

Metrology and Calibration Newsletter

Issue 2

April 2016

Chào mừng!

We hope you enjoyed reading the first issue and are excited to bring you issue two.

In this issue

- Changing to CMC on your Scope
- The international accreditation family
- IANZ electronic records
- Intro to IANZ CBD programme
- Proficiency Testing News
- MSL Technical Guides

Changing to CMC on your Scope

Last year we updated the Metrology and Calibration Specific Criteria document and included the



Source

definition of Calibration and Measurement Capabilities (CMC), previously known as Best Measurement Capability (BMC) and Least Uncertainty of Measurement (the latter being the term currently used on your scopes of accreditation). Now it is time to update the scopes themselves to reference CMCs. Having looked around at other Accreditation Bodies laboratories scopes of accreditation, which vary from having no mention of CMC at all to page-long definitions and rules, we think it best to go for the middle ground and include a short description of CMC on IANZ scopes. And while we're making changes we think a reference to traceability to the SI would also add value. The following example is how we intend to add this to your scope:

Calibration and Measurement Capabilities (CMC) are expressed as an expanded uncertainty with a level of confidence of approximately 95 % ($k = 2$)¹.

CMCs are traceable to the International System of Units (SI) via an unbroken chain of comparisons to the New Zealand National Standards or to the National Standards of other Signatories to the Metre Convention.

¹Unless stated otherwise the CMC is based on the performance of the best existing device and measurement uncertainties achieved for specific calibrations may be greater than the CMC. A laboratory may not report measurement uncertainties lower than its CMC. However, if the device under calibration has a greater accuracy than the device used to calculate the CMC the laboratory may be able to use the calibration data to lower its CMC. Please contact the laboratory to discuss your specific requirements.

If you have any questions about this addition to your scope, please let us know. We intend to make these changes on a lab-by-lab basis and discuss at upcoming assessments.

The international accreditation family



ILAC is the International Laboratory Accreditation Cooperation. You may have seen, or even be using, the ILAC MRA logo on some IANZ (and other international) endorsed

reports. You can apply to use the ILAC MRA/IANZ joint logo if you are an IANZ-accredited laboratory (see form [here](#)).

The primary purpose of ILAC is to establish an international arrangement between member accreditation bodies (like IANZ) based on peer evaluation and mutual acceptance.

Over 80 accreditation bodies from over 70 economies have signed the ILAC Mutual Recognition Arrangement ([ILAC MRA](#)), including IANZ and NATA. The accreditation bodies that are signatories to the ILAC MRA have been peer evaluated in accordance with ISO/IEC 17011 to demonstrate their competence. IANZ has assessments too!

The ILAC MRA signatories then assess and accredit calibration laboratories using ISO/IEC 17025, testing laboratories using ISO/IEC 17025, medical testing laboratories using ISO 15189 and inspection bodies using

ISO/IEC 17020. The results from the accredited laboratories and inspection bodies of the ILAC MRA signatories are then able to be recognised under the ILAC MRA.

IANZ is evaluated by APLAC, the Asia Pacific Laboratory Accreditation Cooperation and our last evaluation was in early 2015.

IANZ electronic records

Some of you will have noticed that IANZ is dealing almost entirely in electronic records and documents now. This means you don't have to supply forms and CAR clearances etcetera in hard-copy; emailed versions are preferred. Also, your assessment reports are sent out only electronically by default; please let us know if a hard copy is required.

Intro to IANZ CBD programme

The Chemical, Biological and Dairy (CBD) Testing Programme is comprised of eight different programmes, spanning Chemical, Biological, Dairy, Laboratory Approval Scheme (LAS), Export Laboratory Programme (ELP), Drinking Water, Proficiency Testing Provider, Reference Material Producer and Wool Testing. In total, the CBD Programme makes up approximately 290 separate accreditations.

In September 2015, the Ministry for Primary Industries (MPI) established a new standard for the laboratories operating under the Animal Products Act. The notices for the Dairy, LAS and ELP laboratories were all withdrawn and the Recognised Laboratories Programme (RLP) was established. The main focus of this new standard was to regulate all export testing and bring them under one notice.

Anne Hofstra is the CBD programme manager and this summary was provided by Don Arnold, a CBD accreditation assessor.

Proficiency testing news

There are two IANZ measurement audits in progress: MA15001 current transformer, and MA15002 class 1 pressure gauge. MA15001 has two more laboratories to participate and MA15002 has only just started, with three out of fifteen laboratories done so far.

IANZ is also considering running measurement audits for pipettes, a watt-hour meter, a class 0.25 pressure gauge and a

digital multi-meter, depending on available artefacts and input from appropriate technical experts. IANZ is pleased to be able to provide these measurement audits free of charge and with the cooperation of MSL and the laboratories who loan or give the equipment to use.

Two IANZ-accredited laboratories participated in the international APLAC programme APM026 for square, which has been draft reported and we are waiting for the final report. Two laboratories participated in APM027 for mass and we are waiting for the draft report for this one.

You can keep up to date with commercially offered proficiency tests from [Proficiency Testing Australia](#), who are accredited to ISO 17043 for providing proficiency testing programmes.

MSL Technical Guides

MSL's technical guides are available [here](#). These are written and made freely available by the scientists and technicians at MSL for use in your laboratory and cover a variety of calibration fields.

Metrology in the Media

ASTM Standardization News January / February 2016, pages 28 – 31. *By the Numbers – a feature on metrology and its place in our lives.*

Fun Bits and Internet Stuff

- For a high-level metrology fix, check out the National Physical Laboratory's YouTube channel [here](#). NPL is like the UK's version of NZ's Measurement Standards Laboratory (MSL). Make sure you've had your coffee first!
- Some nominative determinism for you: [Dr Tony Cubitt](#) is a research fellow working in quantum theory. Neat!



**Tạm biệt bây giờ,
cho đến khi thời gian
tới!**