



APLAC T097 Proficiency Testing Programme
“Food Microbiology Quantitative Scheme”

APLAC Proficiency Testing Program

Food Microbiology Quantitative Scheme

1. Objective

This program is designed to help participating labs to demonstrate their competency on the food microbiology testing in different economies, to create opportunities for laboratories to improve, and at last to try to establish a kind of equivalence.

2. Organization and Responsibilities

This program was organized by China National Accreditation Service for Conformity Assessment (CNAS), with Analysis Capability Assessment System (ACAS) of Chinese Academy of Inspection and Quarantine (CAIQ) as the collaborator, under the auspices of Asia Pacific Laboratory Accreditation Cooperation (APLAC).

During this proficiency testing program, CNAS will be responsible for proposing this program to be approved by APLAC Proficiency Testing Committee, inviting participants, circulating the draft report and final report to participants and acting as a contact point among APLAC, participating accreditation bodies / participants, who will be responsible for preparing, packaging and dispatching samples, handling participants' queries, receiving samples, evaluation of the receipt status for the samples, statistical analysis, and issuing interim and final reports.

3. Points of contacts

The contact details are given below:

Coordinator of organising accreditation body CNAS:

Name: He Ping

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Coordinator of the proficiency testing provider in CAIQ:

Name: Liu Hanxia (Ph.D) Lu Xing-an (Prof.)

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Contact of the proficiency testing provider in CAIQ:

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4. Selection of Participants

APLAC members as well as other non-APLAC members will be invited to participate in the program. Invitations will be sent to all APLAC members and other accreditation bodies. Participating accreditation bodies will be asked to nominate laboratories to participate and indicate the accreditation status of the nominated laboratories for the test. Each accreditation body of APLAC members is invited to nominate up to a maximum of 4 laboratories. Each non-APLAC economy is invited to nominate up to a maximum of 2 laboratories to participate. The participants are required to conform to the relative biosafety standards.

5. Description of PTIs

The samples consist of freeze-dried bacteria and cryoprotectants in small glass vials, which are similar in nature to the food routinely tested by participating laboratories.

6. Properties Measured for Comparison and Requirement

Three quantitative items: Aerobic plate count, *Staphylococcus aureus*, Sulphite-reducing *Clostridium*. Participants should use Direct Plate Count method instead of MPN method.

7. Homogeneity & Stability Study

12 samples will be selected randomly from the prepared bottles of samples and analyzed in duplicate for determining homogeneity in accordance with the recommendation stipulated in ISO 13528. Three samples will be taken randomly and be analyzed in duplicate at temperatures below 30 °C and elevated temperature (about 40 °C) for monitoring the stability between sample dispatch

and after submission of results.

8. Assigned Value

All counting results will be transferred in logarithm. The simple robust statistics will be applied to determine the assigned values. That`s to say, the median of the participants will be assigned values.

9. Evaluation of the Performance

The performance will be evaluated against Z-scores

$$z = \frac{x_i - X}{\sigma}$$

$|z| \leq 2.0$ -----satisfactory

$2.0 < |z| < 3.0$ -----questionable

$|z| \geq 3.0$ -----unsatisfactory

10. Reporting to the Participants

After the results returning to CAIQ, interim report will be prepared and distributed. With the approval of APLAC, final report will be distributed.

11. Confidentially

Participants in the reports will only be indicated by the lab codes.

12. Program Schedule

| Items | Period | Responsible |
|---------------------------------|-----------------------|-------------|
| Invitation of participants | Sep. 2014 – Nov. 2014 | CNAS |
| Preparation of samples | Oct. 2014 - Nov. 2014 | CAIQ |
| Dispatch of Samples | Dec. 2014 | CAIQ |
| Statistical analysis of results | Feb. 2015 | CNAS/CAIQ |
| Interim report | Feb. 2015 | CNAS/CAIQ |
| Drafting final report | March 2015 | CNAS/CAIQ |

13. Reference

- [1] ISO/IEC 17043:2010, Conformity assessment - General requirements for proficiency testing.
- [2] APLAC PT002-2003, Testing Interlaboratory Comparisons.

- [3] ISO 13528:2005, Statistical methods for use in proficiency testing by interlaboratory comparisons.