

Study Shows Ushio's Care222® Lamps Effectively Inactivate SARS-CoV-2 (the COVID-19 Virus)

Cypress, California (September 2020) – Dr. Hiroki Ohge, Professor, Department of Infectious Diseases, Hiroshima University Hospital, and a group of researchers lead by Dr. Takemasa Sakaguchi, Professor, Hiroshima University Graduate School of Biomedical and Health Sciences, have completed a research study that demonstrates that irradiation with filtered 222nm UV-C light effectively reduces SARS-CoV-2 in an in vitro experiment. This is the first study conducted in the world on the efficacy of 222nm UV-C light against SARS-CoV-2, the virus causing COVID-19. The research paper regarding this study is published on the American Journal of Infection Control and can be accessed [here](#).

In this study, Ushio's Care222® UV-C disinfection* module was placed 24 cm above the surface of the plates in which the viral samples were placed. The radiation intensity at the surface of the plates was 0.1 mW/cm². The study showed that 3 mJ/cm² of 222nm light resulted in at least a 99.7% reduction of viable SARS-CoV-2 samples. The researchers concluded that the study demonstrated the effectiveness of 222nm UVC irradiation on SARS-CoV-2. The researchers further noted that the results suggest that the 222nm UVC technology could be used for infection prevention and control against COVID-19 both in occupied and unoccupied spaces.

It is important to use filtered 222nm UV-C light in occupied spaces. Unfiltered 222nm UV-C lamps will emit radiation in the 230nm (UV-C) to 320nm (UV-B) range. Irradiation without blocking these higher wavelengths of light has been reported to cause erythema and damage to the cellular DNA at considerably lower levels than filtered 222nm light.

Ushio's Care222 device features a specially designed band pass filter that is based on groundbreaking research and technology developed by Columbia University and filters the longer UV wavelengths from the lamp.

For more information about the properties of 222nm UV light and Care222 excimer lamps, please visit <https://www.ushio.com/product/care222-mercury-free-far-uv-c-excimer/>.

*Any references to "disinfection" are referring generally to the reduction of pathogenic bioburden and are not intended to refer to any specific definition of the term as may be used for other purposes by the U.S. Food and Drug Administration or the U.S. Environmental Protection Agency.

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