

ISO/IEC 17025:2017 GENERAL REQUIREMENT FOR THE COMPETENCE OF TESTING & CALIBRATION LABORATORIES

ISO/IEC 17025 General requirements for the competence of testing and calibration laboratories is the main standard used by testing and calibration laboratories. In most countries, ISO/IEC 17025 is the standard for which most labs must hold accreditation in order to be deemed technically competent. In many cases, suppliers and regulatory authorities will not accept test or calibration results from a lab that is not accredited. Laboratories use ISO/IEC 17025 to implement a quality system aimed at improving their ability to consistently produce valid results. ISO/IEC 17025 is aligned closely with the 2000 version of ISO 9001.

The latest 2017 version of ISO/IEC 17025 has modified this structure of the standard to be Scope, Normative References, Terms and Definitions, General Requirements, Structural Requirements, Resource Requirements, Process Requirements, and Management System Requirements. General Requirements and Structural Requirements are related to the organization of the laboratory itself. Resource Requirements cite those issues related to the people, plant, and other organizations used by the laboratory to produce its technically valid results. Process Requirements are the heart of this version of the standard in describing the activities to ensure that results are based on accepted science and aimed at technical validity. Management System Requirements are those steps taken by the organization to give itself Quality Management System tools to support the work of its people in the production of technically valid results.

In order for accreditation bodies to recognize each other's accreditation, ILAC worked to establish methods of evaluating accreditation bodies against another. In 2000, the 36 ILAC Full Members consisting of laboratory accreditation bodies from 28 economies worldwide, signed the **ILAC Mutual Recognition Arrangement** (ILAC MRA) to promote the acceptance of technical test and calibration data for exported goods. These ILAC MRA signatory accreditation bodies carry identical acceptance across the globe. It does not matter which AB is utilized for accreditation. The MRA arrangement was designed with equal weight across all economies. **The National Board of Accreditation for Testing and Calibration Laboratories (NABL), a part of Quality Council of India (QCI) is also a member of ILAC MRA.**

In India, NABL grants accreditation to Testing Laboratories (ISO/IEC 17025), Calibration Laboratories (ISO/IEC 17025), Medical Laboratories (ISO/IEC 15189), Proficiency Testing Provider, PTP (ISO/IEC 17043) and Reference Material Producer, RMP (ISO/IEC 17034).

Accreditation implies formal recognition of competence of a conformity assessment body by NABL in accordance with international standard. The benefits of accreditation includes - International recognition, Access to Global market, Time and money efficient, Enhanced customer confidence and satisfaction, Robust Quality Management System, Continual improvements, Better operational control, Assurance of accurate and reliable results, Cost Reduction, Prevent loss due to defects etc. There are over 6,000 laboratories in India which are now accredited by NABL as per ISO 17025:2017.

ISO/IEC 17025 is useful for any organization that performs testing, sampling or calibration and wants reliable results. This includes all types of laboratories, whether they be owned and operated by government, industry or, in fact, any other organization. The standard is also useful to universities, research centres, governments, regulators, inspection bodies, product certification organizations and other conformity assessment bodies with the need to do testing, sampling or calibration.