



**PROFICIENCY TESTING
FREQUENCY BENCHMARKS**

PURPOSE

This document proposes benchmarks for the frequency of proficiency testing participation for the major sub-disciplines of the scopes of accreditation for testing and calibration.

AUTHORSHIP

This publication has been written by the APLAC Proficiency Testing Committee.

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FURTHER INFORMATION

For further information about this publication, contact the APLAC Secretariat, who may be contacted at:

NATA
Level 1
675 Victoria Street
Abbotsford VIC 3067
Australia
Tel: +61 3 9274 8200
Fax: +61 3 9421 0887
Email: aplac@nata.com.au
Website: www.aplac.org

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BACKGROUND

The APLAC proficiency testing policy is stated in APLAC MR 001 Procedures for Establishing and Maintaining the APLAC Mutual Recognition Arrangement Amongst Accreditation Bodies. The APLAC proficiency testing requirements are based on ILAC-P9:2005 ILAC Policy for Participation in National and International Proficiency Testing Activities.

As stated in ILAC-P9 the recommended minimum amount of appropriate PT activities per laboratory is:

- one activity prior to gaining accreditation;
- one activity relating to each major sub-discipline of a laboratory’s scope of accreditation within four years.

APLAC recognises that there is currently significant variability in the frequency of programs for major sub-disciplines as required by each APLAC member’s PT policy. This guidance document proposes benchmark proficiency testing participation frequencies for some of the common major sub-disciplines in the scopes of accreditation for testing and calibration laboratories. It also suggests accreditation bodies having a policy to promote the achievement of these benchmark frequencies wherever possible. This information is intended to provide guidance to both accreditation bodies and APLAC evaluators in assessing the adequacy of a proficiency testing policy to establish and maintain the APLAC MRA. These suggested benchmarks are not requirements and do not override each individual accreditation body’s proficiency testing policy.

The benchmark frequencies of PT participation have been established as a result of a survey of accreditation bodies in 2005, and reflect those frequencies which are currently commonly achieved by APLAC members and their accredited laboratories. These benchmark frequencies will be updated following a review of planned future surveys carried out by the APLAC PT Committee.

Testing

Major Sub-Discipline	Benchmark Frequency of PT participation
Medical (each field)	10/year
Forensics	1/ year
Veterinary Medicine	1/year
Chemical – Environmental	2/year
Chemical – Mineral analysis	2/year
Chemical – other	1/year
Biological	2/year
Electrical	1/two years
Building Products	1/two years
Non-destructive testing	1/two years
Construction Materials	1/two years
Mechanical	1/two years
Toy & Children’s Products	1/two years

Calibration

Major Sub-Discipline	Benchmark Frequency of PT participation
Accelerometry	1/two years
Acoustics	1/two years
Density and viscosity	1/two years
Dimensional	1/two years
Electrical	1/two years
Flow	1/two years
Force and Torque	1/two years
Hardness	1/two years
Humidity	1/two years
Ionising radiation	1/two years
Magnetism	1/two years
Mass	1/two years
Optical	1/two years
Pressure & vacuum	1/two years
Temperature	1/two years
Time & Frequency	1/two years
Volume	1/two years

BENCHMARKING PT FREQUENCIES

The APLAC PT Committee has proposed for guidance purposes a benchmark rather than minimum frequencies. Note that in all cases for testing and calibration this benchmark exceeds the minimum requirements as stated in ILAC-P9. The benchmark participation guidelines for each major sub-discipline are however, considered to be reasonable expectations for each accreditation body to achieve as PT becomes available for laboratories in that economy. The benchmark for each sub-discipline may be used by the accreditation body to compare its own policy with what is currently regarded as the norm.

All signatories to the APLAC MRA should be benchmarking themselves against the other signatories in all areas of their operation, including PT. The PT policy should strive to meet the benchmarks set by others where this is possible.

The benchmarks are thus tools for both the accreditation body and the evaluation teams to assess the effectiveness of a PT policy.

GUIDANCE FOR ACCREDITATION BODY PT POLICY

The accreditation body's PT policy should focus on more than just meeting the requirements as stated in ILAC-P9. The accreditation body should ensure participation when PT is available, appropriate and at a frequency that reflects best practices and/or best local norms. When determining the appropriate frequency of PT, the accreditation body should take into account the test range, method capabilities and regulatory limits, where available.

Furthermore, accreditation bodies should have a policy (and/or specific PT policies where appropriate) to update their specific program requirements as PT schemes

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become available. This policy should promote PT participation requirements that are consistent with best practices for laboratories in that economy or, if possible, with the APLAC benchmark frequencies in that field of testing or calibration, even if these exceed the minimum prescribed by ILAC.

It should be noted that even within a sub-discipline, there may be some PT activities that warrant a higher frequency.

Accreditation bodies may wish to consider a risk based approach to determine appropriate PT frequencies.

Overall the accreditation body should ensure that their PT policy:

- (i) meets the ILAC-P9 requirements; and
- (ii) promotes the minimum to be exceeded when cost, suitability and availability allows.

Where the output from the implementation of the policy is significantly below the accepted benchmark (e.g. less than half), the accreditation body should justify its position or demonstrate how equivalent confidence is built in other ways.