

March 21, 2020

The United States and the world are amidst a critical shortage of Filtering Face-piece Respirators (FFP) N95 masks of epic proportions. As a result, over the past several days we have been actively researching the potential for N95 mask reprocessing. In response to numerous and urgent requests seeking information from us on how to potentially use Surfacide in the reprocessing of N95 masks, we searched for data supporting the use UV-C as a potential in FFP mask decontamination (citations located below).

In addition, we were made aware that yesterday Drs. Cerino, Lowe & Rupp (University of Nebraska Medical Center) discussed their successful decontamination using UV-C and stated, *“The shortage has forced us to be innovative,”* said Dr. Lowe. *“While these items weren’t meant to be used more than once, this is a 100% safe way to extend their useful life. Other major hospital systems in the U.S. have also started to implement this method for the same reason we are.”* (JAMA forum by Cerino. March 20, 2020 UV Light Machines for Decontamination)

We are working feverishly to confirm and validate the efficacy of this practice with the Surfacide system. However, due to the number of inquiries from our customers and given the crisis and shortage of N95 masks we felt it was prudent to share this with our customers immediately.

In the event it is established by the medical institution that Surfacide is appropriate for use, a potential method follows with graphic below:

1. Groups of masks are marked in such a way so that they are returned to the original user, safely bagged and transported to a room inside the hospital which is equipped with 3 ultraviolet light towers operating in a scrub function
2. The FFP is hung on wire via clothes pins stretching 10 feet
3. Operator exits the space vacant of any human presence and activates a scrub cycle.
4. The Surfacide emitters are run for a 5-minute Scrub™ cycle twice (one internal mask cycle and one external mask cycle).
5. The 3 towers are relocated to the opposite side of the hanging masks and for another 5-minute cycle following the same procedure.
 - a. For clarity, the combination of two complete Scrub cycle is 10 minutes.
6. The items are then removed and returned to the original owners for reuse.

Surfacide will provide further updates as they become available.

Sincerely,

Gunner Lyslo
Founder and CEO

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“Preparing for an Influenza Pandemic: Hospital Acceptance Study of Filtering Facepiece Respirator Decontamination Using Ultraviolet Germicidal Irradiation.”

Nemeth C, Laufersweiler D, Polander E, Orvis C, Harnish D, Morgan SE, O'Connor M, Hymes S, Nachman S, Heimbuch B. J Patient Saf. 2020 Mar 12. doi: 10.1097/PTS.0000000000000600. PMID: 32175970

“Effectiveness of three decontamination treatments against influenza virus applied to filtering facepiece respirators.”

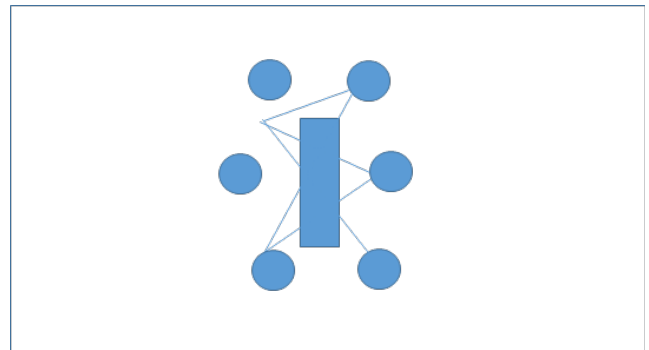
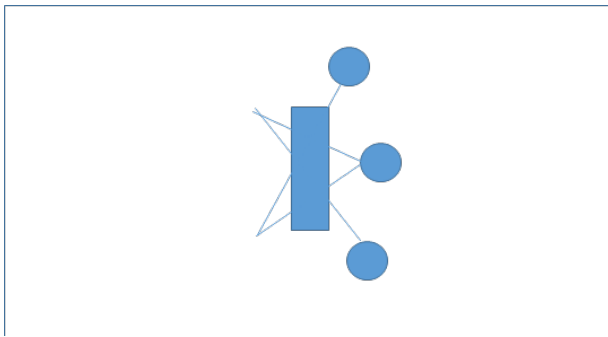
Lore MB1, Heimbuch BK, Brown TL, Wander JD, Hinrichs SH. Ann Occup Hyg. 2012 Jan;56(1):92-101. doi: 10.1093/annhyg/mer054. Epub 2011 Aug 22.

“A method to determine the available UV-C dose for the decontamination of filtering facepiece respirators.”

Fisher EM, Shaffer RE. J Appl Microbiol. 2011 Jan;110(1):287-95. doi: 10.1111/j.1365-2672.2010.04881.x. Epub 2010 Nov 4. PMID: 21054699

Option 1: Single System: Scrub cycle 5 minutes ;
Table and/or Rack: Complete 2 CYCLES (Flip FFP)

Option 2: Dual Systems: Opposing Scrub cycles 5 minutes ;
Table and/or Rack: Complete 2 Cycles (Flip FFP)



Surfacide Emitters Placed Approximately 2m apart in Arced Array (Scrub)
“Clothesline” Length of Approximately 10-12 feet: Place clips on Loop Strings
Avoid Overlapping to prevent blocking UV-C energy to Anterior/Distal surfaces of FFP



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