



Activities of the National Measurement Institute, Australia (NMIA) in supporting the fight against Covid-19

The National Measurement Institute, Australia (NMIA), a division of the Australian Government Department of Industry, Science, Energy and Resources (DISER), has been working proactively to support the Australian Government's response to Covid-19 by collaborating with Australia's manufacturing, health, food, and environment sectors to give consumers confidence in the quality of products and services.

Together with the members of the Australian Technical Infrastructure Alliance, the bodies responsible for Australia's ["quality infrastructure"](#), NMIA is part of a coordinated Australian approach to ensure that stakeholders have access to standards and conformance expertise and capabilities in responding to the current crisis.

NMIA's expertise and partnerships allow us to be flexible, innovative, and responsive in supporting industry and government in this time of crisis. Specifically, NMIA has been instrumental in:

- Being a central point of contact for queries about testing to documentary standards for Personal Protective Equipment (PPE) and other critical supplies, and providing advice on testing available within Australia.
- Developing measurement standards for Covid-19 that will enhance quality assurance programs for Australia's clinical laboratories. Ensuring comparability in pathology testing for Covid-19 will minimise instances of false positive and false negative results through the provision of reference materials and controls for molecular diagnostics. Accurate testing is key to managing Covid-19 outbreaks and confirming that it is safe to reopen the economy.
 - As a specific example, NMIA is working with an Australian test kit manufacturer to calibrate a positive control material for use in their test kits. This work will be a test case of this type of 'calibration service' for test kit manufacturers and supports Australian kit developers, reducing reliance on overseas producers.

- Establishing an independent capability to test face masks to required documentary standards, as well as capabilities to support organisations achieve accreditation of their testing capabilities and to support industry comply with regulatory requirements.

NMIA also has relevant expertise and specialist capabilities in areas including:

- Calibrating precision machining instruments, coordinate measurement machines, and 3D laser scanners that need to be re-set in repurposed production lines.
- Analysis of nanoparticle based disinfection systems and nanobubbles in cleaning units: characterisation of size, size distribution, and surface charge.
- Assessment of ultraviolet (UV) sterilisers that clean surfaces/air to measure UV flux, including assessment of effectiveness and safety.
- Calibration of ear thermometers (including EN12470-05, ASTM E-1965-09) and thermal imagers.
- Gas and liquid flow, flow rate and viscosity for manufacturers of Continuous Positive Airway Pressure (CPAP) devices.
- Reference gases (pure and mixed gas standards for calibrating gas analysers).
- Food and water testing, including allergens, pathogens, organic and inorganic chemical contaminants, and foreign objects (e.g. metal filings)
- Testing medical devices for residual sterilising agents (ethylene chlorohydrin and ethylene oxide) and product safety and compliance testing for pharmaceuticals including capabilities accredited by the TGA.

See also: <https://www.industry.gov.au/news-media/covid-19-news/national-measurement-institute-helping-the-health-and-manufacturing-industry-respond-to-covid-19>.

For more information, please e-mail covid19@measurement.gov.au.