Securing testing, measurement or calibration services

The difference between accreditation and certification

Accreditation:
Delivering Global Confidence

What to look for in your testing, measurement or calibration services

When selecting a supplier to fulfil your testing, calibration or measurement needs, you need to be sure that the laboratory can provide you with consistently accurate and reliable results. Whether or not the laboratory is able to do this depends on the technical competence of the laboratory carrying out the work. The **technical competence** of a laboratory relies on a number of factors including:

- Staff with the right qualifications, knowledge, skills, experience and professional judgement.
- The right equipment which is appropriately traceable to national standards and maintained.
- Appropriate testing and calibration environment
- Appropriate sampling, handling and transportation practices.
- Sound testing/inspection procedures.
- Accurate recording and reporting of data.
- Adequate quality assurance and quality control procedures.

A laboratory may offer their own assurances that they have the above attributes, or you can attempt to evaluate the service yourself. But the way you can be confident in the results of the testing, measurement or calibration services that you pay for, is by securing these services from a laboratory that is **accredited** in accordance with ISO/IEC 17025 for the relevant services by an accreditation body that is a member of the ILAC Arrangement.

Accreditation:
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Why accreditation is proof of technical competence to fulfil your testing, measurement and calibration requirements

Accreditation is the process by which an independent, authoritative body determines—against recognised standards—the impartiality and competence of an organisation or individual to carry out specific tasks.

When it comes to the accreditation of laboratory services, the international standard ISO/IEC 17025 defines what is required of a laboratory in order for it to demonstrate the **technical competence of the personnel.** It also indicates the availability of all the **technical resources** needed to produce accurate and reliable data and results for a defined set of tests, measurements or calibrations.

The accreditation process involves specialist technical assessors conducting a thorough assessment of all factors in the facility that affect the production of technical data, including:

- Technical competency of staff.
- Validity and appropriateness of methods used.
- Traceability of measurements and calibrations to national standards.
- Appropriate determination and application of measurement uncertainty.
- Suitability, calibration and maintenance of test equipment.
- The testing and calibration environment.
- Sampling, handling and transportation of test items.
- Quality assurance of test, inspection or calibration data.
- Reporting statements of conformity.

Laboratories that conform to ISO/IEC 17025 will also operate generally in accordance with the prinicples of ISO 9001.

A laboratory's fulfilment of the requirements of ISO/IEC 17025 means, therefore, that the laboratory meets both the technical competence requirements and management system requirements that are necessary for it to consistently deliver technically valid test results and calibrations.

Furthermore, to ensure continued compliance, accredited facilities are regularly re-examined to ensure they maintain their standards of technical expertise. These facilities are also required to participate in regular proficiency testing programmes or inter-laboratory comparisons as an on-going demonstration of their competence.

What if a laboratory's management system holds accredited certification to ISO 9001?

A laboratory may have chosen to be audited and certified to the international standard for quality management systems, ISO 9001. This is a generic standard that can be applied to any organisation regardless of type, size or service provided and is used to evaluate their system for managing the quality of their product or service.

The certification body carrying out the auditing and certification of the laboratory to ISO 9001 may itself be accredited (to a separate standard ISO/IEC 17021) to carry out this particular service.

Accredited certification to ISO 9001 and accreditation to ISO/IEC 17025 both provide confidence in the services of a laboratory, **but they are not the same.** There are crucial differences between the purpose, criteria and emphasis of the ISO 9001 quality management system standards and those of the laboratory standard, ISO/IEC 17025, that is used in accrediting laboratories.

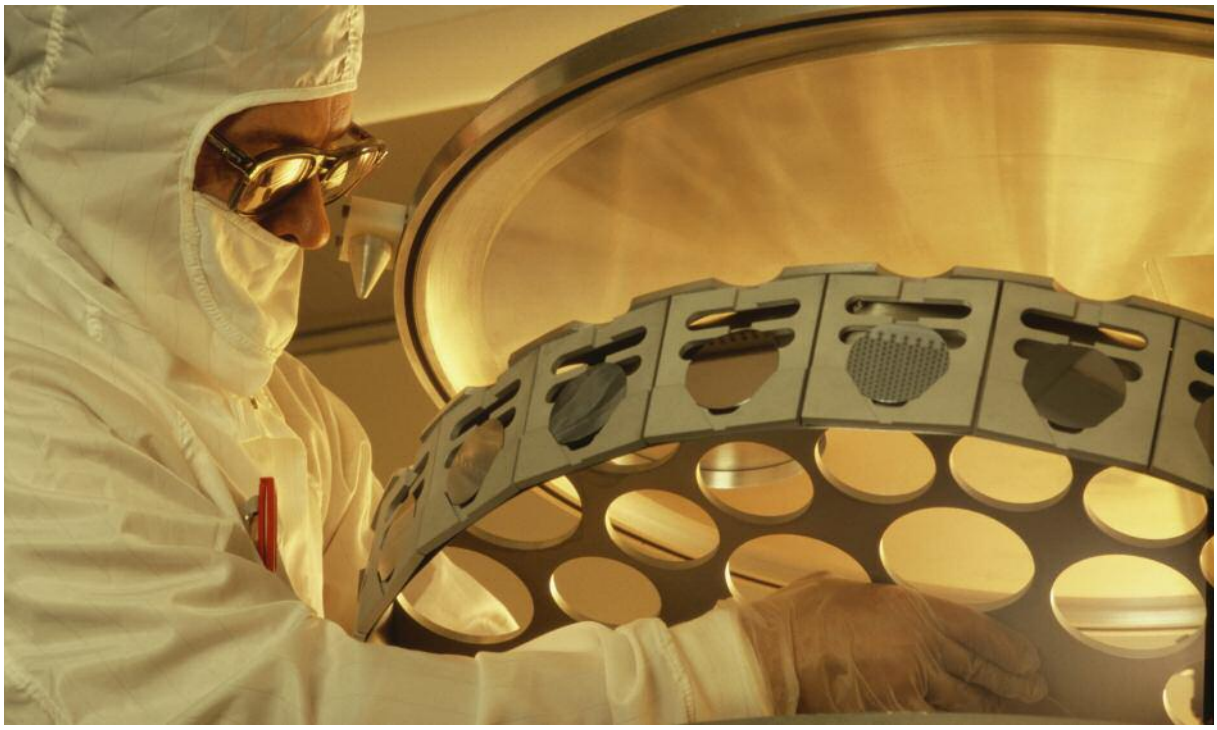
Holding accredited certification to ISO 9001 does not, on its own, represent evidence that a laboratory is able to provide you with accurate and reliable testing or calibration. For this the laboratory must itself be accredited to ISO/IEC 17025 which is more specific in its requirements for technical competence and impartiality while still addressing the quality management system requirements needed to ensure that the laboratory provides consistent and reliable services that will meet your needs.

How can you tell if a laboratory is accredited?

Accreditation bodies in many countries publish lists or directories of the laboratories that they have accredited, together with laboratories' contact details and information on their testing, calibration snf measurement capabilities (scope of accreditation). If necessary, you can contact the accreditation body to find out whether there are any accredited laboratories that can perform the tests or calibrations which you require.

To find out if your country has any laboratory accreditation bodies, you can refer to the signatory search on ILAC **www.ilac.org**, where you will also find directories of accredited laboratories for certain countries. Alternatively, information about accreditation bodies in your country may be available from your national standards body or your ministry responsible for industry/trade or technology.

Accredited laboratories usually issue test or calibration reports bearing some type of logo or endorsement indicating their accreditation. You should also check with the laboratory which specific tests or measurements they have been accredited to carry out, and for what ranges or uncertainties. This is normally specified in their *Scope/Schedule of Accreditation,* which may be supplied by the laboratory or the accreditation body upon request.



What about data from Laboratories in other countries?

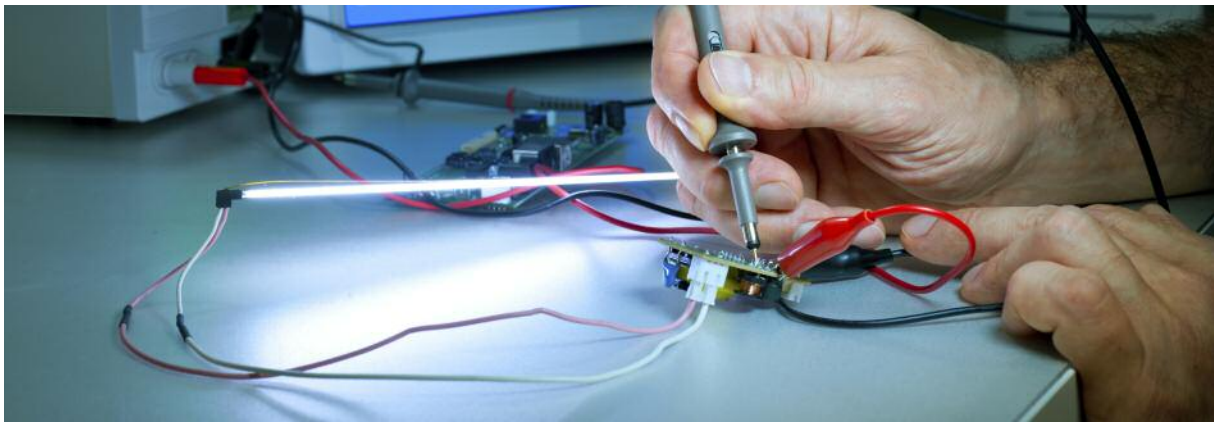
Many countries around the world have one or more organisations responsible for the accreditation of their nation's laboratories. Most of these accreditation bodies use ISO/IEC 17025 as the basis for accrediting their country's testing and calibration laboratories. This, in turn, has encouraged more laboratories to adopt these internationally accepted testing and measurement practices.

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, are key to test data being accepted between countries.

Many laboratory accreditation bodies have signed a multi-lateral mutual recognition arrangement, 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 members (signatories) can be found on the ILAC website **www.ilac.org.**

This system of international arrangements between accreditation bodies has allowed data accompanying exported goods to be more readily accepted in the global market. This reduces or eliminates the need for products to be re-tested in another country and reduces costs for both the manufacturer and the importers.

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 in the global market.



What to remember

Remember if you are securing testing, measurement or calibration services:

- Using the services of a supplier **accredited** to ISO/IEC 17025 means that you are using a laboratory that has been independently assessed to have demonstrated technical competence underpinned by a management system.
- Check that the scope of the facility's accreditation is appropriate for the tests, calibrations or measurements you require to be done.
- A testing facility accredited to ISO/IEC 17025 may also maintain a certified ISO 9001 management system. For example if its quality managementsystem covers non-testing functions such as accounting, marketing, information services or education. However, holding accredited ISO 9001 certification does not, on its own, represent evidence that a laboratory is able to provide you with accurate and reliable testing, measurement or calibration.
- If you are unsure about what to look for in your laboratory or need more information about accreditation, you can contact your local ILAC member. ILAC members in each country can be found in the Directory on at **www.ilac.org**

ilac *Accreditation: Delivering Global Confidence*

About ILAC

ILAC facilitates trade and supports regulators by operating a worldwide mutual recognition arrangement – the ILAC Arrangement – among Accreditation Bodies (ABs) in order to ensure that the data and test results issued by laboratories and inspection bodies, collectively known as Conformity Assessment Bodies (CABs), accredited by ILAC Accreditation Body members are accepted globally. Thereby, technical barriers to trade, such as the re-testing of products each time they enter a new economy is reduced, in support of realising the free-trade goal of *"accredited once, accepted everywhere".*

In addition, accreditation reduces risk for business and its customers by assuring that accredited CABs are competent to carry out the work they undertake within their scope of accreditation.

Further, the results from accredited facilities are used extensively by regulators for the public benefit in the provision of services that promote an unpolluted environment, safe food, clean water, energy, health and social care services.

ABs that are members of ILAC and the CABs they accredit are required to comply with appropriate international standards and the applicable ILAC application documents for the consistent application of those standards.

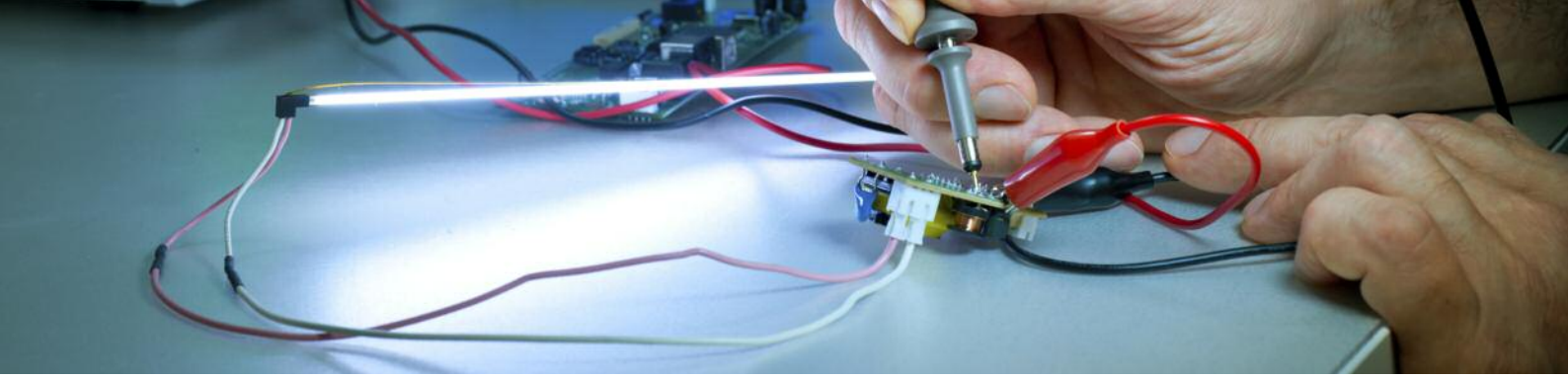
ILAC is the global association for the accreditation of laboratories, inspection bodies, proficiency testing providers and reference material producers, with a membership consisting of accreditation bodies and stakeholder organisations throughout the world.

It is a representative organisation that is involved with:

- The development of accreditation practices and procedures,
- The promotion of accreditation as a trade facilitation tool,
- Supporting the provision of local and national services,
- The assistance of developing accreditation systems,
- The recognition of competent testing (including medical) and calibration laboratories,
- Inspection bodies, proficiency testing providers and reference material producers
- Around the world.

ILAC actively cooperates with other relevant international organisations in pursuing these aims.

ABs having signed the ILAC Arrangement are subject to peer evaluation via formally established and recognised regional cooperation bodies using ILAC rules and procedures prior to becoming a signatory to the ILAC Arrangement.



The ILAC Secretariat
PO Box 7507
Silverwater
NSW 2128
Australia

Phone: +61 2 9736 8374

Email: ilac@nata.com.au

Website: www.ilac.org

@ILAC_Official

www.youtube.com/user/IAFandILAC

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