

R 48-02

PROFICIENCY TESTING REQUIREMENTS FOR  
CALIBRATION LABORATORIES

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## 1. Purpose and Scope

The purpose of this document is to define the policy and specific requirements for participation in Proficiency Testing activities by accredited Calibration Laboratories.

## 2. References, Definitions and Abbreviations

### 2.1 References

- |     |                    |   |
|-----|--------------------|---|
| [1] | ISO/IEC 17025:2005 | General Requirements for the Competence of Testing and Calibration Laboratories.  |
| [2] | ILAC-P9:2005       | ILAC Policy for Participation in National and International Proficiency Testing Activities.                                   |
| [3] | SANAS PM           | SANAS Policy Manual.  |
| [4] | ISO Guide 43-1     | Proficiency Testing by interlaboratory comparisons – Part 1: Development and operation of proficiency testing schemes. (1997) |
| [5] | ISO/IEC 17011      | Conformity Assessment – General Requirements for Accreditation Bodies Accrediting Conformity Assessment Bodies.               |
| [6] | ILAC G13:2000      | Guidelines for the requirements for the Competence of Providers of Proficiency Testing Schemes.                               |

### 2.2 Definitions

- 2.1 **Proficiency Testing Scheme:**  
Interlaboratory comparisons designed and operated to assure laboratory performance in specified areas of testing, measurement and calibration. [5]
- 2.2 **Proficiency Testing Scheme Report:**  
The content of proficiency testing scheme reports may vary depending on the purpose of a particular scheme, but each report shall be clear and comprehensive and include data on the distribution of results from all participants, together with an indication of the performance of individual participants. [6]

### 2.3 Abbreviations

- PT: Proficiency Testing  
 ILC: Interlaboratory Comparison  
 NLA: National Laboratory Association  
 NML: National Metrology Laboratory, CSIR, South Africa  
 UOM: Uncertainty of Measurement  
 STC: Specialist Technical Committee

## 3. Background

ISO/IEC 17011 requires an accreditation body to ensure that its accredited laboratories participate in proficiency testing or other comparison programmes, where available and appropriate, and to ensure corrective actions where necessary are carried out. The accreditation body is also required to specify the minimum amount and frequency of proficiency testing participation by laboratories. [5]

#### 4. General Requirements

- 4.1 All applicant and accredited Calibration Laboratories are required to participate in the Proficiency Testing Program of SANAS in order to demonstrate their capabilities. [3]
- 4.2 All SANAS Calibration STC committee meetings are tasked with the preparation of a proposal for a 5 year plan detailing the proposed measurements, artefacts, and other pertinent information, necessary for the planning of the National Audit Program. This proposal is subject to approval by SANAS.
- 4.3 All accredited Calibration Laboratories **shall** participate in PT / ILC for items on their schedule of accreditation including specific instruments or measurement devices where these have been separately listed on the schedule of accreditation over a maximum period of 5 years. For example each separate item may include DC Voltage, DC Current, Gauge Pressure, and specific instruments may include Tachometers, Oscilloscopes, and Liquid in Glass thermometers.
- 4.4 All accredited Calibration Laboratories are required to prepare an activity plan indicating how the laboratory intends to satisfy the requirement specified above. The laboratory may incorporate in the plan participation in the National Audit program, and participation in any other organized PT activity, or regional / international organizations. Where no formal PT is available, the laboratory shall indicate other interlaboratory activities in which they intend to participate. These may include activities arranged by themselves (bilateral or multilateral intercomparisons etc.) with other laboratories in order to satisfy this requirement. The plan **shall** cover all activities as specified above and shall be accomplished in a period not exceeding 5 years.
- 4.5 The laboratories PT activity plan **shall** be available for evaluation during the assessment of the laboratory; additionally SANAS may request that a copy of the plan be submitted for evaluation at any time. The laboratory **shall** ensure that the plan is maintained and kept current.
- 4.6 Laboratories participation in PT / ILC activities will be evaluated against their plan.
- 4.7 The laboratory **shall** make available to the assessment team all proficiency testing scheme reports. Where the laboratory has participated in informal ILC a report **shall** be prepared that includes at least the following minimum information:
- Identification of the participants;
  - Identification of the measurement standard or Artefact;
  - Measurement results;
  - The reference value/s and how these were established;
  - Evaluation of the measurement results;
  - Conclusion.

*Note: Additional guidance on the evaluation of measurement results, and preparation of PT / ILC scheme reports is available in ILAC G13 [6] and ISO/IEC Guide 43-1 [4].*

- 4.8 The laboratory **shall** investigate all measurement results that fail to meet the minimum acceptance criteria, and record all corrective and preventative action taken.

**ADDENDUM 1.****AMENDMENT RECORD**

<b>Proposed By:</b>	<b>Section</b>	<b>Change</b>
CEO	Section 2	Changed "QM" to "PM"
CEO	Page 1	Changed to new logo & Front page