

# Laboratory Accreditation Framework in India (QCI/NABL)

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## Abstract

In an increasingly interconnected and fast-paced world, the role of quality infrastructure has become more vital than ever before. Quality infrastructure encompasses a range of elements such as standardization, metrology, and conformity assessment. These components form the backbone of industries and economies, ensuring that products and services are reliable, safe, and compatible on a global scale. As we step into a new era of technological advancement and international collaboration, the importance of quality infrastructure cannot be overstated.

Laboratory accreditation plays a pivotal role in the development of a robust quality infrastructure. To ensure that the products and services delivered to the global supply chain are of good quality and trusted, it is imperative that they undergo a procedure of accreditation. This is where the National Accreditation Board for Testing and Calibration Laboratories (NABL) comes in, which is the apex accreditation body providing its accreditation services for testing and calibration laboratories as per international standard ISO/IEC 17025, for Medical Testing as per ISO 15189, for proficiency testing providers as per ISO/IEC 17043 and for reference material producers as per ISO 17034. NABL falls under the ambit of the Quality Council of India (QCI). The article describes the elements and importance of quality infrastructure, accreditation and conformity assessment activities. It also covers the NABL accreditation and its benefits with reference to SSP industry.

**Key words:** Quality, infrastructure, standardization, conformity assessment, metrology, NABL, ISO/IEC 17025, SSP

## Overview of Quality Infrastructure

Quality Infrastructure (QI) is known as a system comprising of organizations (public and private) together with the policies, relevant legal and regulatory framework, and practices needed to support and enhance the quality, safety and environmental soundness of goods, services, and processes. QI is required for the effective operation of domestic markets, and its international recognition is important to enable access to foreign markets. It is a critical element in promoting and sustaining economic development, as well as environmental and social well-being. It relies on metrology, standardization, and conformity assessment. Fundamentals elements of QI are listed in **Figure 1**.

**Standardization:** Standardization involves the development and implementation of technical standards that establish uniform guidelines, specifications, and requirements for products, processes, and services. These standards help in achieving consistency, interoperability, and compatibility, enabling businesses to enhance efficiency, reduce costs, and increase customer satisfaction. Standardization also promotes innovation, and facilitates international trade by ensuring that products meet quality and safety standards across borders.

**Metrology:** Metrology is the science of measurement and provides accurate and reliable measurements for various parameters such as length, temperature, weight, and time. It encompasses the facets of measurement standards, calibration, testing, and certification processes. Metrology ensures the accuracy and traceability of measurements, which is crucial for maintaining quality and fairness in commerce, manufacturing, and scientific research. Accurate measurements enable businesses to produce reliable products, comply with regulations, and build trust with customers.

**Conformity Assessment:** Conformity assessment involves the evaluation and verification of products, processes, and services to ensure their compliance with relevant standards, regulations, and specifications. It includes activities such as testing, inspection, certification, and accreditation. Conformity assessment ensures that products and services meet the required quality, safety, and performance criteria. It also helps in minimizing risks, improving market access, and building consumer confidence in the marketplace.

Together, these components of QI work in harmony to establish a robust framework for quality assurance, product safety, and consumer protection. They provide the necessary tools and processes for businesses to meet industry standards, regulatory requirements, and customer expectations. By implementing quality infrastructure, industries can

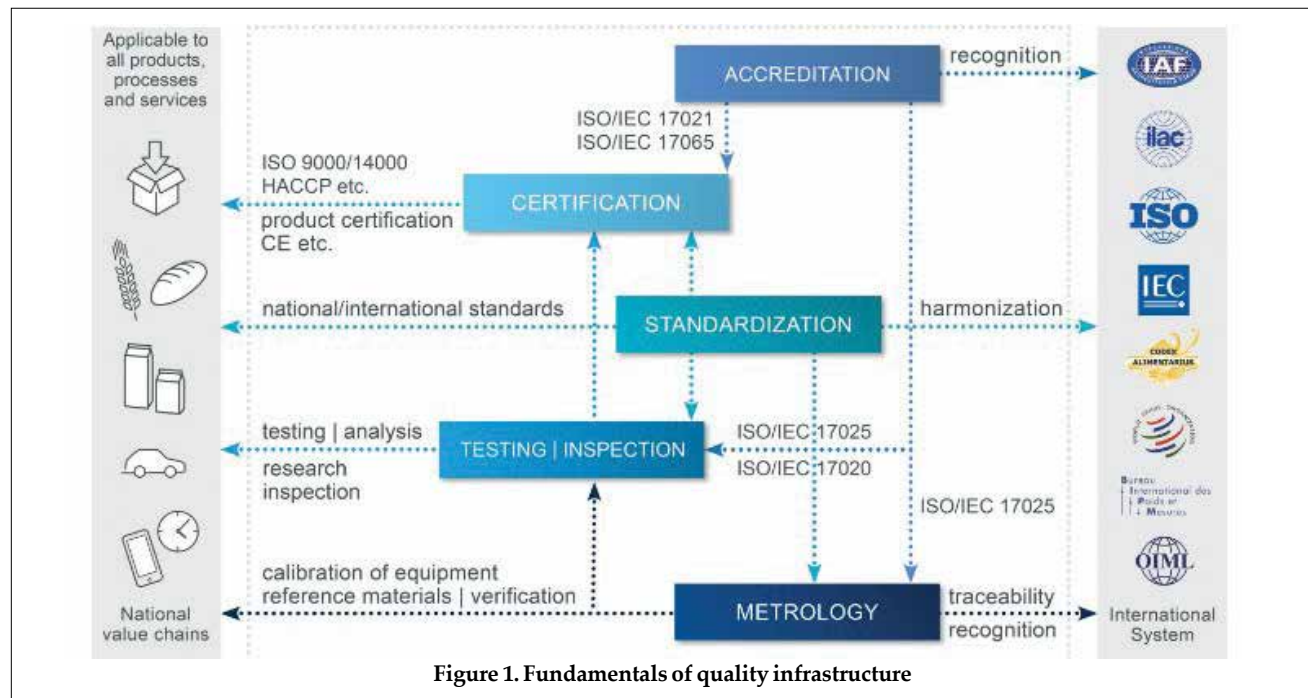


Figure 1. Fundamentals of quality infrastructure

benefit from improved product quality, enhanced competitiveness, increased market access, and reduced trade barriers. It also fosters innovation, facilitates international trade, and protects the health and safety of consumers. Ultimately, quality infrastructure plays a vital role in promoting sustainable economic growth, creating a level playing field, and ensuring customer satisfaction in today's globalized marketplace.

### Importance of Quality Infrastructure

In the forthcoming era, the three fundamental elements of QI as explained will play an indispensable role in guiding industries through a period of dynamic technological advancement and global integration. The role extends beyond individual sectors, influencing everything from the adoption of technology in process to global trade dynamics.

Standardization assumes a pivotal role in the coming era as it bridges the gap between innovation and compatibility. In a landscape saturated with emerging technologies like AI, IoT, and 5G, standardized frameworks serve as the common language that facilitates interoperability. As industries incorporate these technologies into their operations, standardized norms and specifications work to ensure seamless communication, data exchange, and compatibility among various devices and systems. This not only accelerates the adoption of ground-breaking innovations but also minimizes potential conflicts arising from disparate

technological architectures.

The precision of measurements provided by metrology is indispensable as industries venture into the era of unparalleled technological advancements. Accurate metrology facilitates production of high-quality products, development of cutting-edge research, and realization of innovative solutions. In fields like healthcare, quantum computing, and precision agriculture, precise measurements form the bedrock upon which breakthroughs are made, reshaping industries and pushing the boundaries of human achievement.

In an era of heightened consumer awareness and increasingly complex global supply chains, conformity assessment ensures the safety, reliability, and credibility of products and services. As consumers demand transparency and accountability, the implementation of rigorous testing, inspection, and certification mechanisms become essential. Businesses that adhere to these assessments earn consumer trust, enabling them to navigate the competitive landscape successfully. Particularly, in sectors like renewable energy, biotechnology and advanced manufacturing, where novel products emerge frequently, conformity assessment guarantees that offerings meet stringent quality standards and regulatory requirements.

Together, these pillars ensure compatibility, accuracy, and trustworthiness in an age defined by technological innovation and interconnectedness, enabling industries to flourish and society to reap

the benefits of progress.

### International Scenario of Quality Infrastructure

On an international scale, QI plays a vital role in shaping global trade, harmonizing technical standards, and ensuring the safety and reliability of products and services across borders. In the global context, various international and regional organizations play significant roles as QI bodies:

- ◆ Standardization serves as a cornerstone for international trade by facilitating compatibility among products and systems from different regions. International organizations such as the International Organization for Standardization (ISO) and the International Electrotechnical Commission (IEC) work to develop and promote global standards, ensuring that products meet common criteria and can be readily adopted in various markets.

- ◆ Metrology is crucial for international trade, as accurate measurements are essential for fair transactions and regulatory compliance. Organizations like the International Bureau of Weights and Measures (BIPM) establish and maintain international measurement standards, ensuring consistency and precision in measurements across countries. This is particularly important in sectors where measurement units are critical, such as pharmaceuticals, manufacturing, and environmental monitoring.

- ◆ Conformity assessment mechanisms are integral to international trade as they verify that products conform to established standards and regulations. There are international organizations meant to regulate accreditation and conformity assessments such as International Laboratory Accreditation Cooperation (ILAC) and International Accreditation Forum (IAF) and other regional cooperations such as Asia Pacific Accreditation Cooperation (APAC), Arab Accreditation Cooperation (ARAC), African Accreditation Cooperation (AFRAC), European Cooperation for Accreditation (EA), Inter-American Accreditation Cooperation (IAAC), and Southern African Development Community Cooperation in Accreditation (SADCA). Mutual recognition arrangements (MRAs) between countries streamline this process, enabling products that have been tested and certified in one country to gain acceptance in another without the need for redundant testing. This reduces trade barriers and enhances market access.

The international scenario of QI is evolving as globalization intensifies and technologies advance. The digitalization of QI processes, such as the use of online databases for recording and storing standards and certification information, is making cross-border collaboration more efficient. The international

landscape is characterized by collaborative efforts to establish uniform standards, accurate measurements, and reliable conformity assessment procedures. As economies become more interdependent and technologies continue to transcend borders, maintaining a robust international QI becomes paramount for fostering seamless trade, innovation, and trust among nations.

### National Scenario of Quality Infrastructure

A national QI is required to protect health and safety of the consumers, and the environment. While importing products and services, they must comply with national verifiable requirements. Flow diagram of the same is depicted in **Figure 2**.

In the context of India, the QI bodies are:

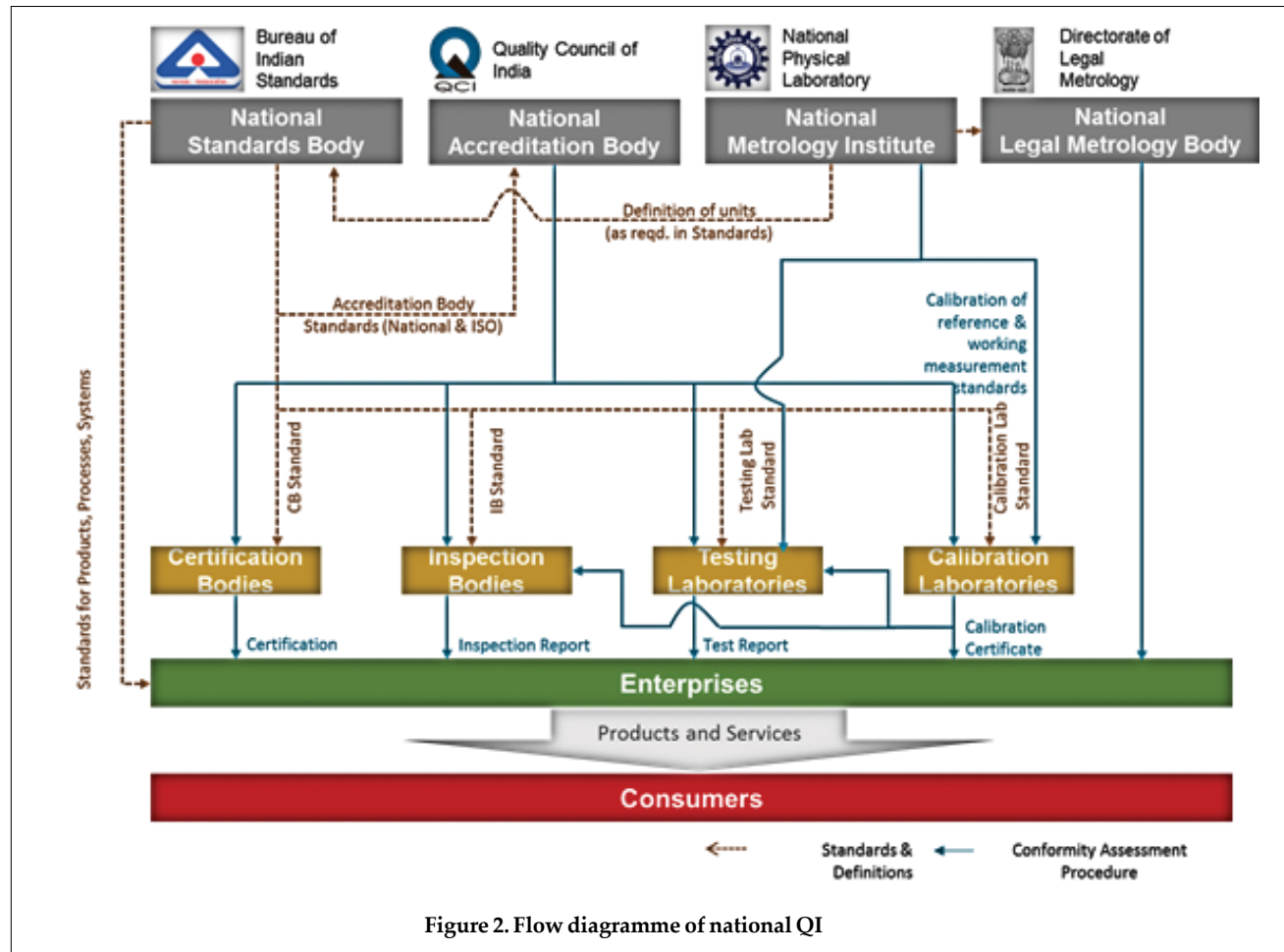
- ◆ The Bureau of Indian Standards (BIS), as the National Standards Body
- ◆ The Quality Council of India (QCI), along with its constituent Boards, the National Accreditation Board for Certification Bodies (NABCB) and the National Accreditation Board for Testing & Calibration Laboratories (NABL), as the National Accreditation Body
- ◆ The National Physical Laboratory (NPL-India), as the National Metrology Institute

### Accreditation and Conformity Assessment Activities

#### Accreditation

Accreditation is the third-party attestation related to a conformity assessment body conveying formal demonstration of its competence to carry out specific conformity assessment activities (Source ISO/IEC 17011: 2017). The conformity assessment activities along with the applicable international standards can be the object of accreditation, and can include:

- ◆ Laboratories performing testing activities [ISO/IEC 17025]
- ◆ Laboratories performing calibration activities [ISO/IEC 17025]
- ◆ Laboratories performing medical testing activities [ISO 15189]
- ◆ Proficiency testing providers providing proficiency testing programmes [ISO/IEC 17043]
- ◆ Reference material producers producing reference materials [ISO 17034]
- ◆ Certification bodies certifying management systems [ISO/IEC 17021-1]
- ◆ Certification bodies certifying product, process and services [ISO/IEC 17065]



- ◆ Certification bodies certifying persons [ISO/IEC 17024]
- ◆ Biobanking [ISO 20387]
- ◆ Inspection [ISO/IEC 17020]
- ◆ Validation/Verification [ISO/IEC 17029]
- ◆ GHG validation/verification [ISO 14065:2013]

#### Accreditation - International Organizations

There are several international organizations which form the global accreditation framework. The organization working in the Asia Pacific region and the international arena are as follows:

**ILAC:** ILAC is the international organisation for accreditation bodies operating in accordance with ISO/IEC 17011 and is involved in the accreditation of conformity assessment bodies including calibration laboratories (using ISO/IEC 17025), testing laboratories (using ISO/IEC 17025), medical testing laboratories (using ISO 15189), inspection bodies (using ISO/IEC 17020), proficiency testing providers (using ISO/IEC

17043) and reference material producers (using ISO 17034). Total number of conformity assessment bodies are shown in **Figure 3**.

#### How does the ILAC MRA work?

Through their capacity to assess a laboratory's and inspection body's proficiency in conducting tests, calibrations, and inspections, the Mutual Recognition Agreement (MRA) fosters trust and confidence among accrediting bodies. When the results of testing, calibration, and inspection can be proven to have come from accredited laboratories and inspection bodies, this confidence in turn makes it easier for testing, calibration, and inspection results to be accepted between countries. The MRA promotes international trade by avoiding the need for retesting and re-inspection each time a product enters a new market. In addition to supporting regulatory and public policy frameworks, this saves the industry time and money. ILAC is dedicated to achieving the idea that goods and services should only need to be tested or inspected once in order to be accepted everywhere.

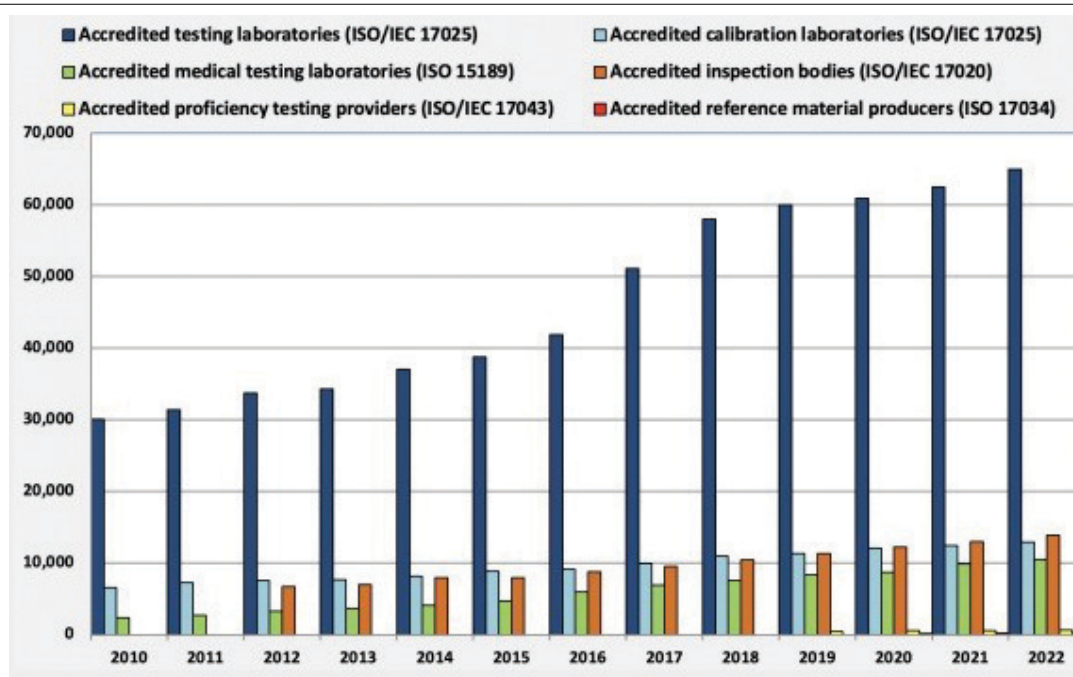


Figure 3. Total number of accredited conformity assessment bodies from 2010 to 2022

**Benefits of ILAC MRA**

- ◆ *For Governments:* The MRA offers governments a credible framework for enhancing bilateral and multilateral international trade agreements, aiming for fully accepted use and recognition of inspection bodies and accredited laboratories, achieving free-trade goals.
- ◆ *For Regulators:* The MRA is an internationally recognized approval stamp which reduces risk and duplication of test, calibration, and inspection data. It helps regulators meet their legislated responsibilities by providing a globally recognized system for accepting accredited test and inspection reports.
- ◆ The MRA guarantees businesses confidence in test, calibration, and inspection data accuracy, ensuring that the facilities are accredited and users check accreditation scope when purchasing products and services.

- ◆ The MRA allows manufacturing businesses to save costs by deferring internal assessments to internationally recognized ILAC signatories, benefiting from market access and reduced costs associated with internal assessments.
- ◆ The MRA ensures public and consumer confidence in testing, calibration, and inspection services by requiring results from accredited facilities, meeting international standards of competence. **Figure 4** shows the signatories to the ILAC MRA by scope (December 2022).

*IAF:* The International Accreditation Forum (IAF) is a worldwide association of accreditation bodies and other bodies interested in conformity assessment in the fields of management systems, products, processes, services, personnel, validation and verification and other similar programmes of conformity assessment.

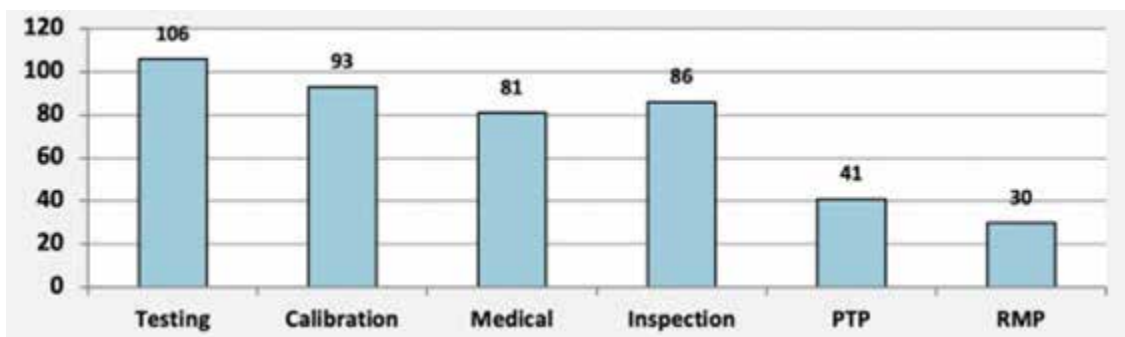


Figure 4. Signatories to the ILAC MRA by scope (December 2022)

Its primary function is to develop a single worldwide programme of conformity assessment which reduces risk for businesses and their customers by assuring them that accredited certificates and validation and verification statements may be relied upon.

**APAC:** The Asia Pacific Accreditation Cooperation (APAC) is the regional accreditation cooperation of the Asia Pacific region and is recognised by the IAF and the ILAC. Its primary role is to manage and expand MRA among accreditation bodies in the Asia Pacific region. The MRA facilitates the acceptance of conformity assessment results (e.g., test reports, test certificates, inspection reports, and certification) across the region and with other regions around the world.

Similar to APAC in Asia Pacific region, there are regional cooperation such as EA in Europe, IAAC in America, SADCA in Southern Africa, AFRAC in Africa and ARAC in Arab region. NABL is a full member of the APAC and ILAC, a signatory to its MRA.

### Benefits of Accreditation

Accreditation is the formal recognition of competence of a conformity assessment body by an authoritative accreditation body like NABL in India, and is often in accordance with international standard, which has many advantages, such as:

- ◆ International recognition/equivalence,
- ◆ Access to global market,
- ◆ Ensures proficiency in time and money
- ◆ Enhanced customer confidence and satisfaction,
- ◆ Robust quality management system,
- ◆ Continual improvements,
- ◆ Better operational control, and
- ◆ Assurance of accurate and reliable results.

### Benefits of Laboratory Accreditation

Laboratory Accreditation acts as a formal recognition of competence of a laboratory by NABL, in India, in accordance with international standard (ISO/IEC 17025 or ISO 15189). It has the following advantages:

- ◆ A ready means for customers to identify and select reliable testing, measurement and calibration services that can meet their needs.
- ◆ Increased confidence in testing/calibration reports issued by the testing, calibration and medical testing laboratories which emphasizes accuracy and reliable results.
- ◆ The results from accredited laboratories are used extensively by regulators for the public benefit in

the provision of services that promote green environment, safe food, clean water, energy, health, and social care services.

- ◆ Better control of laboratory operations and feedback to laboratories as to whether they have sound quality assurance system and are technically competent.
- ◆ Helpful in participating in tenders that require independently verified laboratories.
- ◆ Potential increase in business due to enhanced customer confidence and satisfaction.
- ◆ Accredited laboratories receive a form of international recognition, which allows their data and results to be more readily accepted in overseas markets. Accreditation helps to reduce costs for manufacturers and exporters who have their products or materials tested in accredited laboratories, by reducing or eliminating the need for retesting in another country.
- ◆ Customers can search and identify the laboratories accredited by NABL for their specific requirements from the NABL website or directory of accredited laboratories.
- ◆ Users of accredited laboratories enjoy greater access for their products, in both domestic and international markets.
- ◆ Savings in terms of time and money due to reduction or elimination of the need for re-testing of products.

### NABL, A Constituent Board of QCI

#### Quality Council of India (<https://www.qcin.org/>)

Quality Council of India (QCI) is an autonomous body under the Department for Promotion of Industry & Internal Trade (DPIIT), Ministry of Commerce & Industry, Government of India. QCI is the apex national body and provides accreditation and other related services through its constituent Boards such as:

- ◆ National Accreditation Board for Testing and Calibration Laboratories (NABL)
- ◆ National Accreditation Board for Certification Bodies (NABCB)
- ◆ National Accreditation Board for Hospitals (NABH)
- ◆ National Accreditation Board for Education and Training (NABET)
- ◆ National Accreditation Board for Quality Promotion (NBQP)

QCI has been engaged with several ministries and



government institutions including NITI Aayog, Department of Industrial Policy and Promotion, Ministry of MSME, Ministry of Railways, Ministry of Petroleum and Natural Gas, Ministry of Urban Development, Ministry of Drinking Water and Sanitation, Ministry of Skills as well as several state governments such as Gujarat, Jharkhand, Punjab, Uttar Pradesh to name a few on variety of projects dedicated towards improvement in quality.

QCI is the apex national body and provides accreditation and other related services through its constituent Boards (Figure 5) namely NABCB, NABL, NABH, NABET & NBQP, each having a specific mandate.

#### **National Accreditation Board for Testing and Calibration Laboratories (<https://www.nabl-india.org/>)**

It was established in 1992 and grants accreditation to:

- a) Testing and Calibration laboratories as per ISO/IEC 17025; 17043 and
- b) Reference Material Providers as per ISO 17034

NABL is signatory to the accreditation programmes of International Laboratory Accreditation Cooperation (ILAC) & Asia Pacific Accreditation Cooperation (APAC) MRA signatory for its accreditation programmes. It has granted accreditation to 8500+ laboratories across India and abroad. This comprises of:

- a) 5021 testing labs (ISO/IEC 17025)
- b) 1177 calibration labs (ISO/IEC 17025)
- c) 2226 medical testing labs (ISO 15189)
- d) 66 proficiency testing provider (ISO/IEC 17043)
- e) 19 reference material producer (ISO 17034)

NABL, thus, has the second highest number of laboratory accreditations in the world.

#### **National Accreditation Board for Certification Bodies (NABCB) (<http://nabcb.qci.org.in/>)**

It was established in 1999 and grants accreditation to:

- a) Management System Certification Bodies as per ISO/IEC 17021;
- b) Product Certification Bodies as per ISO/IEC 17065;
- c) Personnel Certification Bodies as per ISO/IEC 17024 and
- d) Inspection Bodies as per ISO/IEC 17020.

NABCB is a signatory to IAF/APAC MLA for its programmes under ISO/IEC 17021 (QMS, FSMS, EMS, ISMS, and EnMS), ISO/IEC 17065 for product certification & global GAP. NABCB is also signatory to ILAC & APAC (earlier APLAC) MRA for its inspection body programme. NABCB has issued a total of 20,000+ certificates through 150+ accredited CBs & IBs.

#### **National Accreditation Board for Hospitals (NABH) (<https://www.nabh.co/>)**

It was established in 2005 and grants accreditation to Hospitals and Healthcare Providers. NABH maintains its international linkages with ISQua (International Society for Quality in Health Care) and ASQua (Asian Society for Quality in Health Care). NABH has granted more than 12000+ accreditations, certifications and empanelment to hospitals & various other healthcare providers.

#### **National Accreditation Board for Education and Training (NABET) (<http://nabet.qci.org.in/>)**

It was established in 1999 and grants accreditation to

schools, training, and other organizations in skill sectors. NABET also provides accreditation to EIA consultant organizations.

**National Accreditation Board for Quality Promotion (NABQP) (<http://nbqp.qci.org.in/>)**

It was established in 2007 and responsible for quality promotion and providing support in spreading quality movement in the country.

**National Accreditation Board for Testing and Calibration Laboratories (NABL)**

**(a) History**

- ◆ 1973 - The Planning Commission suggested the Department of Science & Technology (DST) to look into different aspects of testing facilities.
- ◆ 1982 - DST set up National Coordination of Testing & Calibration Facilities (NCTCF) for providing accreditation services to testing & calibration laboratories.
- ◆ 1993 - Renamed as National Accreditation Board for Testing & Calibration Laboratories.
- ◆ 1998 - Registered as an Autonomous Body (Societies Act 1860) under the aegis of DST.
- ◆ 2016 - Based on Cabinet Decision in 1996, NABL was merged with the Quality Council of India as a Constituent Board

**(b) Services Provided by NABL:** NABL provides voluntary accreditation services as per international standards to:

- ◆ Testing laboratories in accordance with ISO/IEC 17025 'General Requirements for the Competence of Testing and Calibration Laboratories'
- ◆ Calibration laboratories in accordance with ISO/IEC 17025 'General Requirements for the Competence of Testing and Calibration Laboratories'
- ◆ Medical testing laboratories in accordance with ISO 15189 'Medical Laboratories - Requirements for Quality and Competence'
- ◆ Proficiency Testing Providers (PTP) in accordance with ISO/IEC 17043 'Conformity Assessment - General Requirements for Proficiency Testing' and
- ◆ Reference Material Producers (RMP) in accordance with ISO 17034 'General Requirements for the Competence of Reference Material Producers'.

In addition, NABL also provides the following services (not covered under APAC/ILAC MRA):

- ◆ NABL Medical (Entry Level) Testing Labs

{NABL M(EL)T LABS} Programme

- ◆ Government Block Level Drinking Water Testing Laboratory Recognition Programme

**(c) International Linkages of NABL:** NABL has an established accreditation system in accordance with the requirements of ISO/IEC 17011:2017 'Conformity Assessment – Requirements for Accreditation Bodies Accrediting Conformity Assessment Bodies'. NABL maintains linkages with the international bodies relevant to its charter like ILAC and Asia Pacific Accreditation Co-operation (APAC).

**(d) NABL's Scope of Accreditation:** NABL provides accreditation in the aforementioned fields and disciplines. The multi-disciplinary conformity assessment bodies have to apply in relevant discipline(s) depending upon which discipline(s) the scope belongs to:

**Testing Field**

• Chemical	• Electronics	• Photometry
• Biological	• Fluid Flow	• Radiological
• Mechanical	• Forensic	• Diagnostic Radiology QA Testing
• Electrical	• Non-Destructive (NDT)	• Software and IT System

**Calibration Field**

• Mechanical	• Optical
• Electro Technical	• Medical Devices
• Fluid Flow	• Radiological

**Medical Field**

• Clinical Biochemistry	• Histopathology	• Molecular Testing
• Clinical Pathology	• Cytopathology	• Medical Testing
• Haematology	• Flow Cytometry	
• Microbiology & Infectious Disease	• Cyto genetics	
• Serology		

**Proficiency Testing Providers (PTP)**

Categories for PTP

• Testing	• Medical
• Calibration	• Inspection

**Reference Material Producers (RMP)**

Categories for RMP

• Chemical Composition	• Physical Properties
• Biological and Clinical Properties	• Engineering Properties
• Biological and Clinical Properties	• Miscellaneous Properties



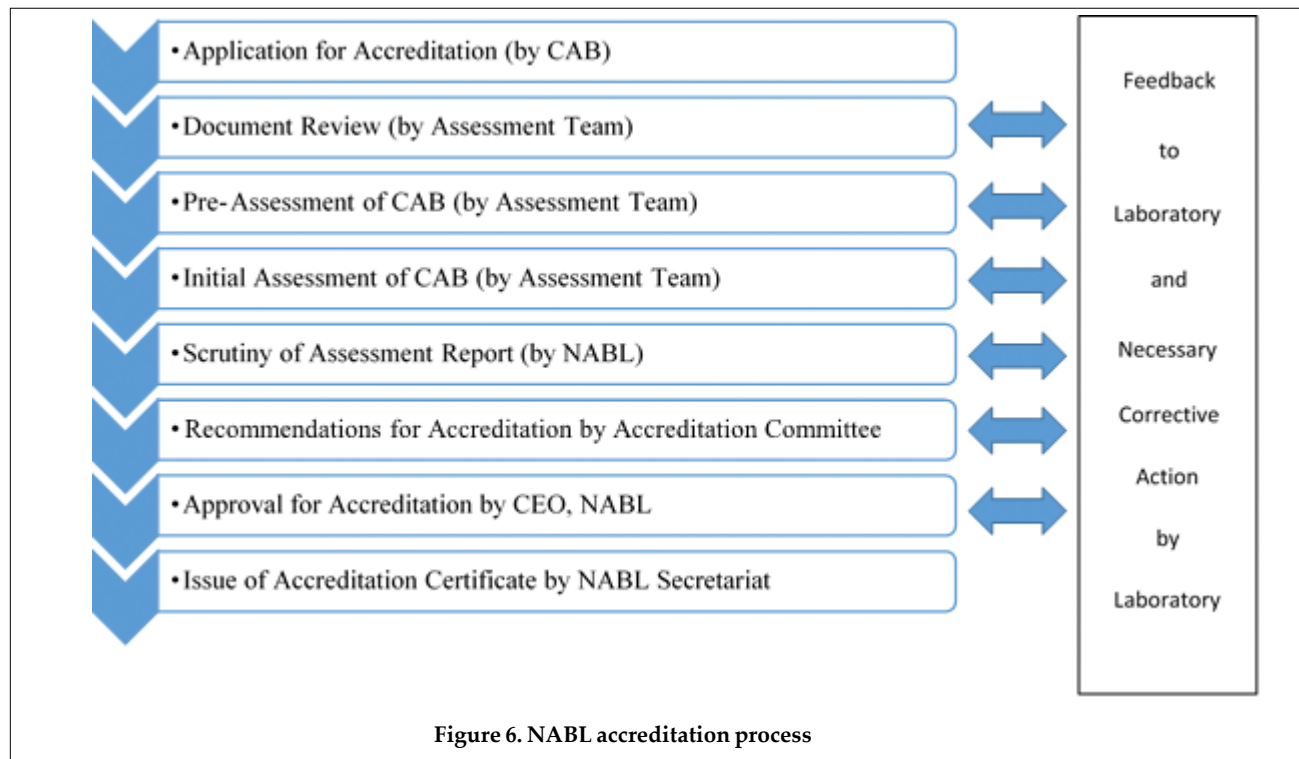


Figure 6. NABL accreditation process

#### (e) NABL's Accreditation Process

NABL accreditation process steps are shown in **Figure 6**.

i. Application of Accreditation: Testing laboratories are required to apply through the NABL web portal ('Apply Now' option on website [www.nablindia.org](http://www.nablindia.org)) or to NABL in prescribed application form (NABL 151 for testing laboratories)

ii. Document Review: The preliminary document review of the application and management system document/ quality manual submitted by the CAB is carried out by NABL whereas the detailed review is carried out by lead assessor.

iii. Pre-Assessment: Once the document review process is completed; a pre-assessment of the CAB may be conducted by the assessment team appointed by NABL.

- ◆ Pre-assessment is optional for testing laboratories, calibration laboratories and medical testing laboratories.

- ◆ CAB shall express its decision (say in 2 to 5 days) in writing to opt for pre-assessment or not. However, it does not preclude the decision of NABL to conduct pre-assessment for any other situations/ reasons (if the document review does not provide confidence in the CAB's management system, recommended by assessment team/ NABL officer, etc.).

iv. Initial Assessment: Initial assessment shall be

conducted after completion of pre-assessment process or document review process.

- ◆ NABL appoints an assessment team to conduct the assessment. Entire disciplines/groups are assessed during initial assessment.

- ◆ The assessment team verifies CAB's implementation of the documented information and checks its compliance with the relevant international standard, specific criteria (wherever applicable) and NABL policies.

- ◆ The assessment report contains the evaluation of competency (includes personnel, facilities and equipment), all relevant material examined, tests/ calibration witnessed including those of retained samples recommended scope of accreditation, compliance to relevant international standard, NABL specific criteria (wherever applicable) and NABL policies.

- ◆ The non-conformities, if any, are reported in the assessment report. It also provides a recommendation towards grant of accreditation or otherwise.

- ◆ The report prepared by the assessment team is submitted to NABL. Summary of assessment report, non-conformities (if any) and recommended scope of accreditation, are provided to the CAB at the end of the assessment visit.

v. Scrutiny of Assessment Report: The assessment report is examined by NABL, and a follow up action

as required is initiated. The laboratory has to take necessary corrective action on non-conformities/concerns based on root cause analysis and submit a report along with the evidence to NABL within 30 days.

vi. Review of Assessment: Report after the submission of corrective action(s) by the CAB, the assessment report along with corrective actions is reviewed by the accreditation committee.

vii. Surveillance Assessment: NABL conducts annual surveillance which is aimed at evaluating continued compliance to the relevant international standard, specific criteria (wherever applicable) and NABL policies.

- ◆ Onsite surveillance : On-site surveillance is conducted for the newly accredited CABs, in the first cycle of accreditation. It is conducted within 12 months (preferably in the 10<sup>th</sup> month) from the date of accreditation.

- ◆ Desktop surveillance : During the second and subsequent accreditation cycles, the desktop surveillance is conducted within 12 months (preferably in the 10<sup>th</sup> month) from the date of each re-accreditation.

- ◆ The desktop surveillance consists of seeking records (as per NABL 218 document) from the CAB to ascertain that the CAB continues to comply to the requirements of relevant international standard, NABL specific criteria (wherever applicable), and NABL policies.

- ◆ NABL may decide to convert desktop surveillance to on-site surveillance based on feedback, complaints or in case of major deficiency observed in the submitted records.

viii. Re-assessment: Accredited laboratories shall apply for renewal of accreditation in the prescribed application form, at least 6 months prior to the expiry of validity of its accreditation so that the process of re-assessment is completed before the certificate expires.

- ◆ The process for re-assessment is similar to that of the initial assessment.

- ◆ When the laboratory is recommended for renewal of accreditation, NABL will re-issue the accreditation certificate to the laboratory.

- ◆ An application submitted after expiry of accreditation is not considered for renewal of accreditation. In such a case, CAB shall apply afresh.

- ◆ CAB also has to apply afresh if there is any change in information related to legal identity, name of the CAB, ownership, address from the

previously issued accreditation certificate.

- ◆ Under these situations, new CAB ID and accreditation certificate number will be allotted to the CAB.

- ◆ NABL will conduct the reassessment within 24 months (preferably 20<sup>th</sup> to 22<sup>nd</sup> month from the date of grant/renewal of accreditation). The accredited CAB is subjected to re-assessment every 2 years before expiry of the validity of accreditation cycle.

#### (f) NABL Documents

NABL has published several documents which supplement the standards and facilitate an understanding amongst the Conformity Assessment Bodies regarding the process and applying to NABL. NABL documents included key documents such as general information brochure and accreditation process & procedure, etc. The documents are also referenced as policy documents which are in line with the requirements of ILAC and are meant to be mandatorily followed by the CABs.

The CABs have to apply to NABL for accreditation through its on-line platform in order to know about the information required to be uploaded and given in the application documents. NABL also publishes specific criteria documents which are domain specific documents. The guidance documents help the customers to understand the subject in more details. There are procedures, documents and directory meant for the purpose mentioned in their title.

The same can be accessed from NABL's website at <https://bit.ly/3P1LUg4>

#### (g) State of Accreditation of Fertilizer Laboratories in India

NABL has provided accreditation to 77 laboratories specialising in fertilizers for chemical testing, under the following sub-groups:

- Bio-Fertilizers
- Fertilizer Mixtures
- Fortified Fertilizers
- Macronutrients
- Micronutrients
- Nitrogenous Fertilizers
- Phosphatic Fertilizers
- Potassic Fertilizers
- Others

NABL accreditation of laboratories in SSP plants is a significant step towards ensuring the quality and safety of fertilizers. It not only enhances the credibility and competitiveness of SSP plants but also instils confidence in customers and regulatory authorities. The benefits of accreditation, including improved efficiency, enhanced customer trust, compliance with international standards, and a culture of continuous improvement, make it a valuable investment in SSP plants. By adhering to



Photo 1. A glimpse of workshop on NABL accreditation

the guidelines and recommendations provided, SSP plants can successfully achieve NABL accreditation and contribute to the overall growth and development of the fertilizer industry

#### TCB's Intervention with Fertiliser Association of India

Highlighting in a conference organized by the Fertiliser Association of India (FAI), New Delhi, Dr. Mansukh Mandaviya, the Hon'ble Union Minister for Chemicals & Fertilizers, and Health & Family Welfare emphasized that the SSP industry should uphold the delivery of high quality suggested products adhering to FCO specifications. He focused that all the SSP manufacturing units must establish a state-of-the-art NABL accredited laboratory in the plant premises to ensure quality. All checks and balances must be carried out at the level to ensure that the final product does not have any lapses. To foster an environment conducive to these aspirations, the TCB Cell at QCI played a pivotal role through its capacity-building initiatives and support. In collaboration with FAI, NABL provided aid to manufacturers in achieving NABL accreditation by providing training and guidance, effectively contributing to the overall ecosystem.

Fifty-two (52) and nineteen (19) participants representing various SSP companies took the advantage of the workshops at Udaipur and Indore, respectively. A glimpse of the workshop in progress at Indore has been given in **Photo 1**.

#### Conclusion

The provision of NABL accreditation to laboratories specialising in SSP plants would create a paradigm shift in the agricultural scenario at large, ensuring that the fertilizers used for food production is of good quality and safe. Not only such kind of accreditation improves credibility and competitiveness of SSP plants, but it also gives confidence to customers and regulatory authorities. Through our association, we wish to enter into an uplifting and empowering collaboration, one that will become a catalyst for change in not only the quality infrastructure of 'Food & Agriculture' domain, but also in ensuring India's prominence in the global supply chain.

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- APAC: <https://bit.ly/3YZk0WJ>
- ILAC MRA Annual Report 2022- <https://bit.ly/44E6Aka>
- ILAC MRA 2022 Infographic- <https://bit.ly/44E6Aka>
- NABL 100 A- General Information Brochure- <https://bit.ly/45AcEeR>
- NABL 100 B- Accreditation Process & Procedure- <https://bit.ly/45AcEeR>
- NABL 120- Guidance for Classification of Product Groups in Testing & Calibration Field- <https://bit.ly/45AcEeR>
- NABL 151: <https://bit.ly/45AcEeR>
- The ILAC Mutual Recognition Arrangement- <https://bit.ly/44E6Aka> ■