

Why become an Accredited Laboratory?



global trust
Testing – Calibration – Inspection

A recognition of testing competence

Laboratory accreditation is a means of determining the technical competence of laboratories to perform specific types of testing, measurement and calibration. It also provides formal recognition to competent laboratories, thus providing a ready means for customers to identify and select reliable testing, measurement and calibration services able to meet their needs.

To maintain this recognition, laboratories are re-evaluated periodically by the accreditation body to ensure their continued compliance with requirements, and to check that their standard of operation is being maintained. The laboratory may also be required to participate in relevant proficiency testing programs between reassessments, as a further demonstration of technical competence.

Accredited laboratories usually issue test or calibration reports bearing the accreditation body's symbol or endorsement, as an indication of their accreditation.

Clients are encouraged to check with the laboratory as to what specific tests or measurements they are accredited for, and for what ranges or uncertainties. This information is usually specified in the laboratory's scope of accreditation, issued by the accreditation body. The description in the scope of accreditation also has advantages for the customers of laboratories in enabling them to find the appropriate laboratory or testing service. Laboratory accreditation bodies publish the scopes of accreditation for their accredited laboratories in either hardcopy directories or on the internet.



A benchmark for performance

Laboratory accreditation benefits laboratories by allowing them to determine whether they are performing their work correctly and to appropriate standards, and provides them with a benchmark for maintaining that competence. Many such laboratories operate in isolation to their peers, and rarely, if ever, receive any independent technical evaluation as a measure of their performance.

A regular assessment by an accreditation body checks all aspects of a facility's operations related to consistently producing accurate and dependable data. Areas for improvement are identified and discussed, and a detailed report provided at the end of each visit. Where necessary, follow-up action is monitored by the accreditation body so the facility is confident that it has taken the appropriate corrective action.

In addition to commercial testing and calibration services, manufacturing organisations may use laboratory accreditation to ensure the testing of their products by their own in-house laboratories is being done correctly.



A marketing advantage?

Accreditation is an effective marketing tool for testing, calibration and measurement organisations, and a passport to submit tenders to contractors that require independently verified laboratories.

Laboratory accreditation is highly regarded both nationally and internationally as a reliable indicator of technical competence. Many industries, such as the construction materials industry, routinely specify laboratory accreditation for suppliers of testing services.

Laboratory accreditation uses criteria and procedures specifically developed to determine technical competence, thus assuring customers that the test, calibration or measurement data supplied by the laboratory or inspection service are accurate and reliable.

Many accreditation bodies also publish a directory of their accredited laboratories, which includes the laboratories' contact details plus information on their testing capabilities. This is another means of promoting a laboratory's accredited services to potential clients.

Finally, through a system of international agreements (see next page) accredited laboratories receive a form of international recognition, which allows their data to be more readily accepted on overseas markets. This recognition helps to reduce costs for manufacturers and exporters that have their products or materials tested in accredited laboratories, by reducing or eliminating the need for retesting in another country.



International recognition for your laboratory

Many countries around the world have one or more organisations responsible for the accreditation of their nation's laboratories. Most of these accreditation bodies have now adopted ISO/IEC 17025 as the basis for accrediting their country's testing and calibration laboratories, or ISO 15189 for medical laboratories. This has helped countries employ a uniform approach to determining laboratory competence. It has also encouraged laboratories to adopt internationally accepted testing and measurement practices, where possible.

This uniform approach allows countries to establish agreements among themselves, based on mutual evaluation and acceptance of each other's laboratory accreditation systems. Such international agreements, called Mutual Recognition Arrangements (MRAs), are crucial in enabling test data to be accepted between these countries. In effect, each partner in such an MRA recognises the other partner's accredited laboratories as if they themselves had undertaken the accreditation of the other partner's laboratories.

Over 40 laboratory accreditation bodies have signed a multi-lateral recognition agreement called the ILAC Arrangement, which greatly enhances the acceptance of data across the national borders of the signatory countries. Full details for the ILAC Arrangement and the list of signatories can be found on the ILAC website at www.ilac.org.

This system of international MRAs between accreditation bodies has enabled accredited laboratories to achieve a form of international recognition, and allowed data accompanying exported goods to be more readily accepted on overseas markets. This effectively reduces costs for both the manufacturer and the importers, as it reduces or eliminates the need for products to be retested in another country.

Countries without viable accreditation systems can seek to have their laboratories accredited by established accreditation systems, so that their test data and associated goods can be accepted on foreign markets. These countries can also endeavour to develop their own accreditation system based on the structure and experience of established systems in other countries.

What types of laboratories can seek accreditation?

If you are considering seeking accreditation for your facility, the first thing you'll need to do is contact the appropriate accreditation body to see whether they can accredit your range of testing services.

Most national accreditation bodies can provide comprehensive accreditation for:

- facilities undertaking any sort of testing, product or material evaluation, calibration or measurement;
- private or government laboratories;
- one-person operations or large multi-disciplinary organisations;
- remote field operations and temporary laboratories.



How do laboratories become accredited?

Laboratories can have either all or part of their testing and calibration activities accredited. The accreditation process involves a thorough evaluation of all the elements of a laboratory that contribute to the production of accurate and reliable test data.

The evaluation process can take one to several days, and involves the use of specialist technical assessors who evaluate the specific types of testing or measurement being performed. The assessment criteria are based on the international standards ISO/IEC 17025 or ISO 15189, which are used for evaluating laboratories throughout the world. Laboratory accreditation bodies use this standard specifically to assess factors relevant to a laboratory's ability to produce precise, accurate test and calibration data, including the:

- technical competency of staff
- validity and appropriateness of test methods
- traceability of measurements and calibrations to national standards
- suitability, calibration and maintenance of test equipment
- testing environment
- sampling, handling and transportation of test items
- quality assurance of test and calibration data

At the end of the assessment a detailed report on the evaluation is presented to the laboratory, highlighting any areas that require attention and corrective action prior to the laboratory being recommended for accreditation.

Once accredited, the laboratory is re-evaluated periodically to ensure its continued compliance with requirements, and to check that its standard of operation is being maintained. The laboratory may also be required to participate in relevant proficiency testing programs between reassessments, as a further demonstration of technical competence.

Where can I get more information?

For more information on how to become accredited, you will need to contact the appropriate laboratory accreditation body. To find out if your country has one or more laboratory accreditation bodies, try contacting your national standards body or your ministry for industry or technology. Alternatively, if you have access to the internet, you can visit the website of the International Laboratory Accreditation Cooperation (ILAC) at **www.ilac.org** and use the directory of laboratory accreditation bodies available on this website.

More information about ILAC

ILAC is the peak international authority on laboratory accreditation, with a membership consisting of accreditation bodies and affiliated organisations throughout the world. Its internet site at **www.ilac.org** can provide a range of information on laboratory accreditation, as well as the location of its members world-wide.

For more information contact:

The ILAC Secretariat

PO Box 7507

Silverwater

NSW 2128

Australia

Phone: +61 2 9736 8222

Fax: +61 2 9743 5311

Email: ilac@nata.com.au

Website: www.ilac.org

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