories resulting from the standard PN-EN ISO/IEC 17025:2018 and problems organising PT/ILC.

We cooperate with the Polish Center for Accreditation to improve the management system in laboratories.

Eurachem-PL will continue to present policy to support laboratories in 2023. Our members will be participating in Symposium POLLAB, section meetings and new PT/ILC programs.

Andrzej Brzyski

PORTUGAL

Between May 2022 and May 2023, the Portuguese delegates and Working Group members have been actively involved in the activities of the Measurement Uncertainty and Traceability, Qualitative Analysis, and Education and Training Working Groups.

The dissemination of Eurachem activities and guidance has also been performed through training courses and working groups promoted by RELACRE, teaching Analytical Chemistry at the University of Lisbon, “International Summer School on Analytical Science, Metrology and Accreditation” and other training promoted by Eurachem-PT members. Various papers on Analytical Chemistry have also been used to publicise Eurachem guidance.

Ricardo Bettencourt da Silva

National Reports

ROMANIA

In May 2000, the Eurachem-Romania Association was established as a professional non-profit association. The association's aim was, among others, to promote the Eurachem activities and, as recorded in the Romanian association's statute, to provide the necessary paths towards harmonizing the principles governing the analytical chemists' activity and the quality of measurements in chemical analysis.

Eurachem-Romania Association pursued its sustained activity through its members from university environments, research institutes, and various groups working in metrology and standardization.

In 2022, after the annual National General Assembly, it was decided to reorganize the association and complete all necessary documentation to comply with the new legal provisions regarding the functioning of similar associations in Romania.

Our organization continued to support the students' professional activity, acting as a co-organizer for the Students Scientific Communications 2022, where Eurachem-Romania awarded three special prizes to the students with outstanding research activity. Also, Eurachem-Romania Association supported and encouraged the participation of students in the International Romanian Chemistry Conference (RICCCE) and awarded the best presentation having a significant contribution to method validation. Meanwhile, our members disseminated the "Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories" guide and the "Assessment of Performance and Uncertainty in Qualitative Chemical Analysis" guide.

Eugenia Eftimie Totu

RUSSIA

The Association of Analytical Centers "Analitica" (AAC "Analitica") is a full member of APLAC and promotes Eurachem activities in Russia. With the participation of the Association in October 2022, the 4th Congress of Russian Analysts was held in Moscow. The congress was dedicated or, rather, timed to coincide with the anniversary of Academician Yu. A. Zolotov, head of the Scientific Council for Analytical Chemistry of the Russian Academy of Sciences. Members of the Association initiated, organized and held within the framework of the Congress a symposium "Actual issues of the quality of chemical analysis and laboratory accreditation".

In 2022 Eurachem Guide "Use of uncertainty information in compliance assessment" (2nd ed. 2021), was translated into Russian and published on the Eurachem website <https://www.eurachem.org/index.php/publications/guides/uncertcompliance/>.

The Eurachem/CITAC guide "Quantifying Uncertainty

in Analytical Measurement", Third edition updated was translated into Russian and published on the Eurachem website https://www.eurachem.org/images/stories/Guides/pdf/QUAM2012_P1_RU_V2.pdf.

Vasilisa Baranovskaia

SLOVAKIA

The main activities of Eurachem Slovakia (hereinafter referred to as ES) were focused to the areas of the chemical metrology and quality of the chemical measurements in the Slovak Republic:

i) Seminars and workshop

ES organised:

(a) Seminar "Assessment of characteristics and their uncertainties in qualitative chemical analysis", May 2022 for the Slovak testing and calibration laboratories. The participants of the seminar were supported by the Slovak translation of the Eurachem/CITAC Guide: "Assessment of performance and uncertainty in qualitative chemical analysis", (2021) as study supporting literature;

(b) Seminar "Metrological traceability of the chemical measurements in testing procedures", Oct. 2022 organised mostly for accredited testing laboratories. The Slovak translation of the Eurachem/CITAC Guide: "Traceability in Chemical Measurement" (2019) was used as a supporting study literature; and

(c) Workshop "Measurement uncertainties from A to Z according to BIPM and ISO international documents", March 2023 where laboratories staffs were trained in the applied evaluation of uncertainties.

ii) Scientific events

Conference. ES participated in the national conference "Present state and perspectives of analytical chemistry in practice", FCHPT STU, Bratislava, June 2022 where Eurachem and ES activities were successfully presented in the lectures: "Sources, means and ways to quality and reliability of the chemical measurements and "Assessment of characteristics and their uncertainties in qualitative chemical analysis"

Research. ES and its research partners have participated in the EURAMET 2023 European Partnership on Metrology Call, part Metrology for Industry, with a project research topic proposal: Implementation of metrological traceability for low-cost sensors (LCS) network measurements applicable to spatial assessment of air quality in urban agglomerations.

iii) ES policy in industrial metrology

ES has continued in its activities to induce development of the Slovak industrial metrology in the domain of the chemical measurements. Within the scope of the Slovak Bureau of Standardisation, Metrology and Testing (UNMS

SR) official document “The concept of the state policy of technical standardization, metrology, quality, conformity assessment and accreditation of conformity assessment bodies for the years 2021 to 2024”, part Metrology, ES kept trying to cooperate and to develop activities in the applied chemical metrology and chemical measurements with the Slovak metrological authority – UNMS SR. Regretfully, no progress was achieved in the official support to the industrial metrology in the domain of chemical measurements which has been absent for many years in Slovakia.

iv) Translation of the Eurachem/CITAC Guides

As before ES translated: (a) Eurachem/CITAC Guide: “Traceability in Chemical Measurement. A guide to achieving comparable results in chemical measurement”, 2nd edition (2019), and published as ES study supporting booklet, ISBN:978-80-8208-027-1, (b) “Assessment of characteristics and their uncertainties in qualitative chemical analysis, 1st edition (2021), and published as ES study supporting booklet, ISBN:978-0-948926-39-6.

Dušan Kordík

SPAIN

Eurachem Spain is integrated into the daily operations of EUROLAB-Spain and FELAB, and all EUROLAB-Spain partners have been regularly informed about all the information generated by Eurachem, through memos and newsletters.

Between May 2022 and May 2023, FELAB organized seven virtual breakfasts, focusing on topics of interest to laboratories. In one of which, “**Eurachem: A knowledge forum at your fingertips. How laboratories can access and participate in it**” we presented Eurachem.

Working Groups (WG):

- a) Method Validation WG led by Pedro Pablo Morillas and Francisco Raposo
- b) Education and Training WG led by Pedro Pablo Morillas
- c) Proficiency Testing WG led by Raquel Murtula
- d) Reference Material WG led by Estíbaliz Sastre.

During 2022, documents being prepared within the validation and training WGs have been reviewed.

In the case of PT-WG:

- » Participation in the Scientific Committee of the next Workshop (10th Edition) in September (Windsor), in the last meetings we have worked on the preparation, organization and distribution of tasks for it.
- » Edition of two new leaflets on the application of statistics in PT.
- » Spanish translation of five of the already published leaflets.

Guide Translations into Spanish:

- Preparing translation group for the guide Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories (2021).

Through FELAB there have been several meetings with the National Accreditation Body (ENAC) about different complementary documents that are applicable in the accreditation processes of the different sectors.

Alfonso González del Rey

Pedro Pablo Morillas

SERBIA

The Directorate of Measures and Precious Metals (DMDM), which is a National Metrology Institute of Serbia, represents Eurachem and its activities in Serbia.

Serbia Eurachem representative actively participated in the work of the Institute for Standardization of Serbia, as a member of Technical Committees for Air quality, Medical devices, Petroleum fuels and Natural gas. In the framework of this collaboration with ISS, several on-line training courses “Measurement uncertainty as a requirement of SRPS/ ISO IEC 17025:2017” were held by the Eurachem NR for Serbia, where Eurachem Guides were also presented, with over 40 participants from the Balkan region. The translation of several ISO standards was carried out in 2022, in all mentioned fields of standardization.

The continued dissemination of information about Eurachem activities, guidance documents and leaflets was maintained in 2022 for all interested parties, during the trainings held, or via mailing lists. National representative for Serbia also participated at the Eurachem Measurement uncertainty evaluation based on in-house validation data (online) workshop, October 2022. Electronic copies of Eurachem Newsletter were distributed to analytical laboratories in Serbia.

Jelena Bebić

National Reports

SWEDEN

In Sweden we have a joint national EUROLAB and Eurachem organisation with 26 members representing over 100 companies.

We take active part in the following work:

- EUROLAB
 - » General Assembly (GA), Margareta Antonsson, Magnus Holmgren
 - » Technical Committee Quality Assurance (TC QA), Magnus Holmgren, Elvar Theodorsson
- Eurachem
 - » General Assembly (GA), Bertil Magnusson, Elvar Theodorsson/Martin Jönsson. Elvar will step down and Martin will be the Swedish delegate for the GA from June 2023
 - » Working Groups
 - » Measurement Uncertainty and Traceability, Bertil Magnusson, Elvar Theodorsson, Eskil Sahlin
 - » Sampling Uncertainty, Bertil Magnusson and Eskil Sahlin
 - » Qualitative Analysis, Elvar Theodorsson
 - » Proficiency Testing, Ulf Örnemark
- Swedac
 - » Ackrediteringskommitté, Magnus Holmgren

We held two member meetings focussing mainly on accreditation and measurement quality issues e.g. interpretation of ISO/IEC 17025 and the assessment of laboratories. A new website was launched www.eurolab-eurachem.se for our national organisation.

Martin Jönsson

Bertil Magnusson

SWITZERLAND

Eurachem-CH is hosted by the Division of Analytical Sciences (DAS) of the Swiss Chemical Society (SCS). The DAS has around 600 members. The members of the board represent academia, administration and industry. SCS is a full member of EuChemS and of Chemistry Europe. The DAS is a member of EuChemS Analytic (Analytical Chemistry Division and Division of Chemistry and the Environment) and co-owner of the journal Analytical and Bioanalytical Chemistry.

Since the foundation of the DAS the organisation of seminars and training courses in the fields of special analytical techniques, spectroscopy, separation technology and quality assurance is the core competence of the division. From the total of almost 60 courses about 15 are related to quality assurance. When available, documents

from Eurachem or its environment were and are used in the trainings. The courses cover the needs of accredited and regulated laboratories.

Towards the end of 2022, the COVID pandemic slowly levelled off. Therefore, face-to-face events were planned again and increasingly held.

For 2023, the DAS planned a larger number of face-to-face events:

- CHanalysis 2023: 29-31 March, successfully completed;
- Eurachem Week 2023: 22-26 May at METAS in Bern;
- Euroanalysis 2023: in Geneva from 26-31 August.

A draft document "The Fitness for Purpose of Analytical Equipment – A Laboratory Guide to the Life Cycle of Analytical Equipment, Equipment Qualification and Related Topic" (working title) was reviewed by several interested experts. The suggestions for changes were gratefully accepted and incorporated into the following draft versions.

The attempt to increase Eurachem's visibility in the German-speaking world with an entry in Wikipedia failed. After three months, the entry was deleted for lack of international relevance.

Eurachem Switzerland is currently active in the Working Groups on Method Validation, Measurement Uncertainty and Traceability, Proficiency Testing and on Reference Materials.

Ernst Halder

TÜRKIYE

In 2022-2023 reporting period, Eurachem Türkiye has been involved in the activities of the Education and Training Working Group, Method Validation Working Group and Proficiency Testing Working Group.

Eurachem ETWG members participated in the web meetings on 26 September 2022 and 6 February 2023. Eurachem MVWG members participated in the web meeting on 27 and 30 January 2023. The members are involved in the revisions of Eurachem Guides "Guide to Quality in Analytical Chemistry – An Aid to Accreditation" and "The Fitness for Purpose of Analytical Methods".

The training on "ISO/IEC 17043 TECHNICAL REQUIREMENTS" was given by Eurachem representatives to the end users from international laboratories performing chemical measurements.

Oktay Cankur

UKRAINE

Since the previous Eurachem General Assembly, Ukrainian representatives took part in a number of events related to the Eurachem activity areas.

Meetings of the Technical Committee of Metrology in Chemistry (TC-MC), which is a Joint EURAMET-Eurachem Technical Committee, were held in January-February 2023. Our delegate attended the meetings of the TC-MC and its subcommittees on electrochemical analysis and inorganic analysis.

The 28th meeting of the Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM) took place in the last week of April 2023. Ukrainian representatives participated in the meetings of the CCQM and its gas analysis (GAWG), electrochemical analysis (EAWG), and inorganic analysis (IAWG) working groups.

We have contributed to drafting the documents produced by the ISO technical committees related to metrology in chemistry: ISO/TC 158 Analysis of Gases, ISO/TC 193 Natural Gas, and ISO/TC 334 Reference Materials.

Two Ukrainian experts have been actively participating in the Eurachem Working Groups on Measurement Uncertainty and Traceability (MUTWG) and Qualitative Analysis (QAWG).

Work on translating the Eurachem documents into Ukrainian goes on. Translations of the Eurachem/CITAC Guide: Use of uncertainty information in compliance assessment and an accompanying Eurachem leaflet on the same topic have been published on the Eurachem website.

Eurachem-Ukraine's activities are still hampered by the Russian invasion of Ukraine.

Mykhailo Rozhnov

Ovsiy Levbarg

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, which includes representation from LGC, operates as the Executive for Eurachem UK. The AMC receives regular reports on Eurachem activity through the UK National Representatives and AMC members also receive the Eurachem Newsletter. Eurachem information is also distributed through the MyRSC online chemistry community.

The AMC (<http://www.rsc.org/AMC/>) has several expert working groups, all concerned with aspects of harmonisation and best practice in analytical chemistry. The AMC publishes reports and Technical Briefs developed by the different expert working groups. Reports are extended publications

in the refereed literature, giving detailed information and recommendations on technical aspects of analytical chemistry.

Technical briefs are short documents giving information on particular technical topics; the AMC has now published approximately 110 Technical Briefs. Technical Briefs since 2012 are published as a themed collection by the RSC journal "Analytical Methods" and are available online; they can also be found, with older technical briefs, by following the "Technical Briefs" link on the AMC webpage at <https://www.rsc.org/amc>.

Two new Technical Briefs were published in year to end May 2023:

- AMCTB 111: A periodic table for liquid chromatography separation modes (DOI: <https://doi.org/10.1039/D2AY90085H>) This technical brief describes a tool in the form of a "periodic table" to assist in optimizing liquid chromatography separations selected by following the guidance provided in AMCTB No. 107.
- AMCTB 112: Comparing measurement uncertainty values (DOI: <https://doi.org/10.1039/D2AY90114E>) Published in collaboration with the Eurachem Sampling Uncertainty WG, this Brief discusses the comparison of uncertainty estimates from ANOVA or robust ANOVA.

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.

The main activity of interest to Eurachem in the year ending May 2023 was our regular training courses on, for example, measurement uncertainty, analytical method validation and statistics for analytical chemists. The year was notable for a return to in-person courses; for most of 2020-21, courses had been delivered online only.

Eurachem UK members have also contributed actively to the following Eurachem Working Groups:

- Education and Training (Chair since September 2022)
- Measurement Uncertainty and Traceability (Chair)
- Proficiency Testing (Chair)
- EEE Proficiency Testing – "Proficiency Testing in Accreditation" (Chair)
- Qualitative Analysis
- Uncertainty from Sampling
- Method Validation
- Reference materials.

Steve Ellison

Chris Harrington

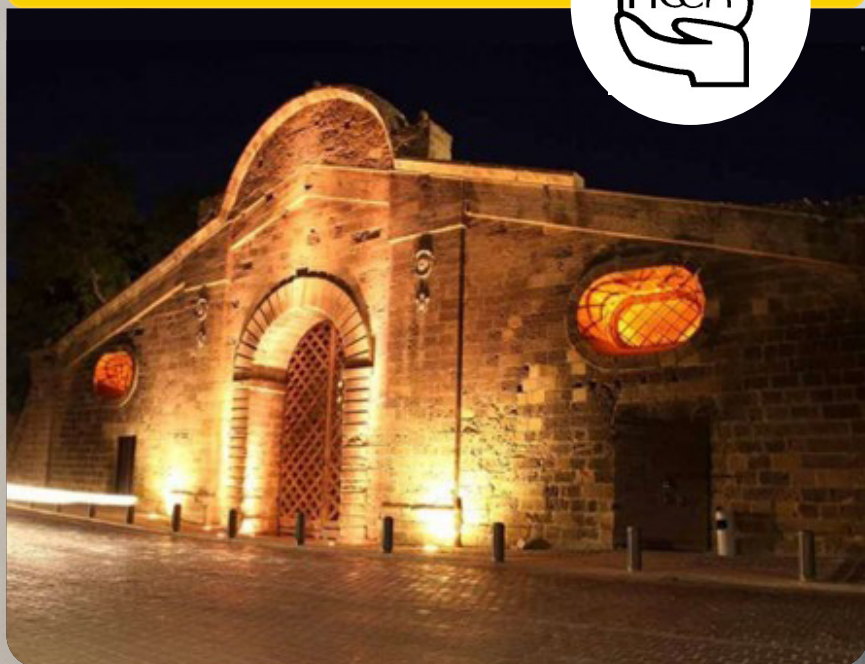
Upcoming events

12-13 March 2024, Nicosia - Cyprus

Workshop on Recent Developments in Quality Assurance

Following a number of successful training events, most recently on the revised ISO 15189 standard, the Pancyprian Union of Chemists (PUC) and the Education and Training Working Group are pleased to invite you to a two-day workshop on quality assurance in Nicosia. The programme is based around the main sections of the recently revised Eurachem Guide on Terminology in Analytical Measurement. The workshop will include sessions on terminology, validation, metrological traceability, internal quality control, external quality assurance (with emphasis on the new ISO/IEC 17043 standard) and quality assurance in qualitative analysis.

Further details are available on the Eurachem website.



Scientific workshop 2024

**Eurachem Week 2024,
Vilnius, Lithuania**

From 13-17 May 2024
Eurachem Lithuania warmly
invites you to the Eurachem
General Assembly and
associated scientific
workshop in Vilnius.

13-14 May 2024

Quality Assurance in Chemical, Medical and Microbiological Laboratories

The principal topics will be:

- Internal quality control
- Method validation
- Measurement uncertainty and traceability of results
- External quality control/proficiency testing

16-17 May 2024

Eurachem General Assembly

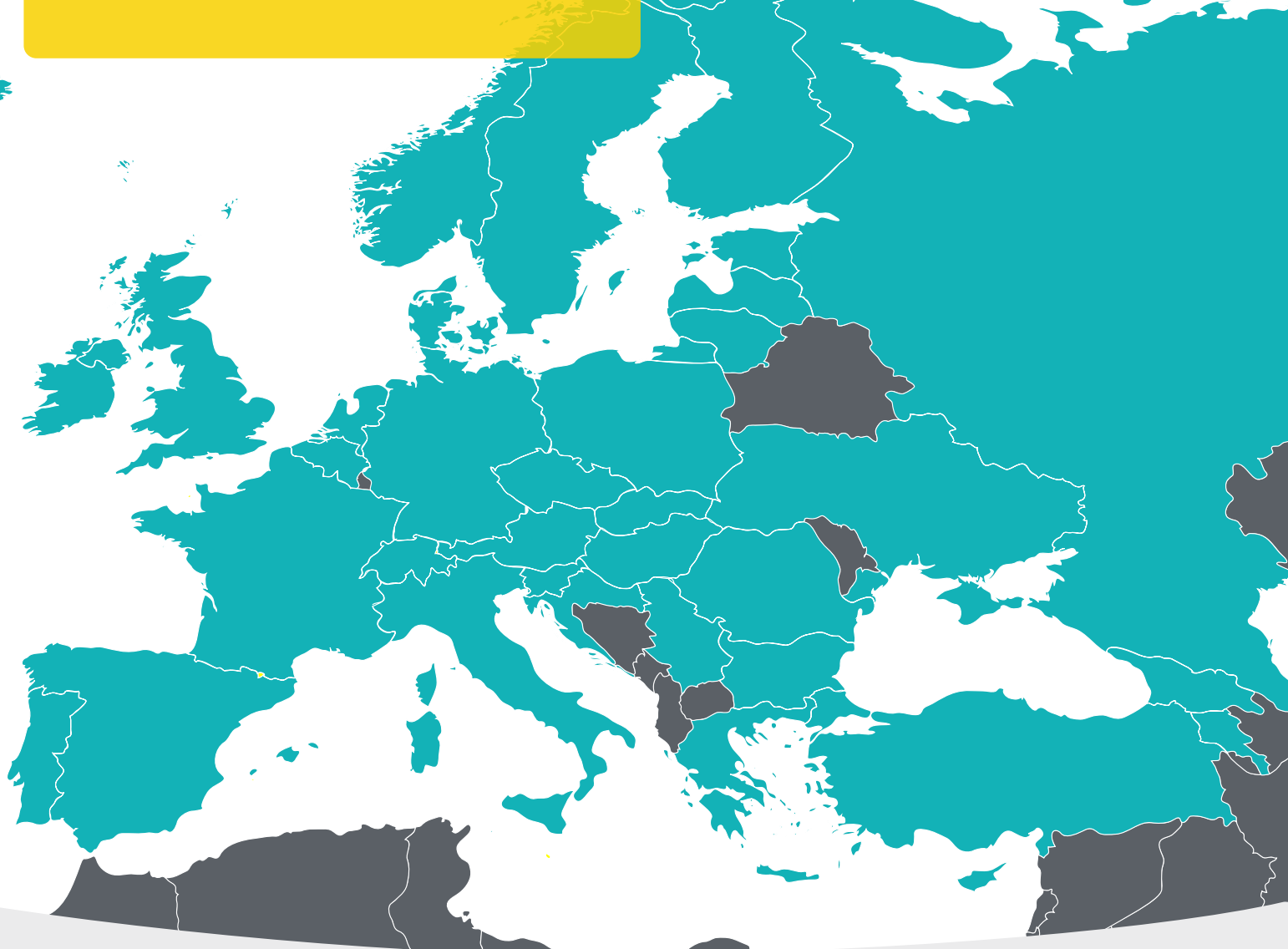
Please see the Eurachem website for further details.



www.eurachem.org

Member Countries

Eurachem member countries in blue.



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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.



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