

A disinfection system that could neutralise COVID-19 in a few minutes

October 27 2020



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Cedrión, a company supported by the Universidad Carlos III de Madrid (UC3M), has designed a disinfection system that could neutralize COVID-19 in just over 10 minutes. The system uses atmospheric plasma

to disinfect spaces and surfaces and neutralizes almost all airborne bacteria and viruses.

The disinfection system is similar in size to a desktop computer and can be placed in any space, such as a room or car, to disinfect surfaces using cold atmospheric plasma. "We're developing systems based on our patented cold atmospheric plasma generating technology. Broadly speaking, we subject the surrounding air to a very strong electrical field, pulling electrons from the neutral particles in the air and forming ions. This system can generate up to 70 different types, from ultraviolet rays to peroxides, ozone, or nitrogen oxides. The synergies between these allow bacteria and viruses to be neutralized," notes Enrique Medina, CEO and co-founder of Cedrión.

Based on this technology, Cedrión can be used in two ways: it can be used to clean the air and surfaces. The first is a silent system which disinfects rooms that have people inside, it recirculates the air and neutralizes bacteria and viruses. The second use cleans any [surface](#) in the room when it is empty. To do this, the system releases ions which, once disinfected, are reconnected in neutral particles.

The testing of this disinfection system will begin in November at the Spanish National Centre for Biotechnology (CNB-CSIC, in its Spanish acronym), testing the neutralization of the strains of Coronavirus that affect humans, including SARS-COV-2. The start-up, which was housed in the UC3M—ESA BIC Madrid Region node until 2019, plans to have the system tested and certified by the end of this year so that it can be installed in hospitals, schools, and offices, among other spaces.

"We have tested the system using different types of [bacteria](#), being able to neutralize 99.99% in less than a minute. We've also started testing strains of the Coronavirus that do not affect humans, and have had some very promising results," Medina concludes.

Provided by Carlos III University of Madrid

Citation: A disinfection system that could neutralise COVID-19 in a few minutes (2020, October 27) retrieved 26 April 2024 from <https://medicalxpress.com/news/2020-10-disinfection-neutralise-covid-minutes.html>

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