

## **Environmental Consultant Offers Science & Data on Stopping Contagious Disease**

Environmental consultant Keith Roe has been taking the mystery out of airborne transmission of bioaerosols, viruses, and toxins over the last year and a half for businesses and organizations along the east coast of the US with his company's scientific testing and purification protocols.

Before and throughout the recent pandemic, Keith Roe of Advanced IAQ Solutions, Inc. has been providing real world testing, data, and research from actual businesses and organizations including schools, daycare centers, restaurants, private companies, and corporations. This testing shows viral clouds containing disease and toxins such as MRSA (Methicillin-resistant Staphylococcus Aureus), mycotoxins from mold, endotoxins from bacteria, staphylococcus, ecoli, SARS/Covid (SARS-CoV SARS-CoV-2), and other bacterias commonly found are real and can be removed with proper HVAC controls, air purification/disinfectant equipment and increased building maintenance procedures.

Particularly in light of concerns about the new Covid Delta variant, there is proven information from testing along with protocols that can be put in to place for those concerned who want to ensure safety in their public and private environments.

According to Roe, “The advent of the Coronavirus from SARS CoV-2 transmission has done much to draw attention to the necessity of the cleanest and purest indoor air people can experience. The transmission of contagious disease by contact with others and touching contaminated surfaces is possible. However, the primary transmission route for airborne bioaerosols and any type of virus is through breathing contaminated air. The viral cloud is real and can remain inside a building for hours.”

The following practical and detailed guidance issued by the ASHRAE Epidemic Task Force is referenced by Keith Roe. This guidance is based on the concept that within acceptable limits; ventilation, filtration, UVC, and air cleaners are very effective in stopping transmission of contagious disease. Filters and air cleaners utilizing technology to remove airborne particles that can convey the contagious bioaerosols and can also assist in inactivating them have a proven track record. That includes the use updated HVAC filters that achieve MERV 13 or better levels of particle arrestance for conditioned indoor air recirculated by HVAC systems.

Roe relayed that studies have shown that obtaining as many air changes as possible per hour of fresh air within the occupied space will flush out airborne contaminants. Flushing out occupied spaces between periods of dense and extended occupancy using the goal of 3 equivalent fresh air changes per hour should be done whenever possible. When HVAC equipment can't meet the required fresh air ventilation standards of at least 6 air changes per hour, the addition of HVAC mounted UVC / BPI systems within the AHU and cleaned supply ductwork has shown promise to be an effective back up. The additional use of MERV 20 HEPA filters in portable air purifiers within the space near a likely source of airborne particulates or bioaerosol transmission is merited.



Finding air cleaners that can provide evidence of effectiveness in removing airborne particles and inactivating viruses & bioaerosol contaminants requires some careful research which Advanced IAQ Solutions provides to those interested. The consultations are free and even single individuals or small businesses and organizations with minimal resources can easily get help directly or on the company's website.

There is an area of controversy at this time as to the validity of the testing methods used to establish efficacy. Roe's company is independent of the manufacturers and has conducted testing in numerous facilities they service that shows the effectiveness of removing toxins, bioaerosols, and viruses from the indoor air and backs up the larger studies referenced. This data can be provided and explained by contacting Advanced IAQ Solutions, Inc. for those needing assistance.

For more information, those interested can also read the Epidemic Task Force *Filtration and Disinfection Guide* <https://www.ashrae.org/file%20library/technical%20resources/covid-19/ashrae-filtration%20disinfection-c19-guidance.pdf> and *ASHRAE Position Document on Filtration and Air Cleaning, reaffirmed February 2, 2021*. Reading the study and test results provided by manufacturers & field testers like Advanced IAQ Solutions, and comparing them to those guidelines is worthwhile homework prior to purchasing any portable units or building level installed units.

Keith Roe shared the following when asked how to go about protecting one's indoor air from threats. "Remember, it's science backed facts people should follow, not just well written marketing promises of performance. Knowing where the unit will be located to provide as much air flow as possible throughout the space should be part of your pre-purchase planning. Don't forget the recommendation of at least 3 air turns per hour. That will require knowing the cubic feet per hour rate of conditioned air from the unit and dividing it by the cubic feet in the space. Last but not least, know what maintenance schedule the unit requires, the frequency of filter & media, and UV bulb changes & the associated costs."

According to Roe and his knowledge obtained from years of field test results and decades of Environmental Restoration projects, a combination of these proven, preventative steps will produce the best results. An investment of time and money in these areas will pay back with better health, safety, and peace of mind.

Advanced IAQ Solutions, Inc.

Keith Roe CIE/CMC

[Keith.roe@rcn.com](mailto:Keith.roe@rcn.com)

[www.advancediaqconsulting.com](http://www.advancediaqconsulting.com)



