Eurachem

a focus for analytical chemistry and quality related issues in Europe

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Introduction

• What is Eurachem

• Eurachem aims and membership

• Eurachem activities
  – Guidance documents
  – Workshops
  – Future activities

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

Eurachem

- EURAMET
- Eurolab
- EA
- EuChemS
- AOAC Europe
- NMKL
- CCQM
- CITAC
- ILAC
- ISO/REMCO
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

- Validation, Traceability and Measurement Uncertainty (2012)
- Data – Quality, Analysis, Integrity (2018)
- Accreditation Issues (2019, 2020, 2021)
- Performance & uncertainty in qualitative chemical analysis (2022)

- 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

- 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)

- 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)
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

• 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:
  – Terminology in Analytical Measurement (2011)
  – Accreditation for Microbiological Laboratories (2013)
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 Vercruysse (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 (1\(^{st}\) ed, 2021)
    - Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories (3\(^{rd}\) ed 2021)
  - Continuing development of leaflets & supplements
  - International workshops in 2023
    - Eurachem “week” 2023 – Bern, 22-26 May 2023
    - 10\(^{th}\) Proficiency Testing Workshop – Windsor, 25-28 September 2023
Eurachem is people

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