



Eurachem

A Focus for Analytical Chemistry in Europe

Eurachem



*a focus for analytical chemistry and
quality related issues in Europe*

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16 May 2022*



Introduction

- What is Eurachem
- Eurachem aims and membership
- Eurachem activities
 - Guidance documents
 - Workshops
 - Future activities

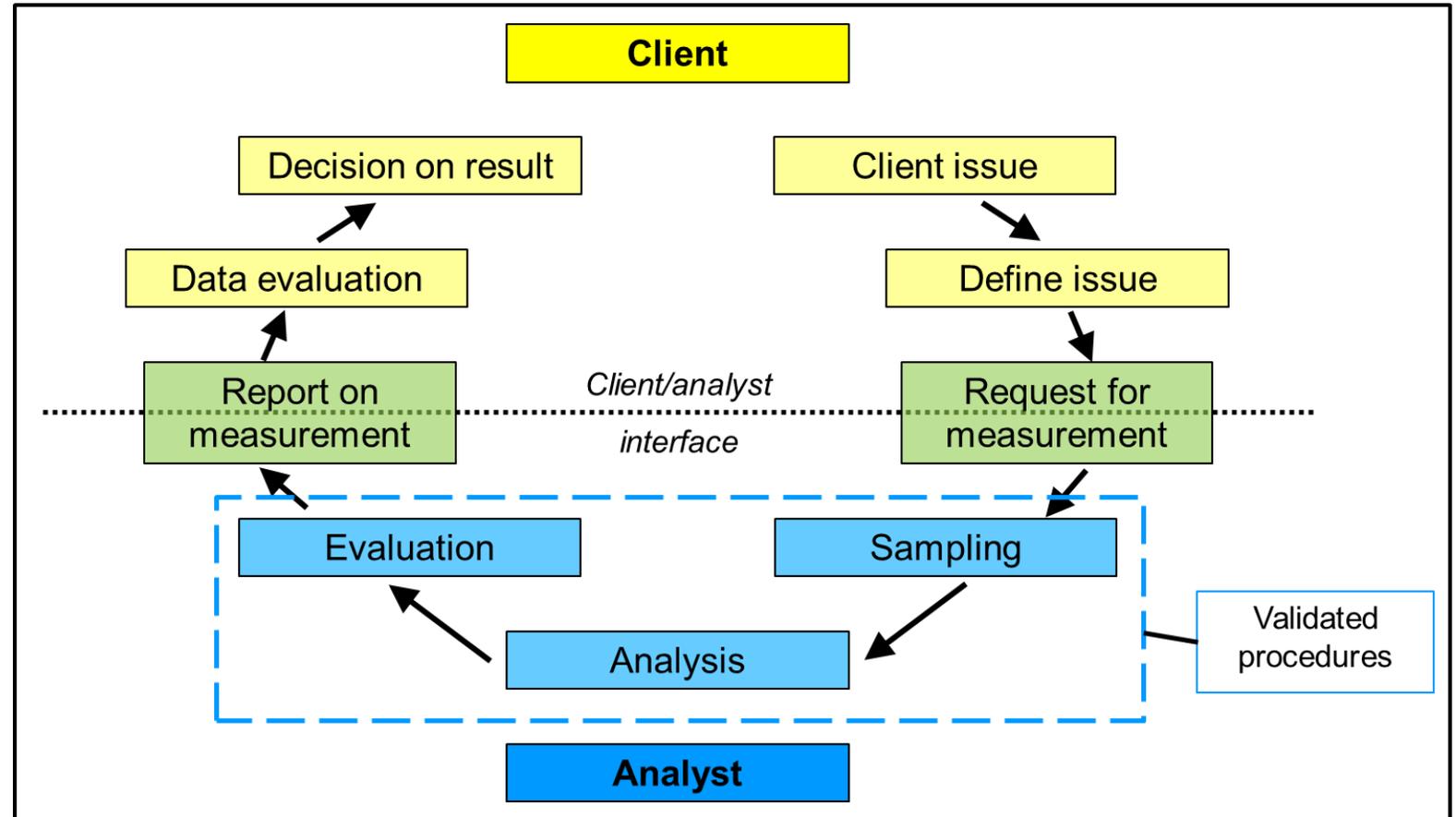
Scope & rules - Memorandum of Understanding see www.eurachem.org



The measurement cycle

Eurachem's focus is measurement quality...

...from client issue to decision on results



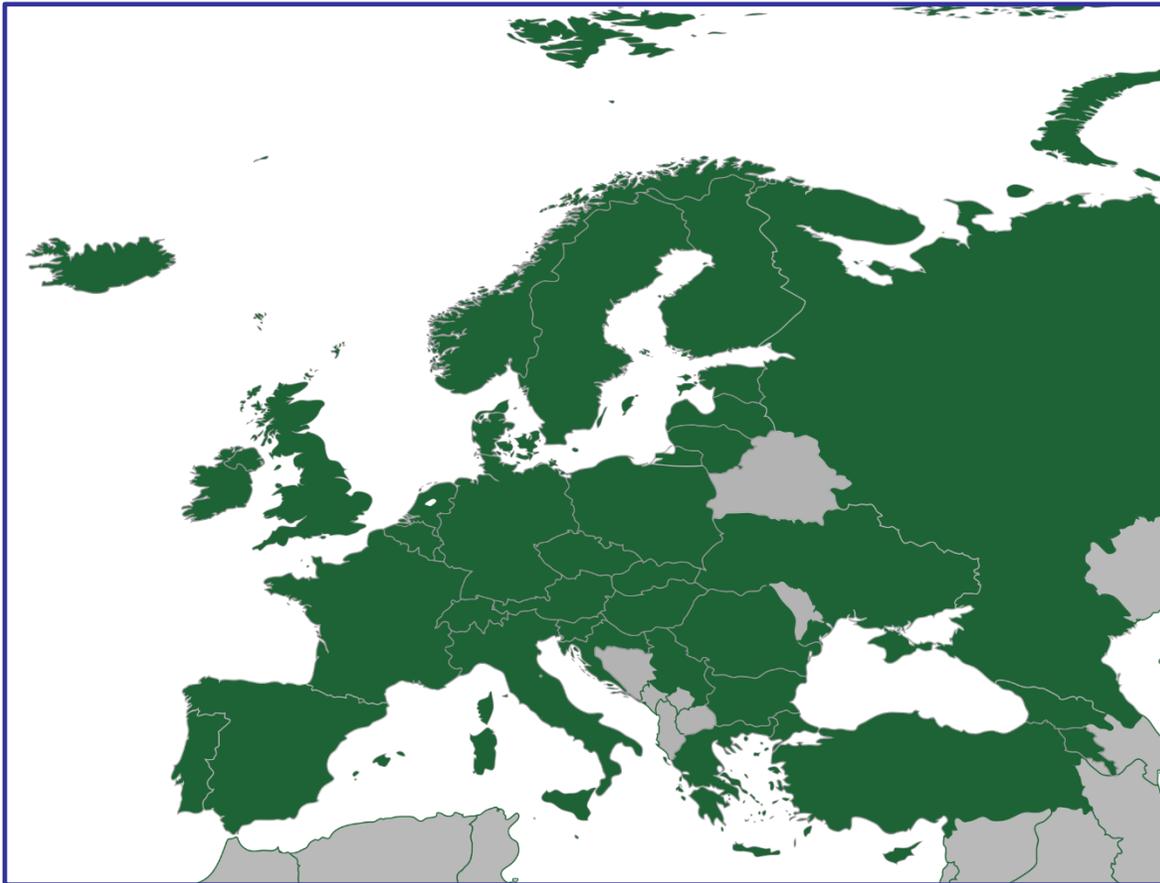


What is Eurachem?

- A network of national and other organisations
- Founded in 1989
- A focus on analytical quality:
 - Traceability of Measurement Results
 - Method Validation
 - Measurement Uncertainty
- Providing guidance documents
- Organising workshops and training events
- Primary audience:
 - Laboratories for analytical measurement
 - Accreditation bodies and related organisations



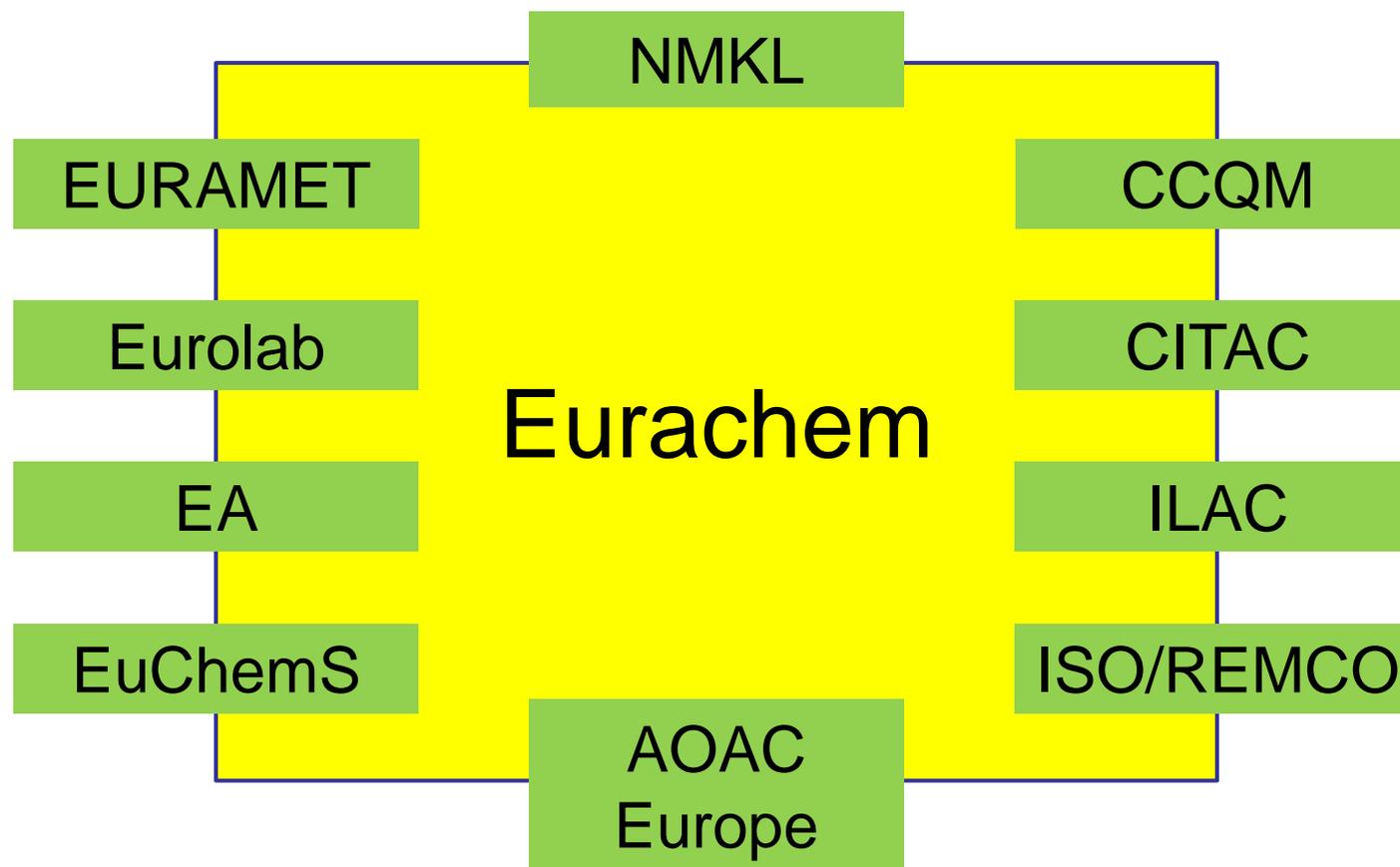
Eurachem membership



- 36 members
- Full membership
 - Countries within EU and EFTA, European Commission
 - EU accession states
 - Countries with Association Agreement with EU
- Associate membership
 - Other European countries with good analytical chemical infrastructure



Major cooperations





Activities

- **Workshops and training**
 - International workshops on analytical QA issues
 - Hosted by members
- **Guidance documents**
 - Prepared by working groups
 - Disseminated via web
 - Translation and publication by members permitted
- **Leaflets**



Currently active working groups

- Education and Training
- Measurement Uncertainty and Traceability
- Method Validation
- Proficiency Testing
- Qualitative Analysis and Testing
- Reference Materials
- Sampling Uncertainty



Workshops since year 2010

- Method Validation (2016, 2019)
- Validation, Traceability and Measurement Uncertainty (2012)
- Measurement Uncertainty (2011, 2017, 2019)
- Data – Quality, Analysis, Integrity (2018)
- Accreditation Issues (2019, 2020, 2021)
- Performance & uncertainty in qualitative chemical analysis (2022)
- Proficiency Testing (2011, 2014, 2017)
- Internal Quality Control (2012)
- Metrology and QA (2010, 2014)
- QA of measurements from Field to Laboratory (2013)
- QA in the university curriculum (2020)
- Decision making (2010)

... as well as Quality Assurance (QA) and training events in conjunction with General Assembly meetings and in collaboration with other organisations



Future Eurachem activities

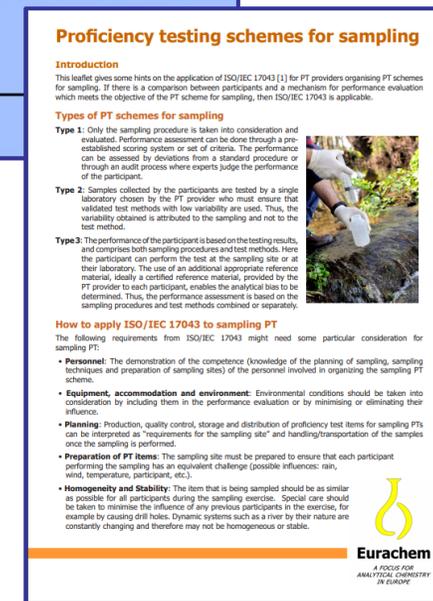
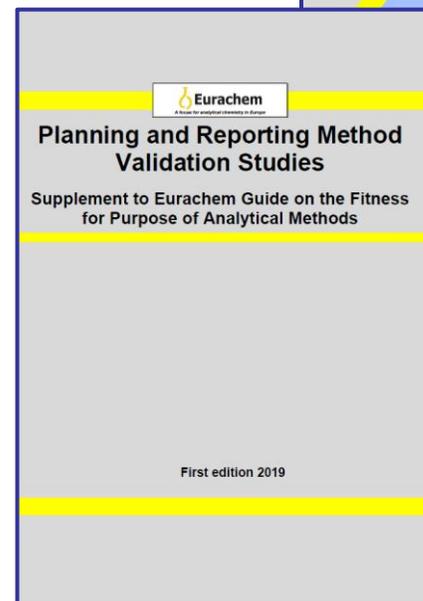
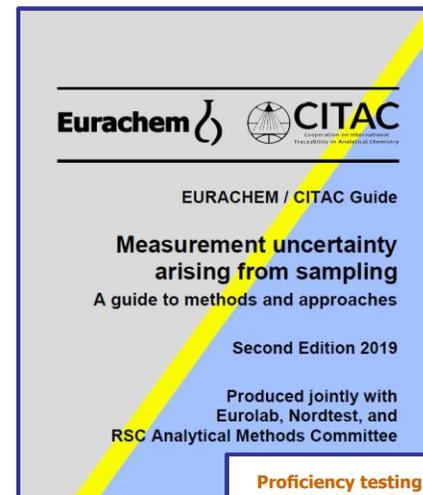
- **Eurachem week 2023**
 - Bern, Switzerland
 - Workshop – 22-23 May
 - General Assembly – 25-26 May
- **10th Eurachem Workshop on Proficiency testing in analytical chemistry, microbiology & laboratory medicine**
 - 25-28 September 2023, Windsor, UK
 - www.eurachem-pt2023.org





Guidance documents Available at eurachem.org

- Eurachem guides
 - Recommendations on good practice
- Supplementary guidance
 - Recommendations on good practice illustrating/amplifying Guide topics
- Information leaflet
 - 2 page document, introducing a Eurachem Guide or providing information on a topic of interest
- Translations available





Guidance documents

New

- Assessment of Performance and Uncertainty in Qualitative Chemical Analysis (1st ed, 2021)
- Use of Uncertainty Information in Compliance Assessment (2nd ed, 2021)
- Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories (3rd ed, 2021)
- Traceability in Chemical Measurement (2nd ed, 2019)
- Measurement Uncertainty Arising from Sampling (2nd ed, 2019)
- Guide to Quality in Analytical Chemistry: An Aid to Accreditation (3rd ed, 2016)

- Setting Target Measurement Uncertainty (2015)
- The Fitness for Purpose of Analytical Methods: A Laboratory Guide to Method Validation and Related Topics (2nd ed, 2014)
- Accreditation for Microbiological Laboratories, 2nd ed (2013)
- Quantifying Uncertainty in Analytical Measurement (3rd ed, 2012)
- Terminology in Analytical Measurement: Introduction to VIM 3 (2011)

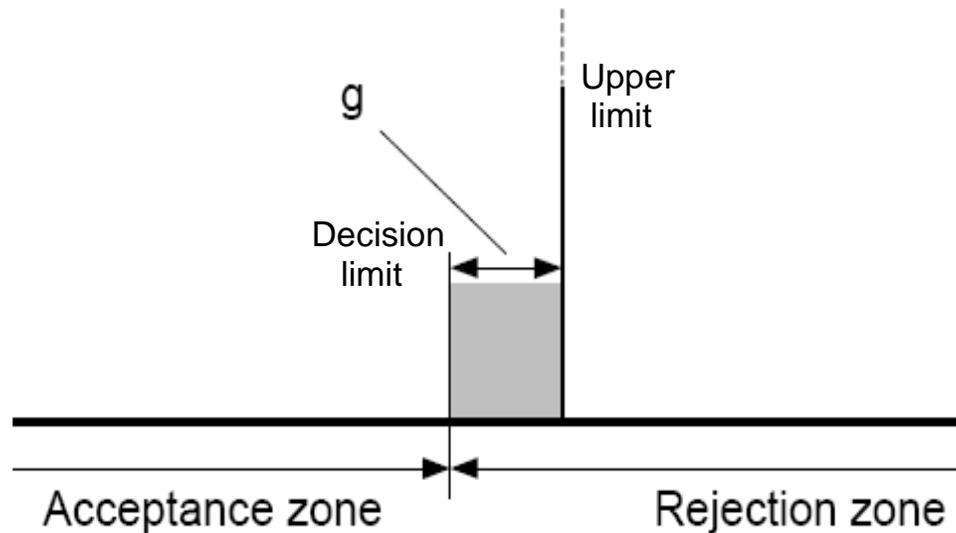




Eurachem information leaflets

Leaflets are short briefing documents on a specific topic intended to inform a wide audience, including laboratory staff, managers and laboratory customers. Examples: traceability, proficiency testing, quality (uncertainty), compliance.

Leaflet introducing the compliance guide



Leaflet introducing the traceability guide



Information leaflets & supplements

- Proficiency testing (PT)
 - PT schemes for sampling (2020)
 - How to investigate poor performance in proficiency testing (2019)
 - Use of surplus Proficiency Test items (2019)
 - Proficiency testing - How much, and how often? (2017)
 - Selecting the right PT scheme for my laboratory (2015)
 - How can PT help my laboratory? (2013)
 - Pre- and post-analytical PT (2009)
 - PT Schemes and other interlaboratory comparisons (2005)





Information leaflets & supplements

- Measurement uncertainty and traceability
 - What is the uncertainty factor? (2021)
 - Use of uncertainty information in compliance assessment (2021)
 - Traceability of Analytical Results (2019)
 - Setting target measurement uncertainty (2018)
 - Treatment of an observed bias (2017)
 - Using repeated measurements to improve the standard uncertainty (2015)
 - Measurement uncertainty for laboratory customers (2000)





Information leaflets & supplements

- Method validation
 - The importance of method validation (2021)
- Accreditation
 - ISO/IEC 17025:2017 - A New Accreditation Standard (2018)
- Terminology
 - You talk, we understand – The way out of the tower of Babel (2016)
- **SUPPLEMENTS TO GUIDES**
 - Blanks in Method Validation (2019)
 - Planning Method Validation Studies (2019)





Current guidance activities

- **Guides in preparation:**
 - Evaluation of measurement uncertainty from in-house precision and trueness tests
- **Guides under revision:**
 - The Selection and Use of Reference Materials (2002)
 - Quality Assurance for R&D and Non-routine Analysis (1998)
 - Terminology in Analytical Measurement (2011)
 - Accreditation for Microbiological Laboratories (2013)
 - The Fitness for Purpose of Analytical Methods: A Laboratory Guide to Method Validation and Related Topics (2014)
 - Guide to Quality in Analytical Chemistry: An Aid to Accreditation (2016)



New activity: Joint Task Group on validation of sampling procedures

- Joint initiative of Method Validation and Uncertainty from Sampling Working Groups
- Aims:
 - establishing practical guidelines for test laboratories and professional samplers
 - best practices for validation/verification of sampling procedures (including sample handling)
 - either for stand-alone sampling activities or as an integrated part of a full measurement process (including *in situ* measurements)
 - joint Eurachem-Eurolab online discussion forum held on 4 May 2022



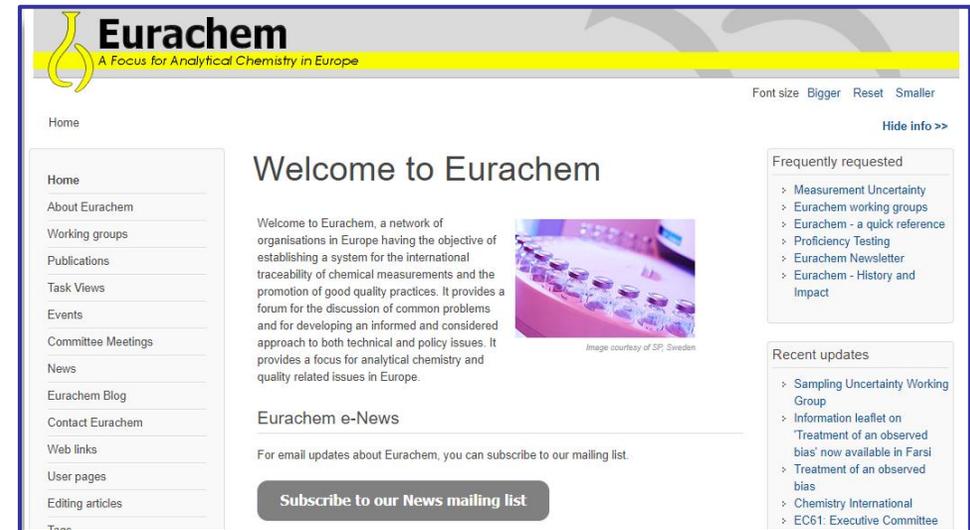
Administration 2020-2022

- Change of Chairs (2-year cycle)
 - Chair: Vicki Barwick (UK)
 - Vice chair: Isabelle Vercauysse (Belgium)
 - Past chair: Marina Patriarca (Italy)
- Secretariat
 - LGC, UK
 - secretariat@eurachem.org
- Website: www.eurachem.org



Keep in touch...

- Website: www.eurachem.org
- LinkedIn: <https://eurachem.org/linkedin>
- Twitter: @EurachemEurope
- YouTube: Search for Eurachem
- Mailing list:
<https://www.eurachem.org/subscribe>





Summary

- Continuing development of guidance
 - Latest guides
 - Assessment of Performance and Uncertainty in Qualitative Chemical Analysis (1st ed, 2021)
 - Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories (3rd ed 2021)
- Continuing development of leaflets & supplements
- International workshops in 2023
 - Eurachem “week” 2023 – Bern, 22-26 May 2023
 - 10th Proficiency Testing Workshop – Windsor, 25-28 September 2023

Eurachem is people

General Assembly, May 2021
Virtual meeting hosted by
Eurachem-Czechia

