

## Novaerus Defend 1050 Proven to Reduce Coronavirus Surrogate by 99.99%

*The portable air dis-infection device has been independently tested and shown effective at reducing MS2 Bacteriophage, a surrogate for SARS-CoV-2 (COVID-19), by 99.99% in 15 minutes.*



Novaerus, an Irish company that manufactures and sells patented medical-grade, clean air solutions, has announced successful independent test results for its most powerful solution, the [Defend 1050](#). The portable air dis-infection device has been [shown effective](#) at reducing MS2 Bacteriophage, a surrogate for SARS-CoV-2 (COVID-19), by 99.99% in 15 minutes.

The Defend 1050 combines rapid air dis-infection and purification into one safe and portable device. Designed for continuous cleaning of the air in large spaces and rapid remediation in situations with a high risk of infection, the Defend 1050 uses Novaerus patented ultra-low energy plasma technology combined with a triple-stage filtration system from Camfil®. As Novaerus plasma is a non-selective, rapid killing technology, it offers a unique and safe solution to kill airborne viruses 24/7, reducing the risk of disease and infectious outbreaks.

There is mounting research to suggest that clean, disinfected air plays a vital role in preventing the spread of SARS-CoV-2, the virus causing COVID-19. While respiratory droplets are considered the primary transmission route, aerosols are being considered by many health authorities as a possible mode of infection transmission. This suggests that viral particles can remain suspended in the air for long periods and can be inhaled.

To test the virus-destroying power of the Defend 1050, Aerosol Research and Engineering (ARE) Laboratories (a GLP certified laboratory), undertook experiments to investigate how effectively the device could remove small aerosolized viral particles from the air, to characterize how the



device might work on capturing the particles that carry infectious viruses.

They performed the experiments in their Bioaerosol Test Chamber, which is located in their U.S. lab. The test chamber is 16m<sup>3</sup>, about the size of a small room. The Defend 1050 was placed in this sealed environment with aerosolized MS2, which is a viral RNA bacteriophage that is commonly used as a surrogate for the influenza virus and now being considered as a surrogate for other RNA viruses such as SARS-CoV-2.

### *Successful Test Results*

When tested against MS2 bacteriophage, the Defend 1050 showed a high net reduction in a short amount of time. By the 15-minute time point, results showed an average 4.14 net LOG reduction, which equates to a 99.99% reduction in MS2 bacteriophage.

“The methods that are used by labs like Aerosol Research and Engineering are informed by consensus standards and established by international bodies and scientists,” says Dr Kevin Devlin, CEO at WellAir, the parent company of Novaerus. “Therefore, we are confident that the tests are indicative of how effective the Defend 1050 can be when removing viruses, like coronavirus, from the air.”

The efficacy of the Defend 1050 was also recently recognised by Chinese Health Authorities and registered on China’s National Online Record Information Service Platform for Disinfection Products. The Platform recognises products it deems suitable for disinfection in healthcare facilities, with all products independently tested to ensure compliance with national hygiene standards.

“We know conclusively that infection can be transmitted on air currents over distances, by direct and indirect contact or a combination of all three routes,” says Dr Felipe Soberon, Chief Technology Officer at WellAir. “These latest test results prove that the Defend 1050 is ideal for mitigating the risk of airborne dissemination of infection and contamination of surfaces and hands by reducing the bioburden in the air.”

As research continues, one thing is increasingly clear; standard infection prevention and control protocols need reinforcement. Many hospitals worldwide have installed Novaerus technology to help reduce transmission of SARS-CoV-2 among healthcare workers and patients. Novaerus recently donated several air disinfection devices to two hospitals in Wuhan, China, Wuhan Xincheng Hospital, and Wuhan Third People’s Hospital, to help them reinforce their virus protection protocols. Among the donation of goods was a Defend 1050 for each facility.

“To successfully control the spread of pathogens and viruses, we need to close the infection control loop; hands, surfaces and air,” says Dr Kevin Devlin, CEO at WellAir. “Our unique technology is a facility’s first line of defence against infectious outbreaks”.

### **About Novaerus**



Novaerus is part of WellAir, an Irish company on a mission to reduce indoor airborne pollutants to create living, working, and healing spaces that foster rather than detract from human health, productivity, and wellbeing. WellAir and its brands, Novaerus and Plasma Air, can be found installed in hundreds of hospitals, senior living facilities, schools, casinos, railway stations, residences, and industrial facilities in more than 50 countries around the world.

For more information, visit [www.novaerus.com](http://www.novaerus.com).