

Can a Consumer Ultraviolet Disinfection Device be Repurposed for N95 Mask Decontamination during the COVID-19 pandemic

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August 3, 2020

Abstract

Abstract. The reuse of N95 masks has been forced on small community-based hospitals, dentists, nursing, and care homes, amongst others, due to the desperate shortage of personal protective equipment globally during the COVID-19 pandemic. The CDC issued guidance on the reuse of N95 masks due to this shortage. However, large scale ultraviolet disinfection equipment would not be practical in these circumstances, we, therefore, investigated the efficacy of a small, mobile, benchtop device with the potential to disinfect N95 masks from SARS-CoV-2 using ultraviolet irradiation. The device tested was the Lumin LM3000 System manufactured by 3B Medical. We found the Lumin LM3000 to be effective against enveloped viruses, including coronavirus, non-enveloped viruses, gram-negative and gram-positive bacteria and spores with reductions greater than 99.9 per cent. Abstract content goes here

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