Eurachem
A focus for analytical chemistry in Europe

SCS Swiss Chemical Society
Division of Analytical Sciences

METAS

Eurachem Scientific Workshop 2023

Hanspeter Andres, Ernst Halder

Welcome addresses by

Philippe Richard, Director METAS

Isabelle Vercruysse, Eurachem Chair

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Session Method Validation

chaired by Lorens P. Sibbesen, Lab Quality International

"A ***measurement method*** is a detailed description of a measurement according to one or more measurement principles and to a given measurement method, based on a measurement model and including any calculation to obtain a measurement result (JCGM 200:2008). Methods published either in international, regional or national standards or by reputable technical organizations, in relevant scientific literature, or specified by the manufacturer of equipment are recommended. Non-standard methods, e.g. laboratory-developed methods and standard methods outside their intended scope, need to be validated (Clause 7.2 ISO/IEC 17025:2017). The performance characteristics of validated methods shall be relevant to the customers' needs and ***consistent with specified requirements.***"

Session Method Validation

chaired by Lorens P. Sibbesen, Lab Quality International

Time	**Titel** Speaker
09:15 – 11:00	**ICH Q2(R2) & Q14 Guidelines and impact on validation in OMCL Laboratories (ISO/IEC 17025:2017)** Massimiliano Conti, Swissmedic
	Correct choice and application of certified reference materials in method validation in food analysis Gisela Umbricht, METAS
	Non-Target Methods: Challenges and Perspectives Marios Kostakis, National and Kapodistrian University of Athens
	BCR sequential extraction procedure and its application to mine tailings and fly ashes Lyudmila Angelova University of Chemical Technology and Metallurgy, Bulgaria
11:00 – 11:30	**Panel discussion** all

Next

Poster Session or Guided laboratory tour (11:30 – 12:30)

Lunch (12:30 – 13:15)

Session Equipment and Software validation

chaired by Christoph Jansen, Mettler Toledo Analytical

“The laboratory needs to verify that all **equipment conforms to specified requirements** (Clause 6.4 ISO/IEC 17025:2017). Laboratory management systems used to collect, process, record, report, store or retrieve of data shall be **validated for functionality** (Clause 7.11 ISO/IEC 17025:2017). All changes, including laboratory software configuration or modifications to commercial off-the-shelf software must be authorised, documented and validated before implementation. When the laboratory management system is managed and maintained off-site or through an external provider, the laboratory needs to ensure compliance with requirements”

Session Equipment and Software validation

chaired by Christoph Jansen, Mettler Toledo Analytical

Time	**Titel** Speaker
13:15 – 15:00	**Lifecycle approaches for establishing 'fitness for use' of analytical instruments and systems in order to support and maintain 'fitness for purpose' of analytical procedures** Christopher Burgess, visiting professor
	Digital measurement and control technology in the analytical sciences and its quality assurance Ernst Halder, Eurachem-CH
	Ion mobility as additional Metrological Value – the Invaluable Benefit of another Dimension in Hybrid Mass Spectrometry Jens Jacobson, Waters™
	Need for the validation of on-site test kits, portable devices and continuous measuring devices for water quality monitoring Nathalie Guigues, LNE
15:00 – 15:30	**Panel discussion** all

Next

Coffee Break and networking (15:30 – 16:00)

Poster Session or Guided laboratory tour (16:00 – 17:00)

Evening Program

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Welcome to 2nd day by

Hanspeter Andres, Vice-Director METAS

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Session Internal and external quality controls

chaired by Hanspeter Andres, METAS

"A laboratory shall monitor the ***validity of its results*** (Clause 7.7 ISO/IEC 17025:2017). The monitoring includes ***internal quality controls***, e.g. use of reference materials, quality control materials or working standards, calibration and functional test of measurement equipment and where available by ***external quality assessments***, such as ***participation in proficiency testings schemes or other interlaboratory comparisons***. The data from these monitoring activities shall be analysed, used to control and, if applicable, improve laboratory's activities. Depending on the field of application, e.g. laboratory medicine, pharma and food security, the terminology used for these monitoring activities varies."

Session Internal and external quality controls

chaired by Hanspeter Andres, METAS

Time	**Titel** Speaker
09:15 – 11:00	**Laboratory medicine – mandatory quality controls are self-evident** Katharina Rentsch, University Hospital Basel
	The Proficiency Testing System of the Organisation for the Prohibition of Chemical Weapons Andreas Schorer, Laboratory Spiez
	Ensuring Validity of Examination Results: What is new in the new ISO 15189 Kyriacos C. Tsimillis, Pancyprian Union of Chemists
	Comparison of standardized and novel methods for oil spill source identification in real spill scenarios reproduced in proficiency tests Ana Catarina Rocha, Instituto Hidrográfico, Lisbon
11:00 – 11:30	**Panel discussion** all

Next

Poster Session or Guided laboratory tour (11:30 – 12:15)

Lunch (12:15 – 13:15)

Session Uncertainty and Traceability of results

chaired by Evaldas Naujalis, FTMC

"When evaluating uncertainty, ***all contributions*** that are of significance, ***including*** those arising from ***sampling***, shall be taken into account using appropriate methods of analysis (Clause 7.6 ISO/IEC 17025:2017). Uncertainty characterises the dispersion of a measurement result (JCGM 200:2008) and needs to be considered in compliance assessments. Traceability, more precisely metrological traceability, is defined as the property of a measurement result to be related to a measurement reference through an unbroken chain of calibrations, each contributing to the measurement uncertainty. The preferred ***measurement reference*** is the international system of units (***SI)***. Where traceability to the SI is not yet feasible, other internationally agreed references can be used."

Session Uncertainty and Traceability of results

chaired by Evaldas Naujalis, FTMC

Time	**Titel** Speaker
13:15 – 15:00	**Measurement uncertainty from sampling and its roll in validation of measurement procedures** Mike Ramsey, Prof. em. University of Sussex
	The Importance of Traceability or how to Achieve Comparability of Chemical Measurements Markus Obkircher, Merck Group
	Measurement uncertainty evaluation with numerical methods Stephen Ellison, LGC group
	The impact of input data on the evaluation of the measurement uncertainty: A case study Ricardo Bettencourt da Silva, University of Lisbon
15:00 – 15:30	**Panel discussion** all

Next

Coffee break and networking (15:30 – 16:00)

End of workshop

Online feedback to workshop

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Thank you very much for your attention