



1 Background and Rationale

- 1.1 In order to ensure metrological traceability, it is important that a certain level of technical competence be maintained by external providers who provide calibration services for reference standards. Typically, technical competence is formally recognized through an accreditation program that requires the calibration provider to undergo regular on-site assessments and test proficiency samples. Unfortunately, there are some accreditation bodies that do not require these fundamental processes in their programs. This may serve the calibration company that wants an easy or inexpensive accreditation, but it does not help their customers, or the industry ensure metrological traceability of their calibration services. Therefore, this policy has been established to guide AASHTO accredited laboratories in selecting qualified external calibration providers that ensure metrological traceability of all reference standards.

2 Objective

- 2.1 The purpose of this document is to clearly define requirements for external providers of calibration for measurement standards.

3 Terminology

- 3.1 *measurement standard*—The embodiment of the definition of a given quantity, with a stated value and measurement uncertainty, used as a reference. This term is often called “reference standard.”
- 3.2 *accredited*—*formal recognition obtained by an agency from a qualified accreditation body as having technical competence to perform specific types of testing, measurement, and calibration through regular on-site assessments and proficiency testing.*
- 3.3 For other related terms, see AASHTO R 18, Section 3.

4 Policy

- 4.1 Where required by AASHTO R 18, measurement standards utilized by laboratories participating in the AASHTO Accreditation Program (AAP) must be calibrated by one or more of the following:
- 4.1.1 A calibration agency accredited to ISO/IEC 17025 by an accreditation body that is a signatory to the International Laboratory Accreditation Cooperation Mutual Recognition Arrangement (ILAC MRA);
- 4.1.1.1 The equipment and range of measurement used must be within the calibration agency’s accredited scope as found on the accreditation body’s website.

Note 1- A list of current ILA MRA signatories may be found at <https://ilac.org/signatory-search/>

- 4.1.2 A national metrology institute (NMI) such as the National Institute of Standards and Technology (NIST); or
- 4.1.3 A state agency with a current verifiable certificate of measurement traceability issued by the NIST Office of Weights and Measures.

5 Resources

- 5.1 ILAC Website: <https://ilac.org/>
- 5.2 YouTube Video on Selecting a Calibration Provider:
<https://www.youtube.com/watch?v=OXcSFbZHLOo&t=161s>