



FACTSHEET

## COVID-related measurement capabilities

*The National Measurement Institute (NMI) delivers Australia's top-level measurement infrastructure and services to ensure that measurements in Australia are reliable, fit-for-purpose and accepted internationally.*

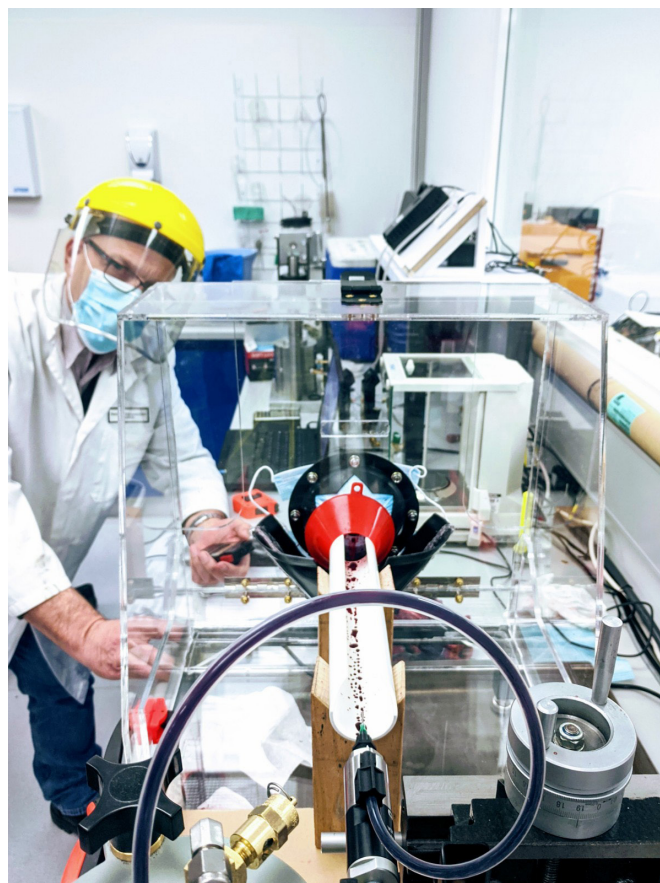
*NMI is currently working closely with other government bodies to support Australian manufacturers and testing facilities in the fight against COVID-19. It is essential that Australia's testing facilities and capabilities can adequately meet the current challenges. This helps ensure that goods and processes are tested to deliver quality products, including personal protective equipment (PPE), where needed.*

### Testing capabilities

NMI can carry out a variety of tests on products such as PPE, including eye and face protection and various medical devices. Included below is a list of our testing capabilities for products including PPE, hand sanitisers and medical devices.

#### ***PPE: Masks—Levels 1–3; Respirators—P1, P2, P3; Face Shields***

- NMI is NATA accredited to test masks for compliance with AS 4381:2015, *Single-use face masks for use in health care*, or to carry out any of its constituent tests:
  - Differential Pressure Drop (breathability)
  - Synthetic Blood Penetration (fluid resistance)
  - Bacterial Filtration Efficiency
- NMI can undertake the following tests for compliance with AS 1716:2012, *Respiratory protective devices*:
  - Inhalation resistance
  - Exhalation resistance
- NMI can carry out the following tests on face and eye shields for compliance with AS/NZS 13371:2010, *Personal eye protection, Part 1: Eye and face protectors for occupational applications*
  - Optical testing
- NMI can undertake NATA accredited calibration of required reference equipment (infusion pumps, flowmeters, pressure indicators, temperature, humidity etc.)



## Hand sanitisers

NMI can analyse the alcohol type and concentration in hand sanitisers to determine compliance with TGA and ACCC guidelines.

Note: As at March 2021, NMI is the only laboratory in Australia to be NATA accredited for this test.



## Medical devices

NMI can undertake the following tests:

- **Medical devices:** testing for residual sterility (sterilising agents—ethylene chlorohydrin and ethylene oxide)
- **UV lamps and steriliser systems** for air, water and surface sterilisation: assessment of performance (UV irradiance and spectrum) and safety (IEC 62471:2006, *Photobiological safety of lamps and lamp systems*)
- **UV detector standards:** NATA accredited calibration of sensors used to monitor and assess UV systems performance and safety
- **Infusion pumps:** calibration to the requirements of AS60601.2.24:2018, *Medical electrical equipment, particular requirements for the basic safety and essential performance of infusion pumps and controllers* (flow characteristics)
- **Clinical ear and forehead IR thermometers:** NATA accredited temperature calibration to the requirements of ASTM E1965-98 (2016), *Standard Specification for Infrared Thermometers for Intermittent Determination of Patient Temperature*
- **Blackbody reference sources:** NATA accredited temperature calibration of blackbodies used for calibrating and testing ear and forehead infrared thermometers and thermal imaging systems
- **Thermal imagers:** NATA accredited temperature calibration of thermal imagers to the requirements of IEC 80601-2-59, *Medical electrical equipment—Particular requirements for the basic safety and essential performance of screening thermographs for human febrile temperature screening*

- **Strip thermometers:** NATA accredited temperature calibration to the requirements of ASTM E1061-1 (2014), *Standard Specification for Direct-Reading Liquid Crystal Forehead Thermometers*
- **Ventilator-calibrators:** Performance testing of ventilator-calibration systems for flow rate, temperature, pressure, humidity and oxygen level
- **Cold-chain and sterilisation:** NATA accredited calibration of temperature reference equipment from -200°C to 2900°C



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## Improving measurement reliability

### Supporting molecular biology and genetics applications

NMI has developed a certified reference material for SARS-CoV-2, the coronavirus that causes COVID-19. This reference material can be used to calibrate SARS-CoV-2 pathology test kits and validate sensitivity of molecular assays in a range of applications, including wastewater screening.

NMI is coordinating an inter-laboratory study for wastewater screening in collaboration with Water Research Australia and other water sector stakeholders. This will enable laboratories across Australia and New Zealand to compare results, improving consistency across jurisdictions.

### Strengthening industry testing capabilities

NMI offers research consultancy services to assist laboratories with method development and provides independent expert technical review to support confidence in measurement results.

### For further information

To discuss how NMI can support your testing needs, please email [Covid19@measurement.gov.au](mailto:Covid19@measurement.gov.au) or phone 1800 020 076.