



Quality Assurance Challenges of Measurements from Field to Laboratory with a focus on ISO/IEC 17025:2017 Requirements

PT Breakout Session
Convenor: Brian Brookman

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PT Breakout Session - Questions

1. Finding a suitable PT Scheme

- a. What sources are available?
- b. What information do you look for when selecting an appropriate PT scheme?
- c. What barriers are there for finding the most appropriate scheme in which to participate?
- d. In what areas are there gaps in the market for suitably available PT schemes?

2. Alternatives to a PT Scheme

- a. What alternative solutions to PT are being used to meet the requirement in ISO/IEC 17025?
- b. What are the limitations of the alternative solutions?
- c. How do you ensure the quality of alternative solutions?
- d. Is there sufficient guidance on alternative solutions?

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Finding a suitable PT scheme

- What sources are available?
 - EPTIS
 - Lists provided by accreditation bodies
 - PT Provider lists, catalogues and websites
 - Lists or recommendations from regulators
 - Social media posts
 - Recommendations from colleagues
 - Information provided at training sessions

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Finding a suitable PT scheme

- What information do you look for when selecting an appropriate PT scheme?
 - Traceability
 - Matrices
 - Uncertainty
 - Concentration levels
 - Range
 - Prices
 - Parameters
 - Frequency
 - Location – shipment issues
 - Accreditation status
 - Evaluation methods

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Finding a suitable PT scheme

- What barriers are there for finding the most appropriate scheme in which to participate?
 - Prices
 - Appropriate matrix match
 - Shipment issues, customs
 - Homogeneity
 - Suitable PT provider
 - Measurement definition
 - Appropriate concentration levels
 - Deadlines
 - Timing i.e. when it is needed
 - Number of participants

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Finding a suitable PT scheme

- In what areas are there gaps in the market for suitably available PT schemes?
 - Soil organics based on preparation
 - Radionuclides
 - Nanoparticles
 - More sampling PT schemes
 - Trace amounts of heavy metals e.g. Hg
 - Qualitative PTs
 - Soil physical properties
 - Biomaterials for clinical applications
 - Morphology of clinical labs

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Alternatives to a PT scheme

- What alternative solutions to PT are being used to meet the requirement in ISO/IEC 17025?
 - Bilateral Comparisons
 - Collaborative studies
 - Two or more different methods
 - CRMs/RMs
 - Comparative measurements between analysts
 - In-house prepared QCs
 - Spiked samples

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Alternatives to a PT scheme

- What are the limitations of the alternative solutions?
 - ISO 17025 talks about comparison between labs – not internal comparisons
 - Matrix issues for a lab to organise an ILC
 - Problems attributing the assigned value and SDPA
 - How to ensure the quality of the alternatives
 - Instability of matrices
 - Competency of interpretation
 - Push from ABs to find alternatives
 - Lack of RMs for use in area of nanoparticles and radionuclides

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Alternatives to a PT scheme

- How do you ensure the quality of alternative solutions?
 - Use of certificate data
 - Distribution of CRMs between participants
 - Compare with other QC lab data
 - Reference lab comparison
 - Ensure accuracy for in-house spiked QC and check for MU evaluation
 - Internal audits
 - Have a fixed fit for purpose SDPA
 - Setting specifications to be obtained

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Alternatives to a PT scheme

- Is there sufficient guidance on alternative solutions?
 - No
 - ISO 5725 series
 - EA 4/21
 - ASTM e691 - Standard Practice for Conducting an Interlaboratory Study to Determine the Precision of a Test Method*
 - *is a collaborative trial (see precision) an alternative solution??
 - ISO Guide 80- guidance for in-house preparation of QC
 - EURACHEM PT Guide – limited guidance

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Other PT Issues?

- MU in PT
 - Important for labs to report it
 - Some ABs encourage/insist on it
 - Not all PT providers allow it to be reported
 - Some PT providers find very low reporting of MUs
 - Better guidance may be needed

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Thank you for your attention

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