



**CYPRUS ACCREDITATION BODY
CYSAB**

**Proficiency Testing
and Inter-Laboratory
Comparisons**

**CYPRUS ORGANIZATION
FOR THE PROMOTION OF QUALITY (CYS)**

Why do we need comparisons?

Measurements in a laboratory should be consistent. This could be illustrated through repeatability and intra-laboratory reproducibility tests; however, the measurements may still significantly deviate from the "true value", due to bias of the laboratory related to methods and techniques and other internal factors. To this end, the laboratory needs to participate in comparisons, namely Proficiency Testing Schemes (PTs) and Inter-Laboratory Comparisons (ILCs). The following definitions apply:

PT: Determination of laboratory testing performance by means of inter-laboratory test comparisons.

ILC: Organization, performance and evaluation of tests on the same or similar test items by two or more laboratories in accordance with predetermined conditions.

Criteria for the acceptance

of PT schemes/providers

A basic requirement for PT providers is their compliance with the requirements of ISO/IEC Guide 43-1:1997 and of ILAC-G13:2000. This compliance can be illustrated by the accreditation status; if this is not the case, the laboratory seeks other adequate evidence. In case PTs are not available, bilateral comparisons among laboratories, in Cyprus or abroad, could be accepted, provided that they are organised according to the abovementioned documents.

Laboratory obligations

- The testing/calibration laboratories shall demonstrate their performance through their participation in appropriate PTs.
- The laboratory should be satisfied with the competence of the providers of PTs in which they participate.
- The laboratory policy for participation in PTs shall be adequately described in the Quality Manual or in other operational documents. Such a description refers to planning, performance/operation, evaluation, corrective action, documentation and records.

- The accredited laboratories and those laboratories which are under assessment should be aware of the available PTs organised by EA. This information may be provided by the EA and CYSAB websites.
- The laboratory shall be prepared to justify non-participation in available PTs, where one or more appropriate schemes exist.
- When a laboratory applies for accreditation, it has to provide CYSAB with information regarding its participation in PTs/ILCs.

Actions by CYSAB

- CYSAB establishes and updates an "Indicative list of PT Schemes", which is accessible via its website.
- CYSAB requires that the accredited laboratories and the laboratories which are being prepared to be accredited participate in PTs which fulfil the abovementioned requirements.
- Prior to its accreditation, the laboratory shall have participated in at least one (1) PTs per type of test/calibration, provided that such PTs are available.
- The laboratory shall participate at least in one (1) PTs per type of test/calibration during one accreditation cycle.
- CYSAB ensures that its Assessors are competent in interpreting PTs and have relevant knowledge of relevant Standards and Guidelines.
- When assessing laboratories, CYSAB considers their participation in PTs; to this end, CYSAB checks the performance results, analysis and corrective actions taken and additional measures where appropriate. This procedure is detailed in EA 03/04 and ISO/IEC Guide 43:1997, Part 2.
- For ILCs organised or carried out by the laboratories themselves, an additional examination of the proper selection of the methods used should be made by the assessment team; the acceptability criteria should also be checked.
- The results of PTs are taken into consideration by the Lead Assessor and the Review Committee when the latter is to decide on granting accreditation.

Appropriate comparisons could be...

- PTs organised by EA in calibration and testing.
- ILCs organised by laboratories themselves, in Cyprus or abroad. Such ILCs should be organised according to ISO Guide 43.
- PTs offered by other accreditation bodies, members of EA or other regional accreditation organizations.
- Bilateral comparisons based on Guide ISO 43.

Some websites of PT Organizers

www.eptis.bam.de	European PT Information System
www.irmm.jrc.be	Institute of Reference Materials and Measurements
www.imep.ws	International Measurement Evaluation Programme
www.bipm.fr	Bureau International de Poids et Mesures
www.fapas.com	Food Analysis Performance Assessment Scheme
www.afssa.fr	L'Agence française de sécurité sanitaire des aliments
www.european-accreditation.org	European co-operation for Accreditation
www.aplac.org	Asia Pacific Laboratory Accreditation Cooperation
www.fapas.com/fepas.cfm	Food Examination Performance Assessment Scheme
www.atilh.fr	Association Technique De L' Industrie Des Liants Hydrauliques

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