

Workshop feedback on the 9th International Workshop for Proficiency Testing in Analytical Chemistry, Microbiology and Laboratory Medicine



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Background

- Portorož, Slovenia; 9- 12 October 2017
 - Organized by Eurachem, EQALM, CITAC
 - Eurachem - a network of organisations in Europe with 32 member countries
 - Hosts this workshop every third year in Europe
 - 2017 – 199 participants from 53 different countries around the world
 - Focus is on PT providers, accreditation bodies and PT participants
- Aim is:
- To keep abreast of new developments in proficiency testing schemes
 - To discuss common problems
 - To establish a system for international traceability of chemical measurements
 - To promote good quality practices

Key topics

- The importance of interpretative PT schemes
- Changes to PTs in developing countries over the last ten years
- Traditional vs virtual PT items
- Implementing ISO/IEC 17043 for sampling PTs
- Experience of the implementation of EA-4/18
- Use and treatment of measurement uncertainty in PT schemes

Training topics:

- Basic PT statistics
- Advanced PT statistical techniques
- PT language and PT reports
- Graphical PT tools in ISO 13528

Training session 1

Training Session 1: PT Language and PT reports (Ulf Örnemark)

- Different terms and definitions used in different standards
- The aim was to see if there as a common understanding of some of the specific terms.
- Useful tools were provided that can be used as a guidance to determine the meaning of some of the terms.
 - Online Browsing platform - www.iso.org/obp/ui/
 - Documents on : www.eurachem.org
- Very useful and informative session that made one aware that terms and definitions can be misleading
- The importance of the standardization of these terms is important since there is not a common understanding of terms.

Training session 3

Training Session 3 on Basic Statistics (Michael Koch, Piotr Robouch)

- Variations are always present and if they are not present, it simply means that the resolution is not high enough.
- Basic understanding of statistics with the focus on PT schemes e.g. variations, histograms, different distributions, sample populations, the arithmetic mean, median, mode, variance of a population, variance of a sample, standard deviation of the mean, relative standard deviation, skewness, Kurtosis, probabilities and different ways how to handle outliers were discussed
- Homogeneity and stability were further discussed
- A useful tool to test for homogeneity was provided

Workshop Discussions: Changes to PT schemes over the last 10 years

- People from Africa, Asia, Australia, New Zealand, Europe, North America and South America.
- The objective of the group was to consider how PT schemes have progressed in developing countries during the last ten years and what is needed to support further development in the next ten years.
- **Availability of PT's**
- An increase in demand from Iran, Middle East, Asia and Africa although sometime also depending on specific regulation.
- Schemes are available but not always local.
- Still gaps in some of the fields.

Workshop Discussions: Changes to PT schemes over the last 10 years

- Sometime is less available because of country's regulation e.g. customs. There is a larger availability in general although not always affordable, especially for developing countries. Singapore and Thailand provide a lot of local Proficiency testing schemes and reference materials.
- Sometime is less available because of country's regulation e.g. customs.
- There is a larger availability in general although not always affordable, especially for developing countries.
- **Participation of PT's**
- In general there is an increase in participation.

Workshop Discussions: Changes to PT schemes over the last 10 years

- **Main drivers of PT's**
- Regulation, trade, PT 'being mandatory, Government sponsoring of PT schemes and Change in regulations, development of a new analytical method and to demonstrate quality of results to customers.
- **Awareness of PT's**
- There an improvement because of educational value, social network, increasing business and communication between users and PT providers. There as a decline in awareness because of a lack of educational value, a fear to failure, poor managerial commitment and pressure from regulations.

Workshop Discussions: Changes to PT schemes over the last 10 years



Ongoing challenges of PT's

- Custom regulations
- Costs
- Local limits of schemes
- Increasing of management support
- Support from government
- Sharing of information
- Training of PT providers
- Sharing of local logistic means
- Training of labs
- More cooperation between the international PT provider and the local PTP

Workshop Discussions: Traditional vs Virtual PT schemes

- Very informative and innovative discussion.
- Very positive feedback came out from the participants
- Can be a solution in all analyses where images have to be evaluated, including MS chromatograms, microbiology, cytology and forensics.
- Also for fiber analyses, metals in residues in oil and fingerprints, photographs and videos that are part of a test and surface measurements or where tests are rare and expensive.
- It has an advantage for educational purposes
- It will be more accessible for clients.

Workshop Discussions: Traditional vs Virtual PT schemes

- The advantage of a virtual schemes is that more clients can easily be served
- The same sample can be assessed by many people.
- The quality can be re-assessed and it is a major factor in reducing work for labs that have to prepare the samples.
- The disadvantages are that the samples are not real
- There can be IT issues, the entire measurement process is not covered
- It is not feasible for all type of samples and color might be an issue.
- In general the participant were happy with this new approach and a lot of opportunities can be explored in this field. However there is a need to build experience in this field and virtual PT's can definitively be complementary to real PT's.

Poster Presentation

- An abstract on “Proficiency Testing Scheme for Chemical Analysis of Water in Africa”[P-12] was also submitted to the Scientific Committee of the workshop
- The abstract was accepted by the Scientific Committee (SC) as a poster presentation and was included in the Book of Abstracts, as a special publication of the workshop.
- It will be further be considered for publication as a full paper in an issue of Accreditation and Quality assurance
- During the 2017 the workshop, 57 posters were accepted.
- The SADC poster obtained five awards from the Scientific Committee with an overall 3rd price.

Poster Presentation

Poster

Awarded to Merylinda Conradie, Michael Koch,
Donald Masuku