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The Role of Proficiency Testing in Laboratory Capacity Building in Australia

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The Role of PT in Laboratory Capacity Building

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Overview

- An introduction to NATA
- Food testing and NATA accreditation
- Promotion of PT and PT programs
- How does PT support confidence in food testing and trade?
- Limitations on the use of PT
- Other issues for consideration

General information on NATA

NATA's role is to facilitate a reliable test, measurement and inspection infrastructure. NATA is recognised by the Australian Government as:

- the national authority for accreditation of Laboratories and Reference Material Producers;
- a peak authority for the accreditation of Inspection Bodies and Proficiency Testing Scheme Providers.

The Australian Government requires NATA to:

- provide accreditation services that support and facilitates trade, economic growth and the protection of public health and safety ;
- contribute to the reduction of technical barriers to trade via maintenance of signatory status to the APLAC and ILAC Mutual Recognition Arrangements;
- Represent Australia in APLAC and ILAC.

Food testing and NATA accreditation

Accreditation programs related to food cover:

- Laboratories undertaking chemical and microbiological analysis of virtually all types of food in relation to both food safety and nutrition;
- Laboratories undertaking tests to detect biosecurity hazards with food – for import and export;
- Proficiency Testing Scheme Providers (PT providers) offering services for chemical and microbiological analyses in food and potable water.

NATA's training department has also undertaken training for Environmental Health Officers (food inspectors) in sampling techniques and sample management.

Food testing and NATA accreditation

NATA works closely with the Australian Department of Agriculture and State/Territory food safety regulatory agencies.

Why?

To ensure our accreditation programs meet the needs of regulators, industry and the wider community.

Promotion of PT and PT programs

PT providers and the areas covered by their programs are listed on the NATA website.

NATA facilitates the provision of PT programs by identifying areas of need through consultation with its technical committees.

Specifications are drafted and expressions of interest sought from PT providers.

How does PT support confidence in food testing and trade?

PT supplements a laboratory's internal quality control system and provides a means of external assessment of its testing capabilities.

NATA's requirements for PT are:

- Applicant and accredited laboratories to participate in PT activities;
- Participation in PT at least once every 2 years for each major area;
- The accreditation status of PT providers must be considered;
- PT participation plans must be formulated.

Detailed in NATA Policy Circular 2 (available from www.nata.com.au).

How does PT support confidence in food testing and trade?

For microbiological testing, participation is required in at least two rounds annually, where relevant to the scope of accreditation.

Programs are available in:

- Microbiology of potable waters;
- Carcass hygiene;
- Pathogens in food;
- Non pathogens in food.

How does PT support confidence in food testing and trade?

NATA accredited food chemical testing laboratories participate in local and overseas PT programs in areas such as:

- Pesticides;
- Food additives;
- Allergens;
- Organic and inorganic contaminants;
- Veterinary drug residues.

How does PT support confidence in food testing and trade?

The benefits of PT include:

- Comparison of performance with peers;
- Monitoring of long-term performance;
- Improvement in method performance following investigation of outliers;
- Staff education, training and competence monitoring;
- Evaluation of methods including precision and accuracy;
- Estimation of measurement of uncertainty;
- Contribution to the laboratory's risk management system;
- Confidence building with interested parties, e.g. ABs, regulators, specifiers.

How does PT support confidence in food testing and trade?

To aid capacity building, PT can be used as a means of demonstrating competency for infrequently performed tests.

While PT serves as a valuable tool to building confidence – and capacity – in the reliability of test results used to support trade, there are two points of caution:

- PT results should not be reviewed in isolation;
- PT results must be reviewed in the context of the laboratory's entire operations.

Limitations on the use of PT

There are challenges to be considered when it comes to the use of PT

1. Cost!

Other concerns from laboratories include:

- The sample type is not exactly what the laboratory is testing or is not within the analytical range they are looking at;
- Insufficient sample size for re-testing;
- Whether the sample was homogenous or not;
- When participating in international PT programs, being able to import the PT sample.

Other issues for consideration

- Laboratory capacity and capability in relation to emerging food safety issues.
- The laboratory/customer interface and the potential disconnect with food sector regulations.
- The need for clear information to importers and exporters.
- Education of relevant parties about the benefits and limitations of MRAs.

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Thank you for your time