We started 2020 with a full schedule of face-to-face meetings and workshops planned. In February, Eurachem-Cyprus, the Pancyprian Union of Chemists and the Eurachem Education & Training Working Group organised a two-day training programme on ‘Accreditation of analytical, microbiological and medical laboratories – ISO/IEC 17025:2017 and ISO 15189:2012’ in Nicosia. The event was attended by 45 participants from 11 countries. As the presenters and participants travelled home from the successful event, little did we know that it would be the last ‘face-to-face’ Eurachem workshop for some time.

By mid-March it was clear that restrictions to control the pandemic were likely to be in place for many months. The Executive Committee therefore had to take a decision very quickly on whether to attempt to host some of the remaining activities planned for 2020 online. What perhaps feels almost routine now after many months of attending ‘virtual’ meetings and conferences, felt like a momentous decision back in March. There seemed to be so many unknowns – would people be interested in attending an online General Assembly, did we have suitable technology available, would it be possible to successfully transfer the key features of Eurachem workshops to a virtual environment? I’m pleased to be able to report that, thanks to the amazing efforts of all involved (especially our colleagues in Eurachem-Romania), the answer to these questions is a resounding ‘yes’!

In May we had the most well attended General Assembly in recent years. The virtual format allowed participation from members who previously may have been unable to travel to GA meetings. In July, Eurachem-Romania, in collaboration with University Politehnica of Bucharest, organised a two-day online workshop on ‘Quality assurance elements for analytical laboratories in the university curriculum’. This successful workshop (see page 3 for a full report) demonstrated that it is possible for Eurachem to hold highly interactive workshops online, including the activities we expect to see such as breakout and poster sessions.

Eurachem’s Working Groups have also continued to be active throughout the year. Revisions of the guides ‘Use of uncertainty information in compliance assessment’ and the PT guide ‘Selection, Use and Interpretation of Proficiency Testing (PT) Schemes’ are both well-advanced and due to be published in 2021. A number of other leaflets and translations have also been produced.

Over the course of the pandemic, science has been in the public eye possibly as never before. Scrutiny of data and discussions about the sensitivity, specificity and reliability of various testing platforms have entered the mainstream media. I am proud that Eurachem has been able to continue its mission of being a focus for analytical chemistry and quality related issues in Europe.

I hope that I will be able to meet you all again in person in the near future, but I am confident that even if it is not possible the valuable work of the Eurachem network will continue.

Vicki Barwick
Eurachem General Assembly 2020

The 2020 Eurachem annual meeting was planned to take place in Bucharest, hosted by Eurachem-România, at the University Politehnica of Bucharest (UPB), on 25-29 May. Additionally, an international workshop was scheduled to take place under the auspices of the General Assembly. However, due to the worldwide restrictions caused by the Covid-19 pandemic, these events took place “virtually”. The Eurachem-România national organising committee and UPB decided that they would host a virtual Eurachem General Assembly during the originally planned week (Figure 1).

The virtual Eurachem General Assembly took place on 27 and 28 May and it was a real success. It was the first ever online event organised for Eurachem. The participation was impressive, with the largest representation of member countries, including the European Commission, for a number of years.

An important part of each General Assembly is the Discussion Forum, which this year was devoted to the topic of laboratories’ responsibilities in relation to software validation. The Discussion Forum began with a highly interactive presentation from Richard Mulders (RESCOP Principal Consultant), followed by a very active Q&A session.

The virtual event was also attended by representatives of a number of liaison organisations including CITAC, EA, EURAMET, EUROLAB, CCOM, IUPAC and MetroFood (Figure 2).

At this Eurachem General Assembly, the new Eurachem Chairs were appointed for the next two years. Vicki Barwick (UK) became the Chair, and Isabelle Vercruysse (Belgium) was elected Vice-Chair. Figure 3 shows the virtual handing over of the Eurachem Memorandum of Understanding from Marina Patriarca, Past-Chair, to Vicki Barwick.

Following the virtual GA, the 60th meeting of the Executive Committee took place. During this meeting, the success of the virtual event organised by Eurachem-România and UPB was highlighted and recognised as the transition of Eurachem into the virtual era.

Eugenia Eftimie Totu
University Politehnica of Bucharest,
Eurachem-România Association

Figure 1. Eurachem 2020 General Assembly announcement, hosted virtually by Eurachem-România and UPB

Figure 2. Participants in the virtual Eurachem GA 2020 meeting

Figure 3. Virtual handover of the Eurachem MoU
Events

First virtual Eurachem Workshop – “Quality assurance for analytical laboratories in the university curriculum”

As a continuation of the online events during the 2020 Eurachem week, on 14 and 15 July, the Workshop “Quality assurance for analytical laboratories in the university curriculum” also took place online.

The event attracted about 60 participants each day from over 20 countries in Europe and beyond (including Brazil, Sudan and Iran). The presenters were experts in analytical chemistry and in the implementation of measures to assure the quality of chemical measurements.

Interactive lectures were given on topics including measurement terminology, the importance of quality management in academic curricula, teaching metrology, internal quality control, measurement uncertainty in conformity assessment and open educational resources for teaching environmental analysis.

The online format still offered participants a welcome framework to share their experiences. The workshop included an interactive poster session with flash poster presentations. The participants also had the opportunity to interact actively in parallel breakout sessions on different topics of interest.

A well-received short online training session on "Computerised Systems Validation", given by Richard Mulders, RESCOP (NL), completed the workshop programme.

The extended abstracts of the presentations held during the workshop were published in a special edition of “Proceedings” MDPI; www.https://www.mdpi.com/2504-3900/55/1. The full programme and copies of the presentations and posters can also be found on the Eurachem website.

In a continuously changing world, Eurachem proved its ability to adapt and made its first step into the virtual world!

Eugenia Eftimie Totu
University Politehnica of Bucharest, Eurachem-România Association
Proficiency Testing schemes for sampling play an important role in the improvement of sampling procedures and also in the development of participants from an educational point of view, especially if workshops with the participants are organised. PT schemes for sampling can also help users to appreciate the contribution of the sampling in relation to the overall quality of the measurement, including its associated contribution to the measurement uncertainty.

This new leaflet, prepared by the EEE-PT Working Group, gives some hints on the application of ISO/IEC 17043 for PT providers organising PT schemes for sampling. If there is a comparison between participants and a mechanism for performance evaluation which meets the objective of the PT scheme for sampling, then ISO/IEC 17043 is applicable.

It is available in English, French, German, Italian, Swedish, Turkish and Ukrainian and available from https://www.eurachem.org/index.php/publications/leaflets/pt-for-sampling
Eurachem representation at international conferences

17th IMEKO TC10 and Eurolab virtual conference ‘Global trends in testing, diagnostics & inspection for 2030’, 20-22 October 2020

The virtual conference in October 2020 was the second conference jointly organised by IMEKO and EUROLAB, with the aim of enhancing co-operation at a global level. Originally planned as a face-to-face event in Dubrovnik, the conference was organised locally by the Croatian Metrology Society.

The conference provided participants with the opportunity to hear from specialists from all over the world with professional experience in industry, universities, research & development as well as in metrology, testing, inspection, diagnostics and certification. Key themes for the conference included: metrological traceability in testing, inspection and diagnostics; measurement uncertainty; verification and validation of methods; inter-laboratory comparisons and proficiency testing schemes. Eurachem was invited to provide keynote speakers and was represented by Vicki Barwick (Chair of Eurachem) and Michael Ramsey (Chair of the Sampling Uncertainty Working Group).

The conference featured nine keynote speakers and over 60 presentations from around the world.

Vicki presented on ‘Ensuring the quality of analytical measurements – current support and future challenges’. The presentation gave an overview of Eurachem’s aims, objectives and membership, and highlighted the impact of the network’s activities over the years. Michael’s presentation titled ‘Measurement uncertainty from sampling: Implication for testing, diagnostics and inspection’ discussed the importance of evaluating uncertainties associated with sampling, and included a worked example using portable XRF to explain how measurement uncertainty and uncertainty from sampling can be estimated for in situ measurements.


Vicki Barwick

3rd International Congress on Food Safety and Quality – Food, health and climate change, 10-13 November 2020

This virtual conference was organised by the Andrija Štampar Teaching Institute of Public Health, the Croatian Metrology Society and the South East European Network for Food Safety and Quality Control (SEEN-FSQC). The event focused on food safety and quality, determining the origin, geographical origin, and food adulteration and its impact on consumer health, as well as the impact of climate change on cultivation and quality. Vicki Barwick (Chair of Eurachem) gave a keynote presentation titled ‘Eurachem – Supporting reliable measurements to ensure food safety, quality and authenticity’.

The presentation highlighted the importance of reliable measurements in ensuring food safety, quality and authenticity and outlined the support and guidance that Eurachem provides to analytical laboratories.

Vicki Barwick
Eurachem celebrates ‘World Days’

‘World days’ such as World Metrology Day provide an opportunity to promote the importance of quality in analytical measurement and showcase Eurachem activities.

World Metrology Day on 20 May is an annual celebration of the signature of the Metre Convention on 20 May 1875 by representatives of 17 nations. The Convention set the framework for global collaboration in the science of measurement and in its industrial, commercial and societal applications. The original aim of the Metre Convention – the world-wide uniformity of measurement – remains as important today as it was in 1875. World Metrology Day is an opportunity to recognise and celebrate the contribution of all the people who work in intergovernmental and national metrology organisations and institutes throughout the year. In 2020, Eurachem marked World Metrology Day with a short video asking the Executive Committee members to answer the question, ‘How does Eurachem support global metrology?’ Filmed during lockdown in spring 2020, you can view the video on the Eurachem YouTube channel.

On 7 June, Eurachem joined the celebration of the second World Food Safety Day, promoted by the UN Food and Agriculture Organization and the World Health Organisation. The theme for 2020 was ‘Food safety, everyone’s business’, to promote global food safety awareness and to inspire actions at all levels to help prevent, detect and manage foodborne risks. To mark the day, Marina Patriarca (Eurachem Past-Chair) published a blog discussing the importance of reliable and comparable measurement results to achieving food safety at the global level. The blog also outlined Eurachem activities to support laboratories in ensuring reliable results, and the specific initiatives Eurachem is supporting in relation to food safety and quality, such as METROFOOD-RI.

9 June has been designated World Accreditation Day by ILAC and IAF. In 2020 the focus was on how accreditation improves food safety, supporting the confidence of consumers, suppliers, purchasers, regulators and specifiers in the quality and safety of food. To celebrate the day, Kyriacos Tsimillis (Executive Committee Member) published a blog describing how Eurachem has supported accreditation activities, since its establishment in 1989.

You can read the blogs on the Eurachem website (https://www.eurachem.org/index.php/mnu-blog).
Richard Mulders (Principal Consultant at Rescop) led the ‘Discussion Forum’ at the General Assembly in May 2020 and also presented at the workshop on "Quality Assurance Elements for Analytical Laboratories in the University Curriculum". Here he gives a short introduction to GAMP5 based computer system validation. You can view Richard’s workshop presentation on the Eurachem website at https://www.eurachem.org/index.php/events/completed/311-wks-qa-uni-2020.

Regulatory instances give more and more focus to the validation status of "computerised systems" in laboratories. With “computerised systems” being all systems used within the laboratory where electronic data/information is created, reported, and/or stored, this means that laboratories must be able to show evidence of validation for its intended use for both software (e.g. LI(M) S, (e)DMS) and equipment (e.g. HPLC, balance) systems. Laboratories must also demonstrate that the validation of these systems has been executed following a structured process.

Although ISPE’s GAMP 5 (a risk-based method for validation of computerised systems) was originally created for the pharmaceutical industry, it can as well help in defining a structure to validate computerised systems in laboratories. The implementation of GAMP5 is aimed to provide sufficient evidence that an organisation is in control of its systems throughout the entire System Life Cycle.

The first step is to decide (and document) what the computerised system is supposed to do in a given process.

The second step is to select a solution that satisfies these needs. The type and extent of validation depends on this choice.

The more the system is used in the same way within the same industry, the lower the risk that there are still errors in the system. Therefore, computerised systems are separated into three different categories depending on the risk to laboratory results and the chance for error in the system.

While for Category 3 and 4 systems lots of information about development, testing and qualifying the system can be retrieved from the supplier and re-used, this must be done for Category 5 systems.

Finally, when the system is in use, its validation status must be maintained by only allowing controlled changes in users, procedures, software, hardware, data, equipment, and environment.

In the end this all leads to the answer to the question: Can I provide sufficient evidence that the system was developed, installed, configured, tested, implemented (including training and procedures), and maintained in a controlled way?

Richard Mulders
Principal Consultant at Rescop

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**In Focus: Software validation**

**GAMP 5 based Computer System Validation (CSV)**

**Category 3**
All systems that can be used directly after installation. No configuration is necessary to create system behaviour to meet the process needs.

**Category 4**
All systems where the behaviour has to be configured (using available settings) to meet the process needs.

**Category 5**
All systems where the behaviour can be configured (using available settings) to meet the process needs.

**Figure 1. GAMP software categories**

**Figure 2. Components of a computerised system**
New Communications Task Group established

There are an increasing number of channels available to disseminate news on Eurachem activities and engage with stakeholders. We have a well-established website and this annual newsletter, and use Twitter to share news. However, to-date there has been no specific plan or strategy in relation to Eurachem communications. As reported to the General Assembly in May 2020, the Executive Committee has decided to form an executive subcommittee to take a strategic approach to publicity and communications. The new ‘Communications Task Group (CTG)’ held its first meeting on 26 July 2020 and met on a further four occasions during 2020. The CTG has developed a draft work programme and strategy, and will coordinate the following:

- maintaining and delivering a Eurachem marketing and publicity plan;
- maintaining a website for Eurachem;
- developing and maintaining a list of contacts for promoting Eurachem activities and outputs;
- distributing regular e-newsletters, with additional emails as required to promote specific activities;
- using social media to promote Eurachem activities;
- producing an annual newsletter.

One of the first activities of the group was the launch of an e-newsletter which can be subscribed to via the Eurachem website. Two e-newsletters were distributed during 2020 and it is planned to issue three per year. If you haven’t yet done so, you can subscribe to the newsletter at https://www.eurachem.org/subscribe.

The CTG is also reviewing Eurachem’s use of social media. Our Twitter account @EurachemEurope provides regular updates but we did not have a publicly visible presence on LinkedIn. In November the Executive Committee therefore agreed to establish a new ‘corporate’ LinkedIn page which will be launched in early 2021 (see https://eurachem.org/linkedin). We encourage you to follow the page and share posts within your networks so that we can spread the Eurachem ‘message’ as widely as possible.

In the coming year the CTG will be following up on the outcomes of the newsletter survey (see next article) and further developing the Eurachem marketing and publicity plan.

The CTG members are: Vicki Barwick (Chair), Elena Sanchez (Secretary), Steve Ellison, Riin Rebane and Isabelle Vercruysse.

Vicki Barwick
CTG Chair

Eurachem newsletter reader survey

The annual Eurachem newsletter is one of the key communication tools used to disseminate information about Eurachem activities. It also acts as a record of Eurachem’s history through the years. Recognising that there are now many ways for people to access information, including the Eurachem website and social media channels, the Executive Committee agreed to launch a survey to seek the views of newsletter readers. We wanted to find out whether readers find the newsletter useful, what content people like and the preferred format for future editions.

The survey was circulated to GA members in March 2020 for distribution to national networks. Between 25 March and 1 May, 31 responses were received.

The feedback indicated that there was strong support for the newsletter; although there was no strong preference for a printed version (see Figure 1). Respondents were generally satisfied with the length, frequency and content of the newsletter (see Figure 2). The survey also asked about the type of information that might be of interest, and where people would prefer to find it (see Figure 3).

A number of comments and suggestions were submitted, including:

- producing a shorter Eurachem flyer which is updated more frequently than the newsletter;
- disseminating regular, shorter e-newsletters;
- ensuring information is disseminated through multiple channels including the website and social media.

The Communications Task Group (CTG) is reviewing all communication channels available to Eurachem, and has already addressed some of the issues highlighted in the survey (see the CTG report in this issue). The Task Group will also use the results of the survey to inform future developments of the newsletter. Thank you to everyone who completed the survey.

Vicki Barwick
CTG Chair
Figure 1. Responses to the question ‘Do you think it is important for Eurachem to produce a newsletter?’ (27 responses)

Figure 2. Responses to the question ‘How satisfied are you with the length/frequency/content of the Eurachem Newsletter? (25 responses)

Figure 3a. Where would you prefer to find different types of information (part 1)? (27 responses)

Figure 3b. Where would you prefer to find different types of information (part 2)? (27 responses)
Membership news

UK membership
Following the EU-exit on 31 January 2020, the UK is no longer a member of the EU or other categories included in item 1.4.1 of the Eurachem Memorandum of Understanding (MoU) that qualify for Full membership of Eurachem. Given the continuous interest of the UK in Eurachem activities, the UK sent to the Secretariat its application for Full membership, based on item 1.4.4 of the MoU, which allows the General Assembly to confer Full membership on an Associate member which has made a substantial and sustained contribution to the work of Eurachem. The Secretariat submitted this application to the GA for voting by correspondence. The request was unanimously approved by the GA.

National Representatives
Chris Harrington has succeeded Andrew Damant as a national representative for the UK.
Francesca Rolle has succeeded Michela Sega as a national representative for Italy.

People news

Meet the new Eurachem Chairs, Secretariat and Executive Committee members
According to the Eurachem rules, the Chairs and Secretariat change every two years. The 36th General Assembly therefore saw the Chair, Marina Patriarca (Istituto Superiore di Sanità, Italy) hand over to the Vice-Chair, Vicki Barwick (LGC, UK) for her two-year term as Eurachem Chair. At the same time, following a vote by correspondence, Isabelle Vercruysse (Belab, Belgium) was elected as the new Vice-Chair. The Eurachem Secretariat, which has been very ably held by Francesca Rolle (Istituto Nazionale di Ricerca Metrologica, Italy) for the past two years, has been handed over to Elena Sanchez (LGC, UK).

Vicki Barwick, Chair
Vicki has been actively involved with Eurachem since 2005. She has been Chair of the Education and Training Working Group since 2010 and a member of the Method Validation Working Group since 2012.
Vicki said “This is a great honour for me. I have learnt a lot through my participation in Eurachem during the last 15 years and I hope that I will be able to give something back through being an effective Chair. I am also proud to be part of the first all-female group of Chairs. I would like to thank Marina and Francesca for all their hard work during their time as Chair and Secretary, and I look forward to working with Isabelle and Marina to ensure Eurachem continues to achieve its aims over the next two years.”

Isabelle Vercruysse, Vice-Chair
In 2006, Isabelle joined Eurachem as the representative of Belgium. She contributes to the Eurachem Working Group on Method Validation. She was elected to the Executive Committee in 2015. In 2016 she organised, together with BELAB, the Eurachem week in Gent (B) including the workshop on “Method validation in analytical science”, and has worked on several Eurachem guides.
Isabelle said “Since the very first beginning I felt Eurachem was more than a society of collaborating scientists. The quality, dynamism and engagement of the Eurachem family is contagious. It feels good to be elected as Vice-Chair and to get the possibility to continue the work of the former group of Chairs. Together with Vicki and Marina, we will face the post corona era and strengthen the international cooperation of our members and liaisons. Like an African proverb tells us: ‘if you want to go fast, go alone, if you want to go far, go together’.”

Marina Patriarca, Past-Chair
Marina has been a delegate to the General Assembly since 2005 and was elected to the Executive Committee in 2009. She contributes to the Eurachem Working Groups on Education & Training, Method Validation and Proficiency Testing and chairs the Reference Materials Working Group. She served as Vice-Chair from 2016 to 2018 and as the Eurachem Chair from 2018 to 2020.
Marina said: “Serving as Chair of Eurachem was a challenging experience, with a steep learning curve! But, thanks to the continuous support of Francesca, as the Secretary, and advice from David and Vicki, as Past and Vice-Chair, also enjoyable and fulfilling! I encourage all of our delegates, young ones (and women especially!), to consider not only what Eurachem can give you, but also that each of you has skills, experience and potential that can be exploited to serve the Eurachem community – and don’t worry, if you cannot sing as Italians sometimes do…”

From L-R: Marina Patriarca, Vicki Barwick and Isabelle Vercruysse

The new team of Vicki Barwick as Chair, Isabelle Vercruysse as Vice-Chair and Marina Patriarca as Past-Chair, will coordinate the work of Eurachem and the Eurachem Executive Committee for the next two years. The main challenge ahead will be to continue to support analytical laboratories in ensuring the quality and metrological traceability of their results, as well as meeting accreditation and regulatory requirements, at a time of great uncertainty globally.
Elena Sanchez, Secretary

On her appointment as Eurachem Secretary, Elena said “I am very happy to be working with all of you in Eurachem. Having worked with Vicki (the current Eurachem Chair) for a number of years, I have seen from a distance the interesting and varied activities she has been involved in so I am very honoured to be part of the “family” now. My first attendance at the General Assembly meeting was really interesting so I look forward to hopefully meeting you all in person sometime soon!”

In addition, in May 2020 two Executive Committee members – Isabelle Vercruysse (Belab, Belgium) and Anna-Liisa Pikkarainen (Eurachem Finland) – completed their terms of office. A vote was held by correspondence to fill these two positions. As a result of this vote, Michael Koch and Riin Rebane were appointed to the EC at the General Assembly in May. Anna-Liisa will continue as a National Representative for Finland. We thank her for her contribution to the Executive Committee during her term of office.

Michael Koch, Executive Committee Member

Having been active in the German Eurachem mirror group for some years Michael joined the Eurachem Proficiency Testing Working Group in 2000 and a few years later, the Eurachem Education and Training Working Group. Since 2012 Michael has been the Chair of the Eurolab-D Chemical Analysis Committee, the German Eurachem mirror group, and since 2014 has been one of the German delegates to the Eurachem General Assembly.

Michael said: “I consider Eurachem to be a very important institution in Europe, helping many laboratories all around the world to meet the necessary quality requirements. I have experienced Eurachem as a group of idealists and I am happy to be part of this family.”

Riin Rebane, Executive Committee Member

Since 2014 Riin has been a representative of Estonia at the General Assembly and in 2019 she had the opportunity to organise the Eurachem Week in Tartu, Estonia.

Riin said: “I think that the quality of measurements is very important, especially in chemistry, and therefore, participation in Eurachem activities allows me to spread this message. And moreover, not only spread the message, but also provide the tools for achieving this.”

L-R: Elena Sanchez, Michael Koch, Riin Rebane
JCTLM: New international regulations and ISO standards for laboratory medicine – the role of the Joint Committee for Traceability in Laboratory Medicine (JCTLM)

Making sure that in vitro diagnostic measurement results can be used across laboratories and at different points in time is amongst the most important current tasks of the in vitro diagnostic industry and in laboratory medicine. A substantial portion of the users of medical laboratory results expect that these challenges are already more than sufficiently solved. Unfortunately, the real situation is not up to expectations.

Professional organisations and several regulatory authorities across the globe have recognised this situation, as exemplified by the recent Regulation (EU) 2017/746 of the European Parliament and of the Council of 5 April 2017 on in vitro diagnostic medical devices. The laboratory medicine professions and standardisation organisations have also stepped up to the plate and published recent standards crucial in this area. The cornerstone principles of traceability, standardisation and harmonisation of measurement results in laboratory medicine are detailed in the following standards: ISO 17511:2020, ISO 21151:2020, ISO 15194:2009, ISO 15193:2009 and CLSI EP30-A.

A new and important principle in this area is traceability by harmonisation using commutable reference materials, as elucidated by ISO 17511:2020, ISO-21151:2020 and illustrated below:

The Joint Committee for Traceability in Laboratory Medicine (JCTLM) within the BIPM is an international consortium that promotes the global standardisation of clinical laboratory test results, and provides information on reference materials, reference measurement methods and services that are available from around the world. The present Chair of the JCTLM Working Group for Traceability, Education and Promotion (WG-TEP) is currently the present Eurachem liaison to the JCTLM. The WG-TEP produces and promotes educational materials to demonstrate the value of traceability in laboratory medicine as a means to reduce between method variability in the interests of improved clinical outcomes and patient safety.

Elvar Theodorsson
JCTLM WG-TEP Chair and Eurachem Liaison
CITAC in 2020

Cooperation on International Traceability in Analytical Chemistry (CITAC) is a non-profit organisation created in 1993 with the mission to improve measurement traceability in chemistry everywhere in the world and to ensure that the results of chemical analysis made in different countries and/or at different time are comparable. CITAC is working closely with such sister international organisations as IUPAC, CCQM/BIPM, ISO-REMCO and ILAC, regional and national professional chemistry societies and institutions, like Eurachem, using joint Working Groups and projects. CITAC activity is summarised annually in CITAC News – a newsletter published on the CITAC website http://www.citac.cc. CITAC News 2020 is available at http://www.citac.cc/CITAC_News_2020.pdf.

Since COVID-19, the CITAC activity in 2020 was based on virtual meetings and email conversations. The annual CITAC members’ meeting was held on 25 June 2020 in remote mode.

New CITAC officers were elected for a three-year mandate: Bernd Güttler (PTB, Germany) as Chairperson and Zoltan Mester (NRC, Canada) as Vice-Chairperson and coordinator of the CITAC Best Paper Award. Ricardo Silva (University of Lisbon, Portugal), Wolfhard Wegscheider (University of Leoben, Austria) and Ilya Kuselman (Independent Consultant on Metrology in Chemistry, Israel), were re-elected for an additional mandate as Secretary, Treasurer and Internet Administrator, and CITAC News Editor, respectively.

On 30 September 2020 the first CITAC web seminar dedicated to the CITAC Best Paper Awards 2019 was successfully organised.

A joint IUPAC/CITAC webinar “Metrology, Quality and Chemometrics – Correlation of Test Results and Mass Balance Influence on Conformity Assessment”, in the framework of IUPAC project 2019-012-1-500, took place on 21 Jan 2021 and the recording is available from the IUPAC webpage https://iupac.org/event/metrology-quality-and-chemometrics/ and CITAC website http://www.citac.cc (Conferences & Workshops).

Michela Sega
CITAC
Working Group Reports

Education and Training Working Group

The Education and Training Working Group (ETWG) met during the GA week in May 2019 with 11 members attending. Since that meeting, the WG has been pleased to welcome two new members: Alice Mosca (Portugal) and Christina Virgiliou (Greece).

Vicki Barwick stepped down as Chair of the WG (but remains a member of the WG) in May 2020 when she became Chair of Eurachem. David Milde (Czech Republic) was nominated to take up the role of ETWG Chair and this was approved by the WG.

Due to the current pandemic situation the ETWG did not hold any meetings during 2020. Nevertheless, the group members have made progress on a number of activities. The revision of the “Guide to quality in analytical chemistry” can be currently considered a key activity for the WG. The aim is to take into account the changes required due to the revision of ISO/IEC 17025 published in 2017. A first draft is to some extent available and after some editorial work will be sent to all members of the ad hoc group dealing with the task for comments and detection of pending gaps. The last comments on the revised guide “Terminology in analytical measurement: Introduction to VIM 3” are being addressed. The 2nd edition of this guide will be published soon.

The ETWG also supported the workshop that was intended to take place in Bucharest in May 2020 and finally was realised on 14-15 July 2020 as an online event. See page 3 for more information.

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

Finally, the Working Group is also responsible for the ‘Reading list’ that is published in the publications area of the Eurachem website. The list is reviewed annually – the latest revision was published in 2019.

The current members of the Working Group are listed on the ETWG page on the website.

David Milde
Chair, Eurachem ETWG

Method Validation Working Group

At present, the MVWG consists of 28 members representing 14 European countries (four new members since GA 2019: two from Greece, one from Switzerland, one from Sweden; two members have left the WG).

The members consist of a “core group” of around 15 persons who are very active, regularly attending WG meetings, forming task groups and contributing with written material whilst seven members are “corresponding members” who contribute electronically.

Since the GA 2019 the MVWG has met twice, and has mainly been focusing on the following tasks.

• Finalisation and publication of two supplements to the Fitness for Purpose (FfP) Guide, now available on the Eurachem website; “Blanks in method validation” and “Planning Method Validation studies”.

• Revision of the 2nd ed. of the FfP Guide, which included a survey on the needs for revision of the guide, with 98 responses received, which together with comments collected over a period will be taken into consideration. The feedback in general points to a rather significant revision of (some of) the existing sections and addition of some new subjects. Guy Lamon, Belgium and Helen Cantwell, Ireland were appointed as editors.

• A task group is still working on the challenging supplement on how to deal with bias as part of method validation.

• Validation of test kits will become a checklist for selection of appropriate (valid) test kits, which will be included as an annex in next revision of the guide.

• A task group has been established for drafting specific guidance on validation of microbiology methods (to be either a separate supplement or an annex to the guide). The WG is communicating with the WG on Qualitative Analysis on how to handle validation of such methods.

• The Working Group is still seeking good, practical examples of application of the principles in the FfP Guide – following the template given in the supplement “Planning of Method Validation Studies”. A leaflet on “The importance of Method validation” is being finalised.

• The Chair has been contributing to a joint AOAC-E & NMKL symposium on “SPEEDING TOWARDS –OMICS… Chemical and microbiological food analysis”, 3-4 June 2019 in Oslo, Norway. At the event the Working Group planned and delivered a 1.5 h workshop on “What is ‘Fitness for purpose’ of an analytical method?” for approx. 60 participants.

Lorens P. Sibbesen
Chair, Eurachem MVWG

Helen Cantwell
Vice-Chair/Secretary, Eurachem MVWG
Measurement Uncertainty and Traceability Working Group

The Eurachem Working Group on Measurement Uncertainty and Traceability (MUTWG) is responsible for four current Eurachem guides:

- Quantifying uncertainty in analytical measurement;
- Traceability in chemical measurement;
- Use of uncertainty information in compliance assessment;
- Setting target measurement uncertainty.

The Working Group published a second edition of the Traceability guide in 2019, which is now on the Eurachem website; a Czech translation has also already been published.

The measurement uncertainty guide (QUAM:2012) was reviewed and confirmed in 2017. The Working Group is, however, staying informed of the direction of JCGM WG1, the group responsible for the GUM to make sure that any substantive changes in international guidance can be addressed promptly. The Working Group has also examined a range of approaches for large uncertainties, which generally result in asymmetric intervals; some of the approaches were presented and discussed at the workshop in November 2019.

The Working Group recently undertook a review of the guide “Use of uncertainty information in compliance assessment” and has concluded that a modest update is needed. This is now under way. The revision will include references to more recent guidance and will include a brief treatment of the different risks of false decisions for some common decision rules; that is, the chance of false declarations of compliance or non-compliance.

In addition to the existing guides, the WG is working towards draft guidance on the evaluation of uncertainty from in-house validation data to supplement QUAM:2012. This is challenging because it is difficult to provide exact instructions that apply well to a wide range of analytical problems, and further discussion within the group is needed to finalise the technical direction, particularly for treatment of uncertainties associated with bias.

Jointly with the Sampling Uncertainty WG, and with the kind assistance of Eurolab-DE, the MUTWG coordinated a successful workshop on “Uncertainty from sampling and analysis for accredited laboratories” in November 2019, at BAM in Berlin. Approximately 130 participants attended, from 37 countries. The meeting included invited presentations, contributed oral presentations, and discussion and poster sessions. All the presentations and many of the posters presented at the meeting can be found on the Eurachem website.

Steve Ellison
Chair, Eurachem MUTWG

Qualitative Analysis Working Group

The Qualitative Analysis Working Group (QAWG) has 18 members and met twice in person in May and November 2019.

A draft guide on “Assessment of the performance and uncertainty in qualitative chemical analysis” was circulated among Eurachem members for a 60 day consultation period until 20 June 2020. The Working Group met online in July 2020 to review and address the helpful comments received and is currently working towards a further draft.

Ricardo Bettencourt da Silva
Chair, Eurachem QAWG

Proficiency Testing Working Group

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

- A paper is being drafted on current practices for performance evaluation in qualitative and interpretative PT schemes based on the results from a survey carried out and a literature search undertaken on performance evaluation in qualitative and interpretative PT schemes. It will focus on the need for harmonisation of performance assessments, highlighting some of the problems created by the large number of different approaches currently in use. The aim would be to present as a poster at the next Eurachem PT Workshop followed by publication in ACQUAL.

- The two recently published leaflets are now available in a number of languages, with others to follow:
  - Use of surplus proficiency test items – Czech, English, French, German, Italian, Swedish, Turkish and Ukrainian;
  - How to investigate poor performance in proficiency testing – Czech, English, French, German, Italian, Swedish and Turkish.

- A new leaflet on ‘Do you speak proficiency testing?’ is currently being drafted.

- A decision has been taken to postpone the 10th Eurachem PT Workshop to 2022 due to a number of reasons connected with the ongoing COVID-19 issues. The new dates for the workshop are in September 2022 at the same venue in Windsor, UK.

Brian Brookman
Chair, Eurachem PTWG
Reference Materials Working Group

There was a request, launched after GA 2019, to form a Task Group and start drafting the revision of the “Selection and use of Reference Materials” Guide, but unfortunately the response was quite small.

However, on the other hand, interest for the Eurachem/ CITAC Working Group on Reference Materials continued to grow. New members were nominated by CITAC, Ireland, Italy and Greece (Angelique Botha, ISO-REMCO; Olivia O’Connor, State Laboratory; Francesca Rolle, INRIM; Christina Virgiliou). The number of members is now 26.

Since about one third of the current members did not participate in the discussion regarding the topics to be covered for the revision, the current strategy for the WG is to re-convene the WG members and update both the list of topics and the timetable. Due to current restrictions to travel, the meeting will be organised online.

In the meantime, members were addressed to an opportunity to update their knowledge, at an online seminar hosted by the Chemical Metrology group at NRC Canada and presented by Dr Angelique Botha, National Metrology Institute of South Africa and ISO/REMCO Chair.

Marina Patriarca
Chair, Eurachem RMWG

Uncertainty from Sampling Working Group

The main achievement of the last year has been the publication of the second edition of the Eurachem Guide to the estimation of uncertainty arising from sampling. The new aspects of this edition, compared to the first edition published in 2007, have recently been explained with varying level of detail, in publications by Eurachem, CITAC, and RSC-Analytical Methods Committee. The Guide was launched at a Eurachem/Eurolab Workshop held at BAM in Berlin in November 2019, which attracted 147 participants from 37 counties. Reports of the Workshop have appeared in the newsletters of both Eurachem and CITAC.

Other WG activities include helping translators of the Guide, from many different counties, by preparing a new version of the document with special forms of the figures that can be edited into any language. The WG are also providing comments to the Codex Alimentarius Commission (part of the Joint FAO/WHO Food Standards Programme) on their draft revision document ‘General Guidelines on Sampling’ (CXG 50-2004).

Mike Ramsey
Chair, Eurachem UfSWG

National Reports

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

Armenia

During 2019, the Armenian Eurachem representative office worked with colleagues from the National Body of Standardization and Measurement to translate and implement the following ISO standards:

- ISO 18113-1-5: In vitro diagnostic medical devices – Information supplied by the manufacturer (labelling) – Part 4: In vitro diagnostic reagents for self-testing all parts;
- ISO 13485-2018: Medical devices – Quality management systems – Requirements for regulatory purposes;

The Armenia Eurachem office collaborated in the organisation of a workshop within the framework of the TAIEX expert mission project organised by European Union, to discuss the alignment of Medical/Public Health Laboratories with EU regulation. During this workshop a roadmap for legislative changes was developed and presented to the Armenian Government.

Mr Karen Darbinyan was actively involved in the Measurement Uncertainty and Traceability Working Group which has been working to develop several guides, including “Evaluation of MU from in-house precision and trueness test”.

As Eurachem representatives we are closely working with the Armenia National Accreditation Body with different training projects.

The Armenian Eurachem office is expecting changes to their work in 2020, including plans to create an association of testing laboratories and increase cooperation and missions in the area of analytical measurement.

Levon Melikyan

Belgium

Belab is the association of Belgian Laboratories and organisations involved in accreditation and is a member of Eurachem and Eurolab. The association has an Executive Board with eight members and counts 57 member-laboratories in the General Assembly.

Members of the Executive committee of Belab are also members of a number of Belac (Belgian accreditation authority) boards: Commission of coordination (management of Belac) and National Council (advisory board for Minister of Economy). Belab is chaired by Isabelle Vercruysse (APB) and Philippe Maesen (University of Liège) is the Vice-Chair.

Belab organised a joint brainstorming session with Belac during their General Assembly in 2019 about the new edition of ISO/IEC 17025 (2017), to explore the result of audits performed in spring 2019 by Belac against the new edition.
Members were asked to submit points and cases they had problems with on their audit. These points were discussed with the Belac management and the members of Belab. A summary of this discussion forum has been posted on the Belab website.

During 2020, Belab planned a survey on the new ISO/IEC 17025 (2017) in cooperation with Belac. The purpose of this survey is to find out the difficult points of the current audits, to know the opinions of the labs and to learn from this how improvement actions can be taken by Belac.

During the period 2019-2020, Belab was asked by the Ministry of Education to give advice on drawing up new professional profiles. Belab also cooperated as an advisory body for the Ministry of Environment and the Ministry of Health.

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 Vercruysse

Bulgaria

The Union of Metrologists in Bulgaria (UMB) and the Bulgarian Institute of Metrology (BIM) represent Eurachem in Bulgaria as the established section BULCHEM. BULCHEM continues to support analytical laboratories in the country. Their main activities concern the organisation of training events and the translation of Eurachem publications.

Training events were organised covering the following topics:

- Discussion of the requirements of the updated international standard BDS EN ISO/IEC 17025:2018 and application of BDS EN ISO 19011:2018 in audit of laboratories in June (36 participants);
- Uncertainty of measurement arising from sampling in October (21 participants);

Discussions on:

- Uncertainty of measurement arising from sampling;
- Application of the rule for decision-making regarding the conformity of the measurement result – the discussion was conducted by the UMB on pre-asked questions in October (21 participants).

Translation of Eurachem Guide in Bulgarian:


The Union of Metrologists in Bulgaria and BULCHEM Section have a good collaboration with the State Agency for Metrology and Technical Surveillance and the Bulgarian Accreditation Service, and also with non-governmental organisations such as CLUB 9000, the Union of quality specialists in Bulgaria and the Union of Construction Laboratory Specialists in Bulgaria.

Dimka Ivanova

Cyprus

2020 marked the 60th anniversary of the Pancyprian Union of Chemists (PUC). A series of activities which had been planned for the year had to be cancelled after March because of the change in our lives due to COVID-19 and the measures implemented to face it. This inevitably affected the Quality Assurance Division which, even under these unexpected and difficult conditions, remained active to the extent that it was possible. The main activities during the last year are referred to below.

The Division of Quality Assurance was established in spring 2014 to operate under the PUC; it was designated to undertake the role of the Cyprus Eurachem Committee which had been active since 1997. 23 years later, the Division is very active with more and more young colleagues getting actively involved. The activities of the Division are coordinated by the Secretariat consisting of Dr Constantina Kapnissi-Christodoulou (University of Cyprus), Dr Despina Charalambous (Frederick University) and Dr Kyriacos Tsimillis.

The division ran a workshop on the topic of “Accreditation of Analytical, Microbiological and Medical Laboratories” which has also been reported on page 4.

Members of the Division were active in the work of Eurachem and the Executive Committee; further to this, there was a contribution to the revision of two guides, i.e. Quality Assurance in Analytical Laboratories and Accreditation for Microbiological Laboratories and the work of ETWG and PTWG. On the occasion of World Accreditation Day a short article on the contribution of Eurachem to accreditation was prepared and published on the Eurachem website. Presentations were made to the Eurachem workshop hosted in Berlin (November 2019) as well as the virtual workshop organised and hosted by Eurachem-Romania (July 2020).

The Division also actively participates in the work of the Division of Analytical Chemistry of EuChemS.

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

The Secretariat of the Division
Czech Republic
Eurachem Czech Republic has been working as an independent organisation since 1993, currently with 70 members. On the other hand we have been closely cooperating with the national accreditation body, Eurolab-CZ and the national metrological institute.
As usual, our activities were focused mainly on education and training during last year. We published a new textbook as the 24th volume of edition KVALIMETRIE (Qualimetrics). This volume covers two topics. The first part is the official Czech translation of the Eurachem/CITAC Guide Metrological Traceability in Analytical measurement (2nd ed. 2019). Whereas, the second part provides a guidance on interlaboratory comparisons with a limited number of participants. The textbook was co-funded by the Czech Office for Standards, Metrology and Testing and the translation of the Eurachem/CITAC Guide by the Ministry of Education Youth and Sports. The textbook is freely available in pdf format on our website.
Unfortunately we had to cancel a workshop on sampling and uncertainty arising from sampling that was planned for April 2020 due to the epidemiological situation.
Recently we translated two PT information leaflets into Czech – Investigating poor results in PT and Use of surplus PT materials. Both translated versions are available on the Eurachem website.
Our organisation distributed among our members two issues of the Newsletter. Besides updates and information for our members, the summer 2019 edition introduced uncertainty arising from sampling to the readers. The winter 2020 edition provided information about the determination of estrogenic hormones in water by GC/MS and LC/MS. 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

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. Eurachem activities in Estonia are strongly connected to the network called Estonian Centre of Analytical Chemistry (AKKI – https://www.akki.ee) which aims for high quality chemical analysis in Estonia.
Education is a large part of the Eurachem activities in Estonia. Ivo Leito is responsible for annually organising two Massive Open Online Courses (MOOC): “Estimation of measurement uncertainty in chemical analysis” (https://sisu.ut.ee/measurement/uncertainty) and “LC-MS method validation” (https://sisu.ut.ee/lcms_method_validation/) which by now have been organised six and three times, respectively, and attract hundreds of participants from all over the world every year. AKKI also organised a practical liquid chromatography course for practising chromatographers. Interest in courses for practising chemists is large and the aim is to develop more such courses in Estonian.
In 2019, Estonia hosted the Eurachem week on 20-24 May in Tartu. The topic of the workshop was “Validation of targeted and non-targeted methods of analysis” (http://eurachem2019.akki.ut.ee). Approximately 160 people attended the workshop. The participants were from 42 countries – the member countries in Eurachem as well as from Asia, North America, South America and Middle East. The farthest participants were from Fiji, the Philippines, Uruguay and Brazil.
Riin Rebane

Finland
During 2019 the Finntesting Association/Eurachem Finland had annual meetings in spring and in autumn. In connection with those meetings, seminars related to quality aspects in analytics and chemistry at the heart of the circular economy were held.
In the spring, a seminar on “Quality aspects for public invitation to tender analytics” highlighted issues which included how to take quality aspects into account, what kind of expertise is needed when enforcing issues related to the contract, how to determine quality in the sector of microbiological analysis from the reference laboratory point of view and how to support experts with their challenges.
Mr Tuomo Niilahti, University of Jyväskylä, gave a presentation on his master’s thesis “Laser-induced plasma spectroscopy in determining the mineral composition of sulphide mineral-containing rocks”, which was awarded the 2017 master’s thesis prize.
Finntesting awarded the 2018 master’s thesis prize to Ms Tiia Laurila, University of Helsinki, for her work on improved calculation statistics for DMPS equipment. She gave a presentation on her work.
The autumn seminar provided interesting information through presentations related to “the circular economy requires reliable measurement”, “circular economy in the metal sector” and “metal recovery from electronic waste”.

In addition to sharing knowledge via seminars, the focus was towards educational needs. Collecting and producing quality related information to our website as well as updating the quality related terminology are on-going activities at the moment.

The executive board of Finntesting Association meets on a regular basis and promotes quality related activities. The Association has nominated members in the Eurachem General Assembly, Eurachem Working Groups and formerly, the Eurachem Executive Committee. The Association also cooperates nationally and internationally through Eurachem, Eurolab and CITAC activities.

Anna-Liisa Pikkarainen

Georgia

The Georgian Laboratory Association (GeLab) has been an Associate member of Eurachem since 2014. Last year, in accordance with the decision of the 35th meeting of the Eurachem General Assembly, Eurachem Working Groups and formerly, the Eurachem Executive Committee. The Association also cooperates nationally and internationally through Eurachem, Eurolab and CITAC activities.

Georgia

Anna-Liisa Pikkarainen

Germany

The Eurolab-D Chemical Analysis Committee, the German Eurachem mirror committee, met only once since the 2019 Eurachem GA in November. A second meeting planned for April 2020 had to be postponed indefinitely due to Coronavirus related restrictions.

During the November meeting information from Eurachem and its Working Groups were distributed and discussed.

The Eurachem online survey on traceability and the problems on understanding the concept of traceability in detail were intensively discussed in the meeting.

Eurolab-D strives to translate as many as possible of the Eurachem publications. Currently the following guides are available in the German language:


We are currently in the process of translating the Traceability Guide, the Sampling Uncertainty Guide and the Supplements to the Method Validation Guide.

Almost all of the Eurachem Leaflets are also available in the German language.

Eurolab-D was also heavily involved in the organisation of the Eurachem Workshop on uncertainty from sampling and analysis for accredited laboratories, which took place on 19-20 November 2019 at BAM in Berlin.

Michael Koch

Greece

Greece’s representative in Eurachem is Professor Georgios Theodoridis from the Department of Chemistry, Aristotle University Thessaloniki. His assignment was made by the Greek Association of Chemists which is the national body contributing to Eurachem.

This was practically the first year of participation of G Theodoridis in Eurachem. He attended the Eurachem workshop “Validation of targeted and non-targeted methods of analysis” which took place in Tartu on 20-21 May 2019, and was introduced and discussed with several of the Eurachem GA and Working Group members. He gave a presentation on QC/validation on LC-MS metabolomics and took part in different workgroup discussions.

Next, efforts were made to increase the participation of Greece in Eurachem Working Groups as a means to increase awareness and interest in the work and documents of Eurachem and improve interaction. Therefore, the following members were proposed and accepted in the Eurachem Working Groups:

Method Validation Working Group: Helen Gika, Aristotle

Nino Manvelidze
University and Marios Kostakis, Athens University.


Apart from the Eurachem activities, the Greek participants are active in various fields of analytical chemistry, validation and metrology. As an example, efforts are realised in the National Research Infrastructure FoodOmicsGR_RI (www.foodomics.gr) which aims to harmonise analytical methods and protocols for food and nutrition research. FoodOmicsGR_RI organised a number of consortium meetings, and participated in various events both scientific/research and public engagement. They also organised two open days in Thessaloniki and Athens, which however were postponed due to the COVID19 pandemic.

In addition, Georgios Theodoridis and Helen Gika are active members in the Metabolomics QA & QC Consortium (mQACC), which is an international think tank established in February 2018 with the goal to develop a collaborative effort among relevant stakeholders in academic, industry and government institutions to address key quality assurance (QA) and quality control (QC) issues in the untargeted metabolomics field.

In the future, we aim to increase involvement in Eurachem activities and in the Eurachem Working Groups. A number of national conferences are planned on metrology and analytical chemistry. We would be interested in sharing or co-organising activities with Eurachem or Eurachem members on quality control in metabolomics and foodomics.

Georgios Theodoridis

Hungary

Since the end of 2018, the Cluster of Hungarian Accredited Organisations (ASZEK) has acted as the Hungarian national Eurachem organisation. 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.

In 2019, ASZEK organised the conference “Accreditation 2019 – changes and current trends” in co-operation with the National Accreditation Authority (NAH). The event concentrated on practical issues of the accreditation procedure, relevant new standards, questions surrounding transfer to e-administration of accreditation process and on-site assessment experience. Over 160 participants attended the conference.

In addition, the National Accreditation Authority (NAH) has also held several seminars throughout the year, to which ASZEK experts have actively contributed sharing their experience.

Two delegates are active in the Proficiency Testing Working Group, Dr Erika Szárkány (also a representative of EQALM) and Dr Csilla Bélavári. Dr Szárkány 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.

On 8 October 2019, a one-day workshop was held in the State Laboratory Campus on the topic of “Measurement Uncertainty and Uncertainty for Compliance Assessment”. The workshop was run by Vicki Barwick and Steve Ellison of LGC (and Eurachem). It was extremely well received by the 78 attendees. A typical comment was “Course was excellent. Exactly what I needed to familiarise myself with MU and its application in the lab. Practical, real lab examples were relatable and very important to grasping MU value”. Vicki and Steve kept everyone alert by asking the audience thought-provoking questions!

Based on the attendees’ enthusiasm, Eurachem Ireland intends to host another workshop by Vicki and Steve in autumn 2020, but this may have to be deferred.

Unfortunately, the popular Eurachem Analytical Measurement Competition could not take place in April as usual. This annual event is organised and run by the EAMC Committee, Eurachem Ireland Secretariat, and by a host Institute of Technology or University. It is a competition for
second year students and is always very well subscribed to. We hope to be in a position to run the competition in 2021. Ireland is well represented on Eurachem Working Groups and members attended various Working Group meetings throughout the year.

**Hugh Fay**

**Italy**

Italy is represented in Eurachem by the National Institute of Health (ISS) and the National Institute of Metrological Research (INRIM). These institutes were sharing the responsibilities of Eurachem organisation, with Marina Patriarca from ISS being the Eurachem Past-Chair, and Francesca Rolle from INRIM the former Secretary and Treasurer. Within this framework, three extra-ordinary Executive Committee meetings, to deal with the effects of the COVID-19 emergency, were hosted online by ISS, in April and May 2020.

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

Activities mainly focus on contributing to Eurachem guidance and its promotion to analytical laboratories at all levels, in particular by making available translations into Italian of Eurachem Guides and leaflets. Due to the ISS website migration to a new platform, the Eurachem-Italia website is currently undergoing major reorganisation.


The Eurachem focus, structure and activities were presented at the Annual Workshop of the European Union Reference Laboratory for metals and nitrogenous compounds in food and feed – held in Copenhagen (DK), 23-24 October 2019, attended by representatives of the National Reference Laboratories designated by the EU Member States in this area of testing.

An overview of recent advances in Eurachem guidance was given to laboratories in the areas of food safety and other interested parties during the IX Workshop of the Italian Reference Laboratories for metals and nitrogenous compounds in food and feed, additives in feed and process contaminants (Rome, Italy, 28-29 November 2019).

Information on Eurachem initiatives, new guidance and coming Eurachem events, such as the workshop on uncertainty from sampling and analysis for accredited laboratories and the two day training event on “Accreditation of analytical, microbiological and medical laboratories – ISO/IEC 17025:2017 & ISO 15189:2012” (Nicosia, Cyprus, 20-21 February 2020) was also directly promoted through distribution of the information to mailing lists and relevant organisations. Printed copies of the latest Eurachem newsletter and of Eurachem leaflets were also distributed to interested parties.

During this year, the leaflets “Use of surplus proficiency test items” and “How to investigate poor performance in proficiency testing” were translated into Italian, by the members of the Proficiency Testing Working Group. Both translations are available from the Eurachem website. The translations of both the supplements to the Eurachem Guide “The fitness for purpose of analytical methods”, dealing with “Planning and reporting method validation studies” and “Blanks in method validation studies” is ongoing. More recently, collaboration with the national representatives of Eurolab (ALPI) was established to prepare a joint translation of the Eurachem guide on “Measurement uncertainty arising from sampling”.

**Marina Patriarca**

**Michela Sega**

**Poland**

Presently, 71 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 Buliska (Vice-Chair), and the section secretariat is hosted by POLLAB secretariat.

Members of the Section are involved in the organisation of symposia, organised every year by POLLAB. The main topic at XXV POLLAB Symposium (2019) was “Implementation of the requirements of PN-EN ISO/IEC 17025:2018-02 as a process of improving the laboratory’s operations”. In two rounds, the symposium was attended by over 420 participants.

We organised also special section’s meetings, including invited lectures dedicated to selected subjects. In 2019 there was one meeting, where participants discussed: “Laboratory management system in accordance with PN-EN ISO/IEC 17025:2018”.

We have organised training courses for our members for four years. These courses are very popular, with many people attending them.

We work with the Polish Centre for Accreditation to improve the management system in laboratories. Eurachem-PL will continue to present policy to support laboratories in 2020.

Our members will be attend in Symposium POLLAB, section meetings and new PT/ILC programs.

**Andrzej Brzyski**
Portugal

In 2019, the Portuguese delegates have been actively involved in the activities of the “Measurement Uncertainty and Traceability” and “Qualitative Analysis” Working Groups.

Eurachem-PT collaborated, with ForMEQ and RELACRE (GT5 – Chemical Metrology), in the translation to Portuguese of the Eurachem/CITAC guide on the use of uncertainty information in compliance assessment. At this moment, Eurachem-PT is collaborating with RELACRE (GT5 – Chemical Metrology) and ForMEQ on the translation of the Eurachem/CITAC guides on “Measurement uncertainty arising from sampling” (2nd edition) and “Setting target measurement uncertainty”.

Recently, Alice Mosca was nominated for the Education and Training Working Group.

The dissemination of Eurachem activities and guidance have also been performed in teaching Metrology in Chemistry at the University of Lisbon, “International Summer School on Analytical Science, Metrology and Accreditation” and in TrainMIC events. The publication of various papers on Analytical Chemistry and Metrology has also been used to publicise Eurachem guidance.

Ricardo Bettencourt da Silva

Romania

Eurachem-România is a professional, non-profit organisation, a legal entity established in 2000, comprising 65 active members from various fields of activities: universities, national research institutes, accredited laboratories and local agencies for public health or environment monitoring.

Our organisation continued to organise the Analytical Chemistry Students Contest where students must solve in a limited time, three specific applications of analytical chemistry with practical application. This competition is popular among students. Additionally, Eurachem-România still supports the Students’ Scientific Communications for the Analytical and Instrumental Analysis Section, awarding the best two papers promoting the quality in analytical measurements.

The main activities have been dedicated to the organisation of the Eurachem GA 2020 and its associated Workshop: “Quality assurance for analytical laboratories in the university curriculum” that was planned to take place at University Politehnica premises, Bucharest, Romania. Unfortunately, due to the severe restrictions imposed by the Coronavirus pandemic, the events were instead delivered as virtual events. A full report on these events can be read on pages 2 and 3.

Eugenia Eftimie Totu

Russia

Eurachem in Russia is represented by the Association of Analytical Centers of Russia “Analitica” (AAC) – a professional, non-profit organisation. The active members of AAC represent different accredited laboratories across the country, national research institutes, universities, analytical equipment manufacturers and journal “Analytica”. Since the Russian delegates represent not only the board of the AAC, but also the academic institute, metrological institute and universities, the dissemination of Eurachem activities and guidance have been performed either in teaching “Metrology in Analytical Chemistry”, “Quality Assurance in Analytical Chemistry” at the National University of Science and Technologies “MISIS”, in validation of primary reference analytical methods in the Ural Science and Research Institute of Metrology (UNIIM), or in training courses on ISO/IEC 17025 implementation, provided by AAC as accredited by APLAC body, etc. Since 2009, the Russian delegate is involved in the activities of the Education and Training Working Group. Members of AAC are also involved in translating leaflets and Eurachem documents into Russian.

In 2019, the transition of Russian accredited laboratories to ISO/IEC 17025:2017 continued. About 30% of laboratories have already completed this transition, with the rest planning to do this in 2020. During 2019, in connection with the introduction of the new edition of the standard, AAC paid special attention to the training of analytical laboratory specialists and the transition of accredited laboratories to the new requirements of these standards, so 12 training seminars were held, in which about 500 specialists from various laboratories took part.

For the implementation of educational programs, the specialists of AAC developed a training program that included such issues as the management system of the testing laboratory, metrological traceability of measurement results, measurement uncertainty, assessment of impartiality risks and risks associated with laboratory activities. The first training seminar was held for specialists working in the field of proficiency testing. In October 2019, at the ILAC General Assembly, AAC received recognition from ILAC in the field of accreditation of proficiency testing providers.

In the scope of metrology in analytical chemistry, and following Eurachem guides, a number of methods have been developed, approved and successfully applied by the UNIIM specialists to ensure metrological traceability of measurement results in the food and agricultural industries as the state primary reference measurement procedures (SPRMP).

The developed CRMs can be used to validate measurement methods and control the accuracy of measurement results of mass fractions of nitrogen (protein, crude protein), moisture, fat, ash, lactose and carbohydrates, determine the metrological characteristics of measuring instruments during calibration and during testing.
The publication of various papers on analytical chemistry and metrology has also been used to publicise Eurachem guidance.

Future plans of the Russian delegates are to continue the translation of Eurachem documents and publicise Eurachem activities around the country.

Vasilisa Baranovskai
Maria Medvedevskikh

Spain

During 2019, Eurachem Spain was involved in the following activities.

- Eurachem Spain is integrated into the daily operations of EUROLAB-Spain and FELAB, the activities carried out by Eurachem Spain should be understood as those carried out within the framework of the Spanish associations mentioned;
- All EUROLAB-Spain partners have been regularly informed of all the information generated by Eurachem, through circulars and newsletters;
- Through FELAB there have been several meetings with the National Accreditation Entity (ENAC) about different complementary documents that are applicable in the accreditation processes of the different sectors;
- Legislative amendments have been made by both EUROLAB-Spain and FELAB, to different legal provisions of the Ministries and Autonomous Communities prior to their publication;
- XV SIMPOSIUM DE FELAB held in Madrid, 7 May 2019;
- Spanish translation of the Guide ‘Setting and Using Target Uncertainty in Chemical Measurement’;
- Active collaboration in the preparation of documents:  
  - Planning method validation studies (Supplement) (2019)
  - Blanks in method validation (Supplement) (2019).

Alfonso González del Rey
Pedro Pablo Morillas

Serbia

The national representative (NR) of Eurachem and Eurachem WGs is from DMDM, which is the National Metrology Institute of Serbia and the institutional representative on Eurachem.

In 2019 the NR Eurachem Serbia participated in the legislation process of the new Serbian regulations in metrology sending a proposed draft of the regulations. The NR Eurachem Serbia draft regulation was focused on the chemical measurements (Protein Measuring Instruments for Cereal Grain and Oil Seeds) and the regulation was adopted in December 2019 by the Parliament of Serbia.

NR Eurachem Serbia also actively participated in the promotion of the SI redefinition, across the Republic of Serbia, by participation to many scientific events.

Training on estimation of measurement uncertainty in chemical measurements, method validation and selection and use of reference materials in chemical measurements were given to the end users and laboratories related to the chemical measurements by Eurachem representatives and other technical personnel from DMDM.

The hard copies of Eurachem Newsletter Issue 36 were distributed to analytical laboratories in Serbia.

Jelena Bebić

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 16 members of the board represent academia, administration and industry.

SCS is a full member of EuChemS and of Chemistry Europe. It owns 5% of the shares of Chemistry – A European Journal. CHIMIA is a peer-reviewed journal published ten times a year by the Swiss Chemical Society. It is also the official membership journal of the SCS and its divisions. The SCS and its divisions were founded in 1992 by the merger of the Swiss Chemical Society (founded in 1901) and the Swiss Association of Chemists (founded in 1920).

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.

EuChemS selected the DAS as conference organiser of XXII EuroAnalysis 2023.

The aims of the DAS are the promotion of all aspects of analytical sciences in Switzerland and the dissemination of information and knowledge through the organisation or sponsorship of meetings, seminars, workshops and lectures. The DAS establishes and maintains links with professional societies and institutions in Switzerland and abroad.

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 about quality assurance. The courses cover the needs of accredited and regulated laboratories. All trainings are also offered as in-house trainings.
The proclamation of the Coronavirus pandemic had a tremendous impact on the activities of the SCS and DAS. The SCS General Assembly Spring Meeting and the CHanalysis, the forum to stimulate a stronger cooperation among persons working in the different areas of analytical sciences, were postponed. Almost all trainings where stopped. Only some in-house courses could be carried out as distance courses.

The experience we got by this forced experiment will have some impact on the further offers in training.

Ernst Halder

Turkey

During the 2019-2020 reporting period, Eurachem Turkey has been involved in the activities of the Education & Training Working Group, Method Validation Working Group, and Measurement Uncertainty and Traceability Working Group. As in previous years, Eurachem Turkey acted as a member of TURKAK PT committee and was involved in the activities within the committee.

The Eurachem leaflet “Setting Target Measurement Uncertainty” was translated into Turkish and published on the Eurachem web page. The previously published leaflet “Traceability of Analytical Results” was revised.

Eurachem ETWG members participated in the revision of the “Guide to Quality in Analytical Chemistry: An Aid to Accreditation”.

Eurachem MVWG members from Turkey participated to the meetings in Paris on 3-4 October 2019 and in Rome on 24-25 February 2020. The members were involved in the preparation of the document “Draft checklist guide on selection of appropriate test kit” which was completed and will be included in the new version of Eurachem guide as an annex.

Training on estimation of measurement uncertainty in chemical measurements and method validation was given to end-users and laboratories related to chemical measurements by Eurachem representatives and other technical personnel from TUBITAK UME.

Ukraine

For Eurachem-Ukraine it was a great honour to become a Eurachem Full member by the decision of the Eurachem General Assembly taken in 2019 during its meeting in Tartu. Since then we continued our activities in spreading the information on Eurachem work, e.g. via the web-site of Ukrmetrteststandart, which is the leading metrology institute of Ukraine in the area of analytical measurements.

Following joining Metre Convention by Ukraine in 2018, Ukrmetrteststandart has obtained the status of the official observer in the Consultative Committee for Amount of Substance: Metrology in Chemistry and Biology (CCQM). In April 2020 our representatives have taken part in the CCQM working groups meetings that were held as web-conferences.

The representatives of Eurachem-Ukraine also continue their work in the ISO technical committees related to metrology in chemistry: ISO/TC 158 Analysis of Gases, ISO/TC 193 Natural Gas, being also a member of ISO/REMCO where Ukraine is O-member. Another area of our activities is participation in the technical committees of the Regional Metrology Organisation COOMET: TC 1.8 “Physico-chemistry” and TC 1.12 “Reference materials” as well as in the working groups of the Metrology Commission of the Inter-State Council on Standardization, Metrology, and Certification. It covered, among others, such topics as measurements in clinical laboratories, proficiency testing, implementation of ISO 17034 by the metrology institutes producing reference materials.

Since October 2019 till March 2020 we have translated five Eurachem leaflets into Ukrainian: Setting target measurement uncertainty; Traceability of analytical results; Selecting the right proficiency testing scheme for my laboratory; Proficiency testing – how much and how often?; Use of surplus proficiency test items. The translations are available from the Eurachem website. The Ukrainian representative is a member of the Eurachem Measurement Uncertainty and Traceability Working Group.

Mykhailo Rozhnow
Ovsiy Levbarg

UK

First and foremost, we would like to thank all of the members of the Eurachem GA for their kind and positive response to the UK’s application for discretionary Full membership of Eurachem in early 2020. Although the UK is no longer a member of the European Union, LGC and the Royal Society of Chemistry, which together provide the infrastructure for Eurachem UK, remain committed to full participation in Eurachem and we look forward to many more years of fruitful work as a Full member of Eurachem.

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

The AMC (http://www.rsc.org/Membership/Networking/InterestGroups/Analytical/AMC/) has various expert working groups including those concerned with sampling uncertainty/sampling quality and statistical methods (now including validation) all of which complement interests and concerns of Eurachem. The AMC continues to publish Technical Briefs which reach all members of the Analytical Division of the RSC and are online for all (including non-RSC members) to access and use. Technical Briefs are published by the RSC journal “Analytical Methods” and are available online; they can be found by following the ‘Technical Briefs’ link on the AMC webpage at https://www.rsc.org/amc. Seven have been published in the year, including:

• No. 95 – Experimental design and optimisation (5): an introduction to optimisation (April 2020);
• No. 96 – What’s novel in the new Eurachem guide on uncertainty from sampling? (April 2020);

• No. 94 – An introduction to hand-held infra-red and Raman instrumentation (March 2020);

• No. 93 – To p or not to p: the use of p-values in analytical science (January 2020);

• No. 92 – The edge of reason: reporting and inference near the detection limit (December 2019);

• No. 91 – Laser-induced breakdown spectroscopy (LIBS) in cultural heritage (November 2019);

• No. 90 – The role of accreditation in ensuring sampling quality (June 2019).

Members of the AMC regularly receive the Eurachem Newsletter and information on Eurachem activity. Eurachem information is also promulgated widely through the MyRSC online chemistry community.

Members of the AMC’s Expert Working Group (EWG) on Sampling Uncertainty and Sampling Quality are active members of the Eurachem WG on Uncertainty from Sampling and have led the revision of the Eurachem/CITAC/Eurolab/Nordtest/AMC Guide ‘Measurement uncertainty arising from sampling’. The second edition was accepted by a unanimous vote of the Eurachem General Assembly and has been published.

Activities associated with the UK Chemical and Biological Metrology programme contribute to maintenance of the UK National Measurement System (https://www.lgcgroup.com/nml), activities of particular interest to Eurachem in the year ending May 2020 include a range of training courses, including courses on measurement uncertainty, analytical method validation and statistics for analytical chemists. The programme also provides guidance documents and reports (https://www.lgcgroup.com/our-impact/).

Eurachem UK members have also contributed actively to the following Eurachem Working Groups: Education and Training; Measurement Uncertainty and Traceability (Chair); Proficiency Testing (Chair); EEE Proficiency Testing – “Proficiency Testing in Accreditation” (Chair); Qualitative Analysis, Uncertainty from Sampling, Method Validation and Reference materials.

Finally, Dr Damant, our RSC representative for the UK, has decided to step down as the RSC Eurachem representative; we at Eurachem UK thank him for his conscientious support for the role and for his contributions to Eurachem during his term of office.

Steve Ellison
Andrew Damant
Eurachem Week 2021

Since travel restrictions due to COVID-19 are still in place in 2021, both the scientific workshop and the General Assembly will run as virtual events. The scientific workshop “Trends & Challenges in Ensuring Quality in Analytical Measurements” will take place from 17-19 May. The General Assembly will take place from 20-21 May.

Registration is now open at http://eurachem2021.cz

The programme for the scientific workshop will aim to reflect experience from laboratories in relation to the revised ISO/IEC 17025:2017 after the transition period. It will also take the opportunity to present current Eurachem activities in the field and to discuss future challenges in quality in analytical measurements from both the research and applied perspective.

Dr David Milde, the Czech Republic Eurachem Chair, and Prof. Miloslav Suchanek, the Chair of the Workshop Scientific Committee will be very pleased to welcome you to this event.
10th Workshop on Proficiency Testing in Analytical Chemistry, Microbiology and Laboratory Medicine

Windsor (UK), 26-29 September 2022

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

Venue

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

Technical Programme

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

Training Sessions

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

- Basic statistics
- Further statistics
- PT scheme design
- Ensuring the quality of proficiency test items

Lectures and Working Group Topics

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

Who should attend?

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

Registration and more information at www.eurachem-pt2022.org

Workshop Secretariat

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Eurachem week 2022

16-21 May, Tbilisi, Georgia

To be hosted by the Georgian Laboratory Association (GeLab).
Member Countries

Eurachem member countries in green.

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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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