Walt Baenziger

Expert in the Building Sciences
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Re: Rapid Detection of SARS-CoV-2 (COVID-19) by Quantitative PCR

Walt Baenziger is now testing to confirm the presence/absence of SARS-CoV-2, otherwise known as COVID-19, on surfaces. This is NOT *Clinical sampling (human testing).*

BACKGROUND AND TRANSMISSION

According to the U.S. Centers for Disease Control and Prevention (CDC), COVID-19 is a respiratory illness that can spread from person-to-person. The main infection route is between people who are in close contact with one another (within about 6 feet) through respiratory droplets produced when an infected person coughs or sneezes. It also may be possible that a person can contract COVID-19 by touching a surface or object that has the virus on it, and then touching their own mouth, nose, or eyes. Currently, transmission from surfaces is not thought to be the main way the virus spread, however the CDC's April 13th update remarked: *"COVID-19 is a new disease and we are still learning about how it spreads and the severity of illness it causes."*

SURFACE CONTAMINATION

Recent studies suggest that the SARS-CoV-2 virus may remain viable and infective on surfaces for hours to days, depending on the surface's material type (fabric, tile, steel, etc.). Thorough cleaning and disinfection of frequently touched surfaces are recommended by the CDC and believed to be essential in preventing the spread of infection1. The presence or absence of the viral genetic material on environmental surfaces can now be directly tested with the new SARS-CoV-2 molecular-based test and used to demonstrate effectiveness of cleaning protocols.

RESULTS INTERPRETATION

This SARS-CoV-2 test by qPCR provides data to meet the objectives of the World Health Organization (WHO) Guidance Document "Surface sampling of coronavirus disease (COVID-19) A practical 'how to' protocol for health care and public health professionals, namely: "to assess the extent and persistence of surface contamination of COVID-19".
Results are reported in either 'Detected' or 'Non-Detected' for two indicators of the SARSCoV-2 coronavirus, per swab, as directed by the CDC. Indicator one is 2019-nCoV_N1 and indicator two is 2019-nCoV_N2. Both indicators detect the nucleocapsid protein 'N' gene of the SARS-CoV-2 coronavirus. A result of 'Detected' for either indicator can be interpreted with confidence that the area swabbed did contain SARS-CoV-2 coronavirus particles that could be deemed as potentially infectious.

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