## We are on the cusp of an on-the-spot COVID test

In an Australian first, [University of Technology Sydney] scientists have used novel optical technology to design a highly sensitive saliva test for the SARS-CoV-2 virus antigens, or viral protein fragments. The test can deliver a positive result in under 15 minutes.

The rapid antigen test collects saliva in a cartridge placed in an existing hand-held device, first developed by Perth company Alcolizer for illicit drug testing. Customised iStrip technology measures the viral load in the saliva sample, even at very low levels, and displays the result on the instrument's small screen. The device has GPS location technology and integration to cloud reporting tools to assist with contact tracing.

The test bypasses the time-consuming molecular amplification currently in use. With the quick turnaround of results and a cost of less than \$25 per test, it would allow testing rates to increase.

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Almost all testing for COVID-19 in Australia – more than 8.1 million tests to date – has used the gold standard PCR (polymerase chain reaction) test, where samples are analysed in a laboratory over several hours. However, with the global pandemic not yet at its peak, rapid antigen tests are attracting increasing attention.

Short of a vaccine, our best hope for returning to normal life lies in a fast, highly sensitive and accurate testing regime.

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