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

- EURAMET
- Eurolab
- EA
- EuChemS
- Eurachem
- CCQM
- CITAC
- ILAC
- ISO/REMCO
- AOAC Europe
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)
- 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 2022
  - Tbilisi, Georgia
  - Workshop (16-17 May): QA challenges of measurements from field to laboratory with a focus on ISO/IEC17025: 2017 requirements
  - General Assembly (19-20 May)

- 10th Eurachem Workshop on Proficiency testing in analytical chemistry, microbiology & laboratory medicine
  - 26-29 September 2022, Windsor, UK
  - www.eurachem-pt2022.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

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**Guidance documents**

- 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)
Downloads of guides

- Validation (FFP)
- Measurement uncertainty (QUAM)
- Sampling uncertainty (US)
- Terminology (TAM)
- Quality in analytical chemistry (QAC)
- Accreditation micro (AML)
- Blanks in MV (supp.)
- Compliance assessment (MUC)
- Traceability (TRC)
- Target uncertainty (STMU)
- Selection of PT schemes
- Recovery (IUPAC)
- Selection of RMs
- Planning MV (supp.)
- QA for R&D

Downloads* of Eurachem Guides
Apr 2020 - Mar 2021

*Downloads: HTTP requests ("hits") – all versions

Downloads of information leaflets

- ISO/IEC 17025:2017 changes
- How can PT help?
- PT and other LUs
- Averaging and MU
- Frequency of PT
- MU and compliance
- Meteorological traceability
- Pre- and Post-analytical PT
- Selecting a PT scheme
- Terminology intro
- Bias and MU
- Poor PT performance
- MJ for customers
- Traceability
- Surplus PT materials
- PT for sampling
- MV info

Downloads* of Eurachem Information Leaflets
Apr 2020 - Mar 2021

*Downloads: HTTP requests ("hits") – all versions
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
  – Use of uncertainty information in compliance assessment (2021)
  – Setting target measurement uncertainty (2018)
  – Treatment of an observed bias (2017)
  – Using repeated measurements to improve the standard uncertainty (2015)
  – Traceability of Analytical Results (2005)
  – 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:
  - Expressing uncertainty in qualitative analysis
  - Evaluation of measurement uncertainty from in-house precision and trueness tests
- Guides under revision:
  - 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)
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
- Twitter: @EurachemEurope
- YouTube: Search for Eurachem
- Mailing list: https://www.eurachem.org/subscribe
Summary

- Continuing development of guidance
  - Latest guides
    - Selection, Use and Interpretation of Proficiency Testing (PT) Schemes by Laboratories (3rd ed 2021)
    - Use of uncertainty information in compliance assessment (2nd ed 2021)
- Continuing development of leaflets & supplements
- International workshops in 2022
  - Eurachem “week” 2022 – Tbilisi, 16-20 May 2022
  - 10th Proficiency Testing Workshop – Windsor, 26-29 September 2022