



222nm Wavelength UV Published Research

[Germicidal Efficacy and Mammalian Skin Safety of 222-nm UV Light](#)

Buonanno, M., Ponnaiya, B., Welch, D., Stanislaukas, M., Randers-Pehrson, G., Smilenov, L., Lowy, F. D., Owens, D. M., & Brenner, D. J. (2017). Germicidal Efficacy and Mammalian Skin Safety of 222-nm UV Light. *Radiation research*, 187(4), 483–491. <https://doi.org/10.1667/RR0010CC.1>

[Higher effectiveness of photoinactivation of bacterial spores, UV resistant vegetative bacteria and mold spores with 222 nm compared to 254 nm wavelength](#)

Clauß, M. (2006). Higher effectiveness of photoinactivation of bacterial spores, UV resistant vegetative bacteria and mold spores with 222 nm compared to 254 nm wavelength. *Acta hydrochim. hydrobiol.*, 34: 525-532. <https://doi:10.1002/ahch.200600650>

[Comparison of the Disinfection Effects of Vacuum-UV \(VUV\) and UV Light on *Bacillus subtilis* Spores in Aqueous Suspensions at 172, 222 and 254 nm](#)

Wang, D., Oppenländer, T., El-Din, M.G. and Bolton, J.R. (2010). Comparison of the Disinfection Effects of Vacuum-UV (VUV) and UV Light on *Bacillus subtilis* Spores in Aqueous Suspensions at 172, 222 and 254 nm. *Photochemistry and Photobiology*, 86: 176-181. <https://doi:10.1111/j.1751-1097.2009.00640.x>

[Effect of far ultraviolet light emitted from an optical diffuser on methicillin-resistant *Staphylococcus aureus* in vitro](#)

Welch D, Buonanno M, Shuryak I, Randers-Pehrson G, Spotnitz HM, et al. (2018). Effect of far ultraviolet light emitted from an optical diffuser on methicillin-resistant *Staphylococcus aureus* in vitro. *PLOS ONE* 13(8): e0202275. <https://doi.org/10.1371/journal.pone.0202275>

[Evaluation of acute corneal damage induced by 222-nm and 254-nm ultraviolet light in Sprague–Dawley rats](#)

Sachiko Kaidzu, Kazunobu Sugihara, Masahiro Sasaki, Aiko Nishiaki, Tatsushi Igarashi & Masaki Tanito (2019). Evaluation of acute corneal damage induced by 222-nm and 254-nm ultraviolet light in Sprague–Dawley rats. *Free Radical Research*, 53:6, Pages 611-617. <https://doi.org/10.1080/10715762.2019.1603378>

[Chronic irradiation with 222-nm UVC light induces neither DNA damage nor epidermal lesions in mouse skin, even at high doses](#)

Narita K, Asano K, Morimoto Y, Igarashi T, Nakane A (2018). Chronic irradiation with 222-nm UVC light induces neither DNA damage nor epidermal lesions in mouse skin, even at high doses. *PLOS ONE* 13(7): e0201259. <https://doi.org/10.1371/journal.pone.0201259>

[Action spectra for validation of pathogen disinfection in medium-pressure ultraviolet \(UV\) systems](#)

Sara E. Beck, Harold B. Wright, Thomas M. Hargy, Thomas C. Larason, Karl G. Linden. Action spectra for validation of pathogen disinfection in medium-pressure ultraviolet (UV) systems. *Water Research*, Volume 70, 2015, Pages 27-37, ISSN 0043-1354. <https://doi.org/10.1016/j.watres.2014.11.028>

[Far-UVC light \(222 nm\) efficiently and safely inactivates airborne human coronaviruses](#)

Buonanno, M., Welch, D., Shuryak, I. et al. Far-UVC light (222 nm) efficiently and safely inactivates airborne human coronaviruses. *Sci Rep* 10, 10285 (2020). <https://doi.org/10.1038/s41598-020-67211-2>

[222-nm UVC inactivates a wide spectrum of microbial pathogens](#)

Narita, Kouji & Asano, Krisana & Naito, Keisuke & Ohashi, Hiroyuki & Sasaki, Masahiro & Morimoto, Yukihiro & Igarashi, Tatsushi & Nakane, Akio (2020). 222-nm UVC inactivates a wide spectrum of microbial pathogens. *Journal of Hospital Infection*, 23 March 2020, PREPROOF published by Elsevier Ltd on behalf of The Healthcare Infection Society. <https://doi.org/10.1016/j.jhin.2020.03.030>

[Long-term effects of 222 nm ultraviolet radiation C sterilizing lamps on mice susceptible to ultraviolet radiation](#)

Yamano, N., Kunisada, M., Kaidzu, S., Sugihara, K., Nishiaki-Sawada, A., Ohashi, H., Yoshioka, A., Igarashi, T., Ohira, A., Tanito, M. and Nishigori, C. (2020). Long-term effects of 222 nm ultraviolet radiation C sterilizing lamps on mice susceptible to ultraviolet radiation. *Photochem Photobiol*, Accepted Author Manuscript. <https://doi.org/10.1111/php.13269>

[DNA Damage Kills Bacterial Spores and Cells Exposed to 222-Nanometer UV Radiation](#)

Willie Taylor, Emily Camilleri, D. Levi Craft, George Korza, Maria Rocha Granados, Jaliyah Peterson, Renata Szczpaniak, Sandra K. Weller, Ralf Moeller, Thierry Douki, Wendy W. K. Mok, Peter Setlow. DNA Damage Kills Bacterial Spores and Cells Exposed to 222-Nanometer UV Radiation. *Applied and Environmental Microbiology*, Apr 2020, 86 (8) e03039-19. <https://doi.org/10.1128/AEM.03039-19>

[Far-UVC light: A new tool to control the spread of airborne-mediated microbial diseases](#)

Welch, D., Buonanno, M., Grilj, V. et al. Far-UVC light: A new tool to control the spread of airborne-mediated microbial diseases. *Sci Rep* 8:2752 (2018). <https://doi.org/10.1038/s41598-018-21058-w>

[Exploratory clinical trial on the safety and bactericidal effect of 222-nm ultraviolet C irradiation in healthy humans](#)

Fukui T, Niikura T, Oda T, Kumabe Y, Ohashi H, et al. (2020). Exploratory clinical trial on the safety and bactericidal effect of 222-nm ultraviolet C irradiation in healthy humans. *PLOS ONE* 15(8): e0235948. <https://doi.org/10.1371/journal.pone.0235948>

08/20/20