IQAS-008

Policy on Metrological Traceability

AMENDMENT SHEET

Sr. No.	Page No.	Clause No.	Date of Amendment	Reasons of amendment	Amendment details	Remark	Approved by
1.	--	--	28.10.2026	Periodic Review as per document control procedure	Detailing as part of periodic review	Replaces previous issue 02 dated 01.07.2024	R.S. Rana
2.							

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1. Objective

Policy on metrological traceability of measurement results.

2. Scope

This document applies to all the laboratories which are accredited or are willing to get accreditation by IQAS, in the field of testing and calibration as per ISO/IEC 17025:2017, medical testing as per ISO 15189:2022, Reference Materials Producer as per ISO 17034:2016 and Proficiency Testing Provider as per ISO/IEC 17043:2023. The policy of metrological traceability is not limited to testing and calibration but it is also applied to the other activities where measurement is involved. The other activities can be reference material producers, proficiency testing providers, inspection bodies and biobanks etc.

3. Responsibility

Conformity Assessment Bodies (CAB).

4. Reference

ILAC P10, APAC MRA-001, ISO/IEC 17025:2017, ISO 15189:2022, ISO 17034:2016 and ISO/IEC 17043:2023

5. Policy on Metrological traceability

Metrological traceability refers to traceability of the measurement **results** to the International System of Units (SI) through an unbroken chain of calibration Accredited by ILAC/IAF or their Regional Cooperation Bodies (APAC, EA, IAAC etc.) Accreditation Body (AB) member.

When metrological traceability is required, guidelines that will be followed is the ILAC policy that the measuring equipment shall be calibrated by:

1) A National Metrology Institute (NMI), say National Physical Laboratory, India for India; and similar for other states, whose service is suitable for the intended use and is covered by the International Committee for Weight and Measures Mutual Recognition Arrangement (CIPM MRA). Services covered by the CIPM MRA can

be viewed in the Bureau International des Poids et Measures Key Comparison Database (BIPM KCDB) which includes CMCs for each listed service.

2) An accredited calibration laboratory as per international standard ISO/IEC 17025:2017 whose service is suitable for the intended use (i.e., the scope of accreditation specifically covers the appropriate calibration) and the Accreditation Body is covered by the ILAC Arrangement or by Regional Arrangements recognised by ILAC.

Note 1: Certificates bearing the accreditation symbol or a text reference to the accreditation of the calibration laboratory from the recognition that the ILAC MRA and its regional counterparts bring. Calibration laboratories can indicate that their service is covered by ILAC Arrangement by including on the calibration certificate:

• The combined ILAC MRA mark, or

• The accreditation mark of the Accreditation Body (that is signatory to ILAC Arrangement) or the reference to its accreditation status.

3) Both of these options can be taken as evidence of metrological traceability (ILAC P8).

3) a A NMI whose service is suitable for the intended use but not covered by the CIPM MRA. In these cases, the IQAS will accept metrological traceability of measurement from National Physical Laboratory (NPL, NMI of India) or any other NMI whose service is suitable for the intended use.

3) b A laboratory whose calibration service is suitable for the intended use but not covered by the ILAC Arrangement or by Regional Arrangements recognised by ILAC.

In this cases IQAS will accept metrological traceability of measurement results from National Physical Laboratory (NPL, NMI of India) or any other NMI whose service is suitable for the intended use.

Accredited Organizations that have demonstrated metrological traceability of their measurements results through the use of calibration services offered according to 1) or 3) above have made use of services that have been subject to relevant peer review or accreditation. In the situation where 3a. or 3b. applies, this is not the case, so these routes should only be applicable when 1) or 2) are not possible for a particular calibration.

The ILAC policy in regard to metrological traceability provided by Reference Material Producers (RMPs) through Certified Reference Materials (CRMs) is that the certified values assigned to CRMs are considered to have established valid metrological traceability when:

4) CRMs are produced by NMIs using a service that is included in the BIPM KCDB.

Or

5) CRMs are produced by an accredited RMP as per ISO 17034 under its scope of accreditation and the Accreditation Body is covered by the ILAC Arrangement or by Regional Arrangements recognised by ILAC.

Or

6) The certified values assigned to CRMs are covered by entries in the Joint Committee for Traceability in Laboratory Medicine (JCTLM) database.

Recognizing that the accreditation of RMPs is still developing and CRMs may not be available from accredited RMPs, where CRMs are produced by non-accredited RMPs, Accredited Organizations shall demonstrate that CRMs have been provided by a competent RMP and that they are suitable for their intended use.

7) When metrological traceability to the SI is not technically possible, it is the responsibility of the Accredited Organization to:

7) a Choose a way to satisfy metrological traceability requirements by using certified values of certified reference materials provided by a competent producer.

Or

7) b Document the results of a suitable comparison to reference measurement procedures, specified methods, or consensus standards that are clearly described and accepted as providing measurement results fit for their intended use. Evidence of this comparison shall be assessed by the IQAS.