

NASA-Based ActivePure Technology[®] Rapidly Reduces 99.9% of Airborne SARS-CoV-2 Virus in FDA-Compliant Military Lab Tests

Developer Scaling Production to Meet Global Pandemic Needs

DALLAS, TX: December 14, 2020: ActivePure Technologies, LLC, announced that its air purifying technology inactivated over 99.9% of highly concentrated airborne SARS-CoV-2 virus in an enclosed setting in just 3 minutes, below detectable levels. Testing of the ActivePure Technology[®] was conducted by one of the world's top biosafety testing facilities, the University of Texas Medical Branch (UTMB), which primarily tests for the U.S. military and the Centers for Disease Control (CDC).

"These results demonstrate the effectiveness of the technology in a laboratory setting," said Dr. William S. Lawrence, PhD, director of the Aerobiology Services Division at UTMB's Galveston National Laboratory.

ActivePure Technologies foresees widespread use of the technology to reduce the amount of SARS-CoV-2 virus present in the air and on hard surfaces in commercial, residential, and medical settings. ActivePure Technology has been on the retail market as an air purifier for more than 10 years. It is installed as part of HVAC systems or as the core technology inside the company's portable air purification units. ActivePure Technologies currently sells about 500,000 ActivePure units annually across all brands and product lines but is seeing an enormous increase in demand from its distributors due to the pandemic.

"ActivePure Technology enables us to go on the offense against airborne coronavirus with real-time elimination of viral particles so we can reclaim the spaces – the gyms, restaurants, diners, theaters, beauty salons and barber shops – that are near and dear to our hearts," said Joe Urso, Chairman and CEO of ActivePure Technologies, LLC. "Unlike conventional, passive, filtration-based air purifiers, ActivePure works immediately and does not require capture or exposure time. It rapidly and continuously fills a room with virus-neutralizing particles that instantly break viruses down to their component parts, rendering them harmless."

"ActivePure surrounds a person with protective virus-inactivating air," Urso added, "which is especially important in a medical setting. I think of it as a form of Personal Protective Equipment (PPE)."

The Cleveland Clinic is conducting a 2-year study with ActivePure units in its operating rooms to see if the technology can reduce surgical site infections. Daniel Sessler, M.D., chair of outcomes research, said, "The Cleveland Clinic continuously adapts practices to ensure we are providing the safest care for our patients."

"In this deadly pandemic," Urso added, "people must have air they can trust."

The UTMB research was conducted in late November 2020 in a Bio Safety Level (BSL)-3 and -4 laboratory, which studies the world's most deadly pathogens.¹ Currently, nearly all BSL-4 analysis is dedicated to Centers for Disease Control and Prevention (CDC) and military testing. According to the CDC, BSL-4 facilities "are used to study agents that pose a high risk of life-threatening disease."²

The tests were done in triplicate, according to FDA guidelines and protocols. Live SARS-Cov-2 virus was sprayed into a test chamber at extremely high concentrations (7+ logs, or over 10 million particles per milliliter).

Within 3 minutes, ActivePure Technology-based Aerus[®] Pure & Clean and Vollara[®] Air & Surface Pro units, calibrated to their lowest setting of only 29 cubic feet per minute of air movement, reduced the concentration of the virus to no more than 1.6 logs, a reduction of 99.96%. The lab was able only to measure down to 1.6 logs, so the actual results may have resulted in a 99.99% or greater reduction.³ The units only used the ActivePure Technology; all other purification technologies in the units were disabled or removed.

Andy Eide, Vice President of Engineering of ActivePure[®] stated, "We believe the best defense is a good offense. Going out on the attack and proactively neutralizing SARS-CoV-2 viruses is a highly effective way to minimize the amount of virus that reaches your mask or lands on surfaces you may touch." He added, "We manufacture nearly 100 different products with ActivePure, addressing concerns in every imaginable environment from homes to offices, hotel rooms, elevators, and even cars."

A full report by the lab is expected before the holidays, said Urso.

He added, "The November research found that ActivePure technology produces enormous reductions in three minutes, but shorter durations were not tested. We will now be testing efficacy in just 30, 60 and 120 seconds to see how quickly we can achieve similar or better results. And we will be working with the BSL-3 and 4 labs to test other highly contagious pathogens in the future."

About ActivePure Technologies, LLC

In 2017, ActivePure Technologies LLC, formerly known as Aerus Holdings LLC, was recognized by the Space Foundation as the only surface and air-purification technology to effectively adapt and market technology originally developed for NASA to improve the quality of life for all humanity, when it was inducted into the Space Technology Hall of Fame at a reception sponsored by SpaceX.⁴

ActivePure is a patented scientific process that dispatches super-charged, sub-microscopic particles at tremendous speed. These particles are created by reactions between ambient water and oxygen molecules, a patented matrix coating, and a specific wavelength of UVC light. The particles collide with viruses, bacteria, and air pollutants and immediately turn them into harmless elements.

¹ <https://www.scientificamerican.com/article/facing-down-the-world-s-deadliest-pathogens-in-a-bsl4-lab/>

² <https://www.niaid.nih.gov/research/biodefense-biosafety-labs>

³ 'Log Reductions' convey how effective a product is at reducing pathogens. The greater the log reduction, the more effective the product is at inactivating bacteria and other pathogens that can cause infections. A 1 log reduction means reducing something by 9 times, a 2 log reduction means reducing something by 99 times, a 3 log reduction means reducing something by 999 times or 99.9%, etc.

⁴ <https://www.spacefoundation.org/what-we-do/space-technology-hall-of-fame/>

The technology has been used for several years by HVAC installers and as portable units because of its proven pathogen-reducing power. Over one million ActivePure systems are currently in use to help safeguard front-line workers in hospitals such as the Cleveland Clinic and in government buildings, including the Texas State Capitol, homes, restaurants, offices, and other public spaces.

The FDA in June cleared ActivePure technology, deployed in an Aerus Medical Guardian unit, as a Class II Medical Device for use in occupied rooms to inactivate six different pathogens, including an RNA virus similar to SARS-CoV-2.⁵ Previous research found that ActivePure inactivates the COVID-19 virus on surfaces.⁶

Other publicized systems, such as HEPA, UV light, and MERV-13 are passive, slow, and may trap pathogens, but fail to inactivate them. Many others are so dangerous that people and pets cannot be in the room when they are operating.

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⁵ <https://www.biospace.com/article/releases/aerus-announced-today-that-it-received-class-ii-medical-device-clearance-from-the-us-food-and-drug-administration-fda-for-the-aerus-medical-guardian/#:~:text=DALLAS%2C%20TX%20%2F%20ACCESSWIRE%20%2F%20June,the%20Aerus%20Medical%20Guardian%20with>

⁶ <https://www.activepure.com/covid/>