

SADCWaterLab collaborates with BOBS on the revamped microbiology PT Scheme

Background

During the PT Evaluation Workshop held in Mauritius in November 2011 it was decided not to send out samples for a microbiology PT unless there is a major step forward in the field of temperature controlling the samples and ensuring that they reach their destinations within the necessary time. It turned out that using temperature sensitive samples like the liquid samples prepared by Uganda National Bureau of Standards (UNBS), was not feasible for the region. Although the PT provider UNBS has made a great effort and sample preparation was satisfactory the problems encountered with logistics could not be overcome. In a final discussion in November 2012 with the SADC MET secretariat, the PT provider (UNBS) and PTB it became clear that the aim to transfer the German model of providing a PT was very ambitious and it was agreed to not take it further this way. However, still the need for an affordable PT within the region remains. To avoid the problems with unstable materials faced up to present, it was decided to focus on more stable materials than the liquid and very natural samples used so far. As it was known that Botswana Bureau of Standards (BOBS) offers a PT in the field of microbiology, it was agreed to contact BOBS and to discuss whether there was a possibility to expand their national PT to the African region.

After discussions between the BOBS management, BOBS laboratory staff, SADC MET Secretariat and PTB it was agreed to expand the existing BOBS National Quality Control Sample Exchange Scheme (NQCSES) to the African region in cooperation with the SADC MET secretariat and the SADCWaterLab Association. It was further agreed that the laboratories that participated in the SADC MET water PT will be accommodated in the next PT round that BOBS is going to offer in August/September 2013. There will be more parameters than in the former PT carried out by UNBS and the costs will therefore increase from 100 to 150USD. The participating laboratories will have to pay in advance in order to ensure a timely purchase of the PT material. After an evaluation workshop envisaged for 11-15 November 2013, the SADCWaterLab Executive Committee should discuss the way forward concerning increasing the number of rounds (up to three per year) and increasing the costs.

The Revamped Water Microbiology PT scheme

The revamped PT scheme will be operated by BOBS in which competence of participating laboratories will be monitored through testing of selected materials at regular intervals during the course of each year.



Microbiology Laboratory Staff at BOBS headed by Pinkie Malebe, third from left

Proficiency tests (PTs) are an integral part of laboratory quality control procedures. It is an objective way through which a laboratory can have its performance assessed on a continuing basis by an independent body. Clause 5.9 of the ISO/IEC 17025: 2009 "General requirements for the competence of testing and calibration laboratories" requires a laboratory to participate in regular inter-laboratory comparison or proficiency testing as a means of assuring the quality of results.

Essentially, a Proficiency Testing scheme checks the competence of participating laboratories by evaluation of the data they obtain on analysing centrally distributed materials. Participation in the scheme is normally confidential in that the laboratories are identified by codes.

The Objectives of this scheme are:

- Promotion of the technical competence among microbiology testing laboratories.
- Provision of a regular, objective and independent assessment of the performance of a laboratory's results under routine conditions.



Benefits of the scheme to the laboratories would include:

- Participating laboratory is provided with a regular, independent and external assessment of its performance.
- The laboratory has a means of demonstrating its data quality to third parties, e.g. customers, regulatory agencies or organizations providing recognition.
- The laboratory is able to regularly compare its performance with that of peer laboratories.
- If the test method is specified, the study can provide information on the performance characteristics of analytical methods.

Samples

The water sample(s) will be supplied as freeze dried or gel lenticules in vials containing any or a combination of the micro-organisms listed below. The laboratory has an option to choose any one or more of the parameters it wishes to test from the list below.

Parameters under test include:

- Coliform bacteria
- *Escherichia coli*
- Sulphite Reducing *Clostridium perfringens*
- *Pseudomonas aeruginosa*
- Intestinal enterococci and
- Aerobic microorganisms or standard plate count at 22°C and 37°C.

Samples supplied: Freeze-dried or gel lenticules in a vial. Detailed information on reconstituting the water sample will be given.

The Proficiency Testing Scheme Process

The PT Scheme process will follow the work plan below:

Activity	Responsible	Proposed Date
Announcement/ Invitations to all former SADC MET participants to participate	BOBS	30th April 2013
Registration of participating labs	BOBS	31 st May 2013
Payment by the participating labs to BOBS (150USD)	BOBS	Mid June 2013
Purchase of PT material	BOBS	Until beginning July 2013
Dispatch of samples and reporting template with unique identification of participating labs	BOBS	August 2013 (the earlier the better)
Receiving of results from participating labs sent back to BOBS	Participating labs	Three weeks after shipment date, latest by end of September 2013
Analysis and evaluation of the results; compilation of the evaluation report	BOBS / Dr K. Luden (PT Facilitator)	End of October, beginning November 2013
Presentation of final results at the evaluation workshop (parallel workshop on chemical parameters)	BOBS	During week 11-15 November 2013

PT Provider Contact details

Any specific details required about the scheme can be availed through the PT Provider on the following contact details:

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