APLAC Proficiency Testing Program
APLAC PT T099 - DIESEL FUEL

1. Objective

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

2. Organization and Responsibilities

This program is being organized by National Accreditation Board for Testing and Calibration Laboratories (NABL) with support of accredited PT Provider M/s.Bharat Petroleum Corporation Limited (BPCL), under the auspices of Asia Pacific Laboratory Accreditation Cooperation (APLAC).

NABL will be responsible for conducting this program (approved by APLAC Proficiency Testing Committee). NABL will be inviting participants, circulating the draft report and final report to participants and acting as a contact point among APLAC participating accreditation bodies. NABL and BPCL (PT Provider) 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.

Nominating AB's are responsible for Dispatch of samples to participating labs within their economy.

3. Points of contacts

The contact details are given below:
Coordinator of organising accreditation body (NABL):
Name: Anita Rani
Address: National Accreditation Board for Testing and Calibration Laboratories
NABL House, Plot- 45, Sector 44,
Gurgaon - 122002, Haryana
(Near HUDA City Centre Metro Station, Behind Fortis Hospital)
Tel. no.: 91-124-4679700 (30 lines) ; Fax: 91-124-4679799
Email : anita@nabl-india.org

Coordinator of the proficiency testing provider in BPCL:
Name: Deepak M Tawade
Address: QA Laboratory, Bharat Petroleum Corporation Limited
Sewree A Installation, Sewree Fort Road, Sewree (E), Mumbai
Post Code: 400015
E-mail: tawadedm@bharatpetroleum.in
Tel:(+91) 22 24176384

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. Preferences are to be given to the accredited laboratories. The participants are required to conform to the relative safety standards.

5. Description of PT items

The samples consist of diesel fuel in aluminium container, which are similar in nature to the diesel fuel routinely tested by participating laboratories.

6. Properties Measured for Comparison and Requirement

The following properties / quantities will be measured and compared in this proficiency testing as per the specified methods.

Test Parameter	**Test Method**
Density*	ASTM D 1298/ASTM D 4052
Distillation	ASTM D 86
Sulphur *	ASTM D 2622/ASTM D4294/ASTM D5453
Kinematic Viscosity at 40^0C*	ASTM D 445/ASTM D 7042
Pour Point	ASTM D97
Flash Point	ASTM D56

*Laboratories may use any of the mentioned test method and performance would be evaluated separately for all the test methods.

7. Homogeneity &Stability Study

10 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: 2015. Three samples will be taken randomly and be analyzed in duplicate for monitoring the stability between sample dispatch and after submission of results.

8. Assigned Value and Standard Deviation for Proficiency Assessment

The simple robust statistics (Algorithm A, as per C.3 of ISO 13528:2015) will be applied to determine the assigned values.
The SDPA will be derived as per clause 8.5 of ISO 13528:2015 i.e. with information on repeatability and reproducibility of the standard method. The SDPA $\pm pt$ is calculated as follows;

$\pm_R$ is the reproducibility standard deviation, and

$\pm_r$ is the repeatability standard deviation,

Standard deviation for proficiency assessment (σpt) shall be calculated using this information, as follows: $\pm pt = \sqrt{\pm_R^2 - \pm_r^2 (1 - 1/m)}$

where m is the number of replicate measurements each participant is to perform in a round of the proficiency testing scheme. For this PT scheme, m= 1.

9. Evaluation of the Performance

The performance will be evaluated against Z-scores

$$Z_i = \frac{x_i - x_{pt}}{\pm \text{pt}}$$

Where
x_{pt} is the assigned value, and
σ_{pt} is the standard deviation for proficiency assessment.

— A result that gives $|z| \leq 2,0$ is considered to be acceptable.
— A result that gives $2,0 < |z| < 3,0$ is considered to give a warning signal.
— A result that gives $|z| \geq 3,0$ is considered to be unacceptable (or action signal).

10. Reporting to the Participants

After the results returning to NABL, 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

Stages	Period
Invitation of participants	01.12.15 – 01.01.16
Preparation of samples	
Dispatch of Samples	25.01.16
Statistical analysis of results	March – April, 2016
Interim report	15.04.16
Drafting final report	15.08.16

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