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:

- acted as a central point of contact for queries about testing to documentary standards for Personal Protective Equipment (PPE) and other critical supplies, and provided advice on testing available within Australia
- developed and certified a new measurement standard for SARS-CoV-2, the virus which causes COVID-19. NMIA's SARS-CoV-2 reference material is one of only a few in the world to achieve traceability to the International System of Units. This certified reference material can be used to determine whether current methods can detect very low amounts of virus, thereby giving greater certainty that infected people can be identified reliably
- established an independent capability to test face masks to required documentary standards, as well as supporting organisations to achieve accreditation for their testing capabilities, and supporting industry to demonstrate regulatory compliance. NMIA is accredited by Australia's National Association of Testing Authorities (NATA) for its mask testing capabilities

- developed an accredited capability to test hand sanitisers for alcohol type and content, for comparison against the WHO-recommended formulations and to ensure alcohol content matches the statement on product labels.

NMIA also has expertise and specialist capabilities in areas including:

- calibrating precision machining instruments, and coordinating measurement machines and 3D laser scanners that need to be re-set in repurposed production lines
- analysing nanoparticle based disinfection systems and nanobubbles in cleaning units: characterising size, size distribution, and surface charge
- assessing ultraviolet (UV) sterilisers that clean surfaces/air to measure UV flux, including assessing effectiveness and safety
- calibrating 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
- providing 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 Therapeutics Goods Administration of Australia.

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.