AirGradient's COVID-19 Index

Learn more about how AirGradient's COVID-19 Index can help create safer indoor spaces.

AirGradient's C-19 Index helps facility operators and owners identify environmental factors that can be improved to create safer indoor spaces. The C-19 Index allows immediate recognition of spaces where ventilation, temperature, or humidity may be adjusted to decrease the risk of viral transmission. The C-19 Index is based on current recommendations from WHO, REHVA, ASHRAE, and peer-reviewed studies specific to COVID-19 transmission risk.

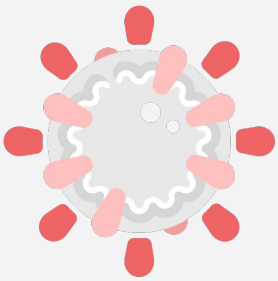
The C-19 Index does not represent or calculate the quantified transmission risk. This is not possible by any index since the transmission risk's relationship to measurable environmental factors have not been adequately proven. Furthermore, additional factors such as mask wearing, occupant profile, activity and occupant density have not been quantified.

Additionally, the emergence and coexistence of virus variants with vastly different transmissibility complicates quantified transmission risk. The AirGradient C-19 Index instead is designed to provide insight to areas where transmission risk can be decreased through the adjustment of ventilation, temperature, and humidity.

Ventilation & CO2

Elevated CO2 levels serve to identify spaces that are poorly ventilated. Increasing ventilation decreases the transmission of COVID-19 through aerosols, and may decreased the deposition of aerosolized particulates on surfaces.

The C-19 Index follows REHVA's guidance to set CO2 set-points to 550 ppm, and REHVA and US CDC's recommendations of 800 ppm during pandemic conditions. The C-19 indicator calculation then progressively increases with higher CO2 levels.



Temperature

REHVA and ASHRAE state that temperature has little effect on the transmission of the SARS-CoV-2 virus at normal indoor temperatures. Studies do show exponentially increased half life on surfaces at lower temperatures.

The C-19 indicator calculation begins at 20C and progressively increases with lower temperatures.

Humidity

Humidity has little effect on the viability of the SARS-CoV-2 virus until very high humidity levels of above 80% RH. However, REHVA and ASHRAE state that humidity contributes to droplet nuclei forming, and susceptibility of occupants' mucous membranes.

Based on these guidelines, the C-19 indicator calculation begins at 30% RH and progressively increases with lower humidity.

Contact us for more information

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