

**NATIONAL ASSOCIATION OF
TESTING AUTHORITIES, AUSTRALIA**

WORKING WITH NATA ACCREDITED BUILDING PRODUCT LABORATORIES

INDUSTRY USER GUIDE NO.4



WHY?

Many building products require testing to verify that they meet relevant technical standards under applicable Australian building laws or voluntary codes. Having something tested is not always as straightforward as people might think if they don't devote some effort to understanding what they are trying to achieve and how to go about it.

This Guide provides information about choosing and interfacing with a laboratory service to anyone needing to determine conformity of a product with a particular standard, specification or code – be they manufacturer, importer or supplier. The objective is to facilitate the supply of conforming product to the market.

WHY USE A NATA ACCREDITED LABORATORY?

NATA accreditation is about confidence – yours and that of your customers – in the data and information on which you must make informed decisions.

NATA accreditation covers those activities that produce this technical/scientific data and information.

In NATA's vocabulary, accreditation has a very specific meaning.

A procedure by which an **authoritative body** gives formal recognition that a body is **competent** to carry out **specific tasks**.

Hence, NATA accreditation is a high level process of recognising collective, specific and demonstrated competencies. The core of NATA accreditation is the third party, objective, peer assessment process at a scientific and technical level that provides assurance of the laboratory's capability to produce reliable data from particular analyses. The NATA Accreditation Criteria include the international standard ISO/IEC 17025 *General requirements for the competence of testing and calibration laboratories* which is used globally for accreditation.

In addition to confidence, NATA accreditation provides you with:

- an ability to outsource to an independent, objective authority the monitoring of laboratory performance;
- international arrangements providing for the mutual recognition of data produced by laboratories accredited by NATA and equivalent accreditation bodies globally;
- a resource to resolve disputes relating to laboratory services.

WHAT BUILDING PRODUCT TESTING ACTIVITIES ARE ACCREDITED BY NATA?

NATA accredits tests, measurements and examinations which may be performed in laboratories, mobile facilities and in situ for a range of disciplines and broad array of product types including:

Cementitious materials	Plumbing and drainage fittings
Concrete Products	Gas appliances and fittings
Sealants and adhesives	Roofing Materials
Electrical wiring and fittings	Liners and membranes
Fasteners	Steel products
Fire detection and protection systems	Timber and engineered timber products
Insulation	Wall, floor and ceiling panels
Plaster board	Windows, doors and related products

IS THE LABORATORY ACCREDITED FOR WHAT I NEED?

A laboratory's NATA Accreditation may not cover every service that it provides so it is important to ask the correct question when seeking to have your product tested.

“Do you hold NATA accreditation for [the specified tests] of [the specific product type]?”

NATA accredited laboratories are able to add the NATA endorsement to reports covering accredited activities. As such, a more concise specification is to specify that

“I want all test results reported to be NATA endorsed”.

The tests for which a testing laboratory has successfully demonstrated practical competence and capability at a NATA assessment are detailed in its Scope of Accreditation.

Scopes are publicly available documents so they are the primary source of information for anyone wanting to have something tested. They are accessible from the NATA website at www.nata.com.au.

Limited Scopes of Accreditation

A laboratory may not have every test, measurement and examination described in a particular standard, code or specification included in its scope of accreditation. For example, some laboratories may only have a limited capability with regard to the list of tests specified in a standard. Where one or more tests can be performed validly in isolation – that is, they are not contingent on the product sample already having undergone another test(s) – NATA may accredit them for a subset of the standard, code or specification.

As such, when checking a laboratory's scope of accreditation, it is important to clarify any limitation on the capability.

It should be noted that an accredited laboratory is permitted to include the results of tests not covered by its scope of accreditation on a NATA-endorsed test report provided any such results are appropriately identified as not being covered by the endorsement. If you need all tests to be performed under the laboratory's scope of accreditation make this clear at the start.

That is why it is so important to specify that “all test results reported must be NATA-endorsed”.



NATA-ENDORSEMENT – WHAT'S THE SIGNIFICANCE?

The NATA endorsement consists of the NATA logo, the laboratory's accreditation number and the International Standard with which the facility complies. This will be presented similarly to the following.



Accredited for compliance with ISO/IEC 17025
Accreditation number xxxxx

In addition, the following statements may be added:

NATA is a signatory to the ILAC mutual recognition arrangement for the mutual recognition of the equivalence of testing, calibration and inspection reports [for those who may need international recognition of the reported results]

NATA endorsed vs unendorsed reports – cost / benefit?

NATA requires that all activities described in the scope of accreditation are performed using exactly the same processes and to the same level of confidence whether reported on a NATA-endorsed report or not.

Some laboratories do, however, apply a surcharge to issue an endorsed report for commercial or marketing reasons.

For you as the customer, the NATA-endorsement is there to provide prima facie evidence that the test results within the report have been issued under the laboratory's NATA Accreditation. Hence, you can have the confidence that the tests have been undertaken by competent staff using sound science/ engineering as verified by NATA's peer assessment processes.

Similarly, your own customers and auditors (if your business is subject to some form of external oversight) may share this confidence.



WHAT DO I NEED TO SPECIFY?

This may be stating the obvious but simply dropping off a product sample at a laboratory and saying “I want it tested” is not the best approach – yet it happens. NATA accredited laboratories will happily assist you with defining your needs but they do need some specific information first.

Once you have ascertained that the laboratory is appropriately accredited, the next step is to ensure clarity around:

- Why you need their services – e.g. one-off investigation, regulatory compliance, on-going routine production testing, market surveillance etc.;
- Any specifics for sampling - your own or those relating to a standard/specification;
- What tests and examination you wish to have performed;
- The standard, code or specification that is applicable to the product;
- Where appropriate, the test method to be used (if the standard, code or specification allows for options);
- Whether the test is for export purposes – as this may impact on the selection of test criteria.

This gives the accredited laboratory a starting point for determining its ability and availability to undertake the work and, of course, work out the cost.

Test plans

For products that require a series of tests and possibly other considerations such as preconditioning, it may be desirable – or necessary – to develop a test plan in conjunction with the laboratory.

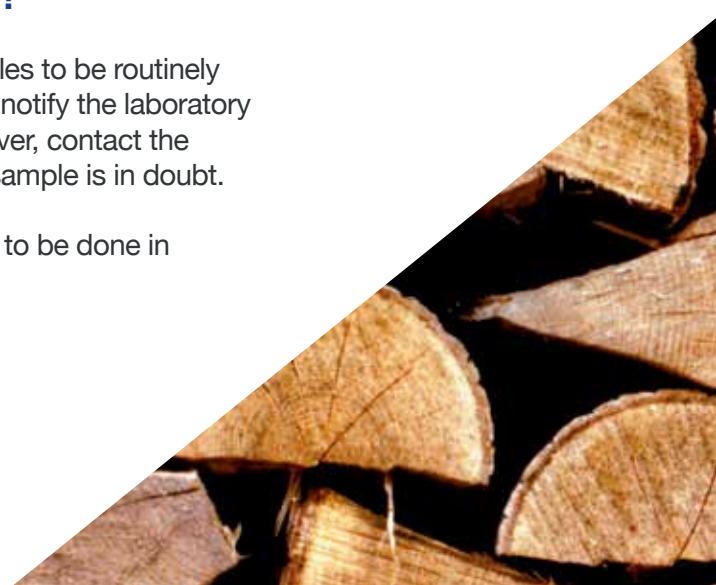
Test plans ensure there is no ambiguity in requirements and are also very useful when:

- multiples tests have some consequential aspects (if-then-else);
- there may be a choice of test limits based on the design application of the product;
- there are customer specified test conditions accommodated by the standard or specification – e.g. environmental testing.

What do I do if my testing requirements change?

Where there is a standing arrangement or contract for samples to be routinely tested – such as under a certification scheme - you need to notify the laboratory of any changes to the requirements. Laboratories will, however, contact the customer if the sample type changes or the integrity of the sample is in doubt.

Any material change to such a standing arrangement needs to be done in writing and confirmed by the laboratory.



WHY DO MARKET SURVEILLANCE TESTING?

Market surveillance testing may be undertaken for a variety of reasons by different players in a market.

- A regulator may wish to check compliance with a regulatory requirement.
- A manufacturer/supplier may have a product tested as part of their quality assurance processes.
- A manufacturer/supplier may suspect their competitor's product is non-compliant with a code or regulation.
- A product certifier may use surveillance testing as part of their certification system.

Testing is rarely inexpensive (particularly when done properly) so surveillance testing is not usually performed without a good reason – be it driven by competition or the management of risk. The cost can, however, be managed by focussing on those aspects of a product or material that are either suspected of being deficient and/or the aspects that present the most risk should they be non-conforming.

The complexity of some supply chains and the risks associated with putting non-conforming product on the market make undertaking some level of surveillance testing highly desirable and, in many cases, an investment rather than an expense.

WHAT IS IMPORTANT WITH SAMPLES, AND SAMPLES MANAGEMENT?

Sample integrity

The best quality testing service available is effectively useless if samples are compromised by:

- poor sample selection/preparation;
- inappropriate storage and transport (e.g. temperature, shock, vibration, water ingress); and
- incorrect identification.

It is stating the obvious but samples supplied to a laboratory are supposed to be representative of the product that will be supplied to the market. Compromising the integrity of the samples will waste everyone's time and your money.

Supplying the correct amount/number of samples

Some codes and standards as well as product certification regimes are specific about the number and size of samples that need to be tested. Ensuring that you supply the correct amount of material and/or the number of samples will save angst with the laboratory and minimise your costs.

"Samples tested as received"

This statement is usually applied to test reports when the laboratory has not been responsible for the collection of samples. Use of this statement does not, however, remove the responsibility of the laboratory to test samples that are in a satisfactory condition. Laboratories are required to have procedures covering the acceptance of samples for testing.

If a laboratory receives a sample that does not meet acceptance criteria, the laboratory must contact the customer and ascertain what action to take. The best option is to provide another sample but this is not always possible. In such cases the testing may be undertaken but the test report must include comments regarding the nature of the problem(s) with the samples and, where applicable, that caution is required when interpreting the result(s). Such caveats may have serious implications regarding the intended use of the report, such as for demonstrating compliance with a specified code.

WHAT SHOULD I DO WITH TEST / INSPECTION REPORTS?

NATA's accreditation criteria detail what needs to be included in a test report. Nonetheless, customers should still check any test report received to ensure that:

- it matches the sample(s) provided for testing;
- it references the agreed standard, code, specification and/or test method;
- the results are reported in the manner prescribed by the applicable standard, code or specification;
- any statement regarding sampling reflects the arrangements as understood by the customer;
- any additional information that you have requested such as photographs of the test configuration.

Unless the laboratory performing the tests has been involved in the sampling, the report may include a statement to the effect that "samples were tested as received". This indicates that the customer has been responsible for providing the samples to the laboratory in an appropriate manner.

If the sampling has been performed by another accredited laboratory or an accredited inspection body, details of the sampling should have also been provided in a NATA-endorsed report.

HOW SHOULD TESTING BE USED IN SUPPLY DECISIONS?

Testing is a conformity assessment activity used to determine whether the product or material under test meets one or more defined criteria. The results of the test apply to the particular example of the product, or the sample of material, that actually underwent testing.

Basing supply of a product solely on an initial (type) test can be fraught unless there is also a high level of confidence in the reliability and consistency of production. In some very specific cases where:

- a sample can reasonably be taken as being representative of a defined batch of material (e.g. it is demonstrably homogeneous); and
- the laboratory has control of the sampling in accordance with a validated plan; it may be appropriate to interpret the test result as being representative of the batch.

Except for such specific cases, a test result is specific to the sample or item(s) actually tested. As such, the decision to use the test result as being representative of

a larger batch of material or a serially produced product is not one for the laboratory to make. Their role is to provide reliable data on which such decisions can be made.

Decisions on how a test result is to be used should occur down-stream in the supply chain (hopefully involving the purchaser) in order to ensure the interests of the purchaser and/or consumer are protected. Product certification bodies (ideally accredited by JAS-ANZ or a JAS-ANZ MLA partner) can play an important role in resolving the possible disconnect between individual test results and the commercial supply of products. Many product certification systems incorporate production tests and some even market surveillance in order to ensure that what goes into the market remains compliant with the relevant standard, code or specification.

Even where a certification may be based on an initial or type test, a wise supplier will consider the products' risk profile and undertake an appropriate level of surveillance testing.

HOW ELSE CAN I PROTECT MY BUSINESS?

Unfortunately, not all building products supplied to the market conform to applicable standards, specifications and codes. To ensure that yours do conform, there are some additional points to consider.

Photographs – While good practice, it is not an accreditation requirement for a laboratory to include photographs of what is being tested and how the test is being performed. For products that are complex, those where the result is highly dependent upon the test configuration or product identification is critical for regulatory purposes, you should consider the inclusion of photographs – including close-ups of any critical aspects – in the test report as a mandatory requirement of your test request. This ensures that you have evidence of the way the test was performed and your customer can see that the product being tested matches the one you are supplying. If a laboratory will not provide this additional service, consider seeking another laboratory.

Witnessing – As the laboratory's customer, you are entitled to ask to witness any testing performed. Remember that the laboratory is obliged to protect the information of all clients so, if they are undertaking work for another customer, they will need to shield this from you. Hence, witnessing should be arranged with due notice so that everyone's confidentiality can be protected. Remember though, witnessing does not permit you to exert influence over the testing or test outcomes.

Product identification and traceability – Not all products submitted for testing are necessarily easy to track and/or may lack any formal identification. You need to ensure that your own records contain adequate information on matters such as the supply chain, batch numbers, and any other information that will allow you to trace product once it is in the marketplace.

COMMUNICATION IS THE KEY

The key to successfully gaining reliable testing data is effective communication between the laboratory and client.

Mutual understanding doesn't just happen, it must be pursued. Two particular points to remember:

- Initial clarity surrounding the purpose of the testing will aid all subsequent discussions and greatly improve the likelihood of obtaining the appropriate services;
- Communication shouldn't be a once-off event – if you have questions having received the test report and something seems odd or doesn't make sense, ask.

SUMMARY

Why use a NATA Accredited facility?	<ul style="list-style-type: none">• 3rd party verification of capability and competence• Compliance with international standard for laboratories• International recognition of results
Is the laboratory accredited for the services I need?	<ul style="list-style-type: none">• Ask the right question regarding NATA Accreditation• Check laboratory's Scope of Accreditation
What do I need to specify?	<ul style="list-style-type: none">• All results to be NATA-endorsed• The purpose of the test• Test methods• Applicable standard/specification• When you need the results
What is important with samples to be tested?	<ul style="list-style-type: none">• Collection – who, sample plan, amount and number• Identification, traceability and labelling• Maintaining integrity during transport
What should I do with my reports?	<ul style="list-style-type: none">• Check that report is clear and complete• Make sure report is NATA endorsed• Take note of any comments• Use the results to benefit your business!

HELP IS AVAILABLE

NATA also recognises that despite best intentions and a robust accreditation system, things may go wrong. If you are experiencing difficulties with any NATA accredited laboratory and have not been able to resolve them through direct discussions, it is recommended that you contact NATA to discuss the general nature of any concerns. You should then follow this up with a written account of the issues. NATA has a comprehensive complaints handling process and treats any issues raised very seriously.

In the infrastructure sector, please direct inquiries to:

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