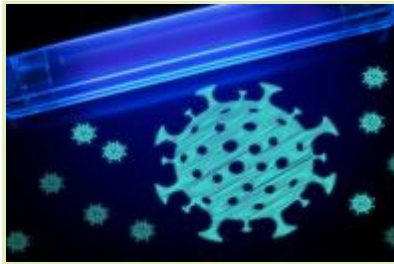


Are Germicidal Lamps Effective on SARS CoV-2 Coronavirus?

By **IVT Staff** Sep 17, 2020 7:00 am EDT



Ultraviolet-C Radiation has been used extensively in commercial buildings to aid in the disinfection of water, and nonporous surfaces, and is extremely effective inside air ducts to disinfect the air. UVC lamps are also commonly used in home and office to sanitize personal spaces. This technology, which has been used for decades, is a known tool in the reduction of the spread of bacteria, such as tuberculosis, but is it effective in stopping the spread of COVID-19 virus? The answer is Yes and No.

According to the FDA's "*UV Lights and Lamps: Ultraviolet-C Radiation, Disinfection, and Coronavirus*", while there have been some studies conducted, there is limited published data about the wavelength, dose, and duration of UVC radiation required to inactivate the SARS-CoV-2 virus. This is of importance especially to users of UVC lamps created for in-home, or non-commercial use, as those units tend to deliver a much lower dose of radiation than larger commercial unit and may nevertheless cause skin or eye damage if used in close proximity to humans.

In a recent report published in *nature.com*, researchers studying the Far-UVC light (222 nm) on coronavirus found that far-UVC light could provide a major reduction in the ambient level of airborne virus in occupied indoor environments. Using current regulatory exposure limit (~3 mJ/cm²/hour) would result in ~90% viral inactivation in ~8 minutes, 95% in ~11 minutes, 99% in ~16 minutes and 99.9% inactivation in ~25 minutes. While important findings, the lack of published studies supporting this connection continue to lend uncertainty.

The FDA also points out that there are other concerns with UVC lamps, including improper installation, user error, or the inability of the UVC rays to reach the virus should it be covered in dust, human fluids or embedded in porous surfaces, all of which can lead to health and safety concerns.

At this time, it is not advisable to rely on the inactivation of the COVID-19 virus solely based on exposure to UVC lamps purchased for home use. Use of disinfecting agents, such as 70% isopropyl alcohol solutions, for surface contamination, coupled with the use of face masks, social distancing and a stringent handwashing routine continue to be recommended.

In summary, while initial research does demonstrate that SARS CoV-2 coronavirus can be deactivated using Far-UVC light, more needs to be understood about proper dose, exposure time needed and what surfaces can be sanitized and in what environments. Further, proper instruction on handling and administering of effective UVC protocols would need to be introduced in order for this method of sanitization to be considered reliable and effective against COVID-19.

[More from the FDA on Ultraviolet Lights](#)

Study Far-UVC light (222 nm) efficiently and safely inactivates airborne human coronaviruses

News Scientists make breakthrough with UV-emitting gadgets that reportedly can kill coronavirus on contact

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