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Researchers use Agilent's spectrometer for COVID-19 detection via saliva screening in Australia

February 25, 2022 | News

Methodology developed by QIMR Berghofer researchers utilizing the Agilent Cary 630 FTIR Spectrometer



Agilent Technologies Inc. has announced that researchers from the QIMR Berghofer Medical Research Institute in Brisbane, Australia, collaborated with Agilent experts on a proof-of-concept FTIR-based saliva COVID-19 testing workflow using the Agilent Cary 630 FTIR Spectrometer.

The study investigated the pathophysiological response to a COVID-19 infection through ATR-FTIR spectroscopy. The researchers acquired infrared spectra of saliva samples following a quick and simple sample preparation requiring only ethanol and basic laboratory equipment. An infrared spectrum can be considered as a biochemical snapshot of the saliva sample including a COVID-19 immune response signature.

Unlike other testing technologies such as PCR testing or rapid antigen test, the ATR-FTIR method analyses the pathophysiological responses of the human body rather than detecting the pathogen/antigen itself, which is thought to make this method more robust against virus mutations. The results demonstrate the advantage of using the Cary 630 FTIR Spectrometer in advanced infectious disease research.

Andrew Hind, associate vice president of Research and Development for the Molecular Spectroscopy Division at Agilent said, “It emphasizes the potential of ATR-FTIR spectroscopy for life science and infectious disease research. Agilent funded parts of this research work through the Agilent Technologies Applications and Core Technology - University Research Grant and provided the Cary 630 FTIR Spectrometer. We will continue to support work in the field of COVID-19 and infectious diseases research.”

The research was further funded by the QIMR Berghofer Medical Research Institute and The Prince Charles Hospital Research Foundation.