

Instructions for Healthcare Personnel: Emergency Bioburden Reduction of Compatible N95 or N95-equivalent Respirators in Lumin LM 3000 Bioburden Reduction UV System

The U.S. Food and Drug Administration has authorized an Emergency Use Authorization (EUA) for the emergency use of the Lumin LM 3000 Bioburden Reduction UV System manufactured by 3B Medical Inc, for use in decontaminating compatible N95 or N95-equivalent respirators (hereafter referred to as the “N95 respirators with convex and concave surfaces”) in a healthcare facility for single-user reuse by healthcare personnel. The Lumin LM3000 Bioburden Reduction UV System utilizes a 5 minute ultra violet germicidal irradiation (UVGI) cycle to reduce the bioburden on one N95 respirator at a time by exposing the concave side of the respirator for 5 minutes followed by the convex side of the respirator for 5 minutes and permits single-user bioburden reduction up to 10 times. Healthcare personnel should follow these instructions, as well as procedures at their healthcare facility, to prepare N95 respirators for bioburden reduction in a Lumin LM3000 Bioburden Reduction UV System; please refer to the Lumin User Manual for complete instructions for use.



Caution: Due to incompatibility, the Lumin LM3000 Bioburden Reduction UV System is only authorized for use with respirators that are hard-bodied respirators with filters made of hydrophobic materials, such as:

3M 1870, 3M 1860, Kimberly-Clark PFR, Moldex 1512, Precept 65-3395, Gerson 1730, Sperian HC-NB095, U.S. Safety AD2N95A, etc.

Caution: Due to incompatibility, the Lumin LM3000 Bioburden Reduction UV System is not authorized for use with soft-bodied respirators, foldable respirators, filters made of hydrophilic materials, and respirators with expiratory valves

Caution: UVGI functions by optics, and care should be taken that the device is used for one N95 respirator at a time. Adding multiple masks will create shadowing and block the light.

Caution: The Lumin LM3000 Bioburden Reduction UV System’s UVC output may start to deteriorate after 9,000 hours or 56,000 cycles. In heavy use environments (i.e. > 10 uses daily), it is recommended that the Lumin UVC bulb be replaced annually to insure optimal efficacy.

Caution: As the Lumin LM3000 Bioburden Reduction UV System relies on optics, keep mirrored surfaces clean. Use only water and a mild dishwashing liquid to carefully wipe mirrored surface. Do not use any abrasive powders or liquids as these might scratch the polished mirrored surface and impair reflection and refraction.

Caution: UVC light presents a safety hazard to operators if exposed. Make sure no UVC leakage during use.

Caution: Discard N95 respirators with convex and concave surfaces with visible

soiling (e.g., blood, dried sputum, makeup, sunscreens, soil) or damage – do not use and do not send for decontamination.

Caution: N95 respirators with convex and concave surfaces should be discarded after 10 decontamination cycles.

Caution: Any N95 respirators with convex and concave surfaces whose traceability was lost or number of decontamination cycles not able to be identified should be discarded.

- **Bioburden Reduction** N95 respirators with convex and concave surfaces are not Sterile.
- The Lumin LM3000 Bioburden Reduction UV System inactivates the SARS-CoV-2 virus on N95 respirators with convex and concave surfaces
- Testing has not been conducted to show its effectiveness to reduce levels of other pathogens on N95 respirators with convex and concave surfaces.
- **Bioburden Reduction** requires all surfaces and features to be exposed to adequate doses of UV light. Any shadowing or obstruction resulting from device features, load organization or chamber design could prevent successful **bioburden reduction**.

Material Needed:

1. Gloves
2. Decontamination wipes
3. Permanent marking tool

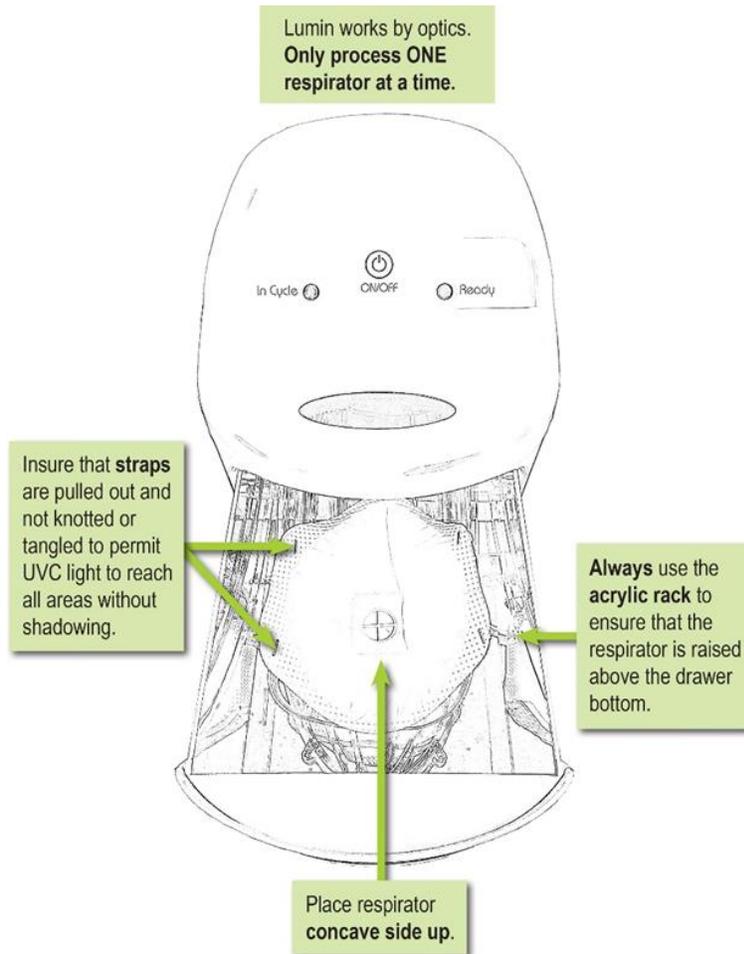
N95 respirators with convex and concave surfaces Marking
Ensure uniform system to mark each use of respirator

To Decontaminate N95 respirators with convex and concave surfaces in a Lumin System:

N95 respirators with convex and concave surfaces Marking, Collection, and Instructions for Individual Use

1. Visually inspect the respirator for obvious signs of wear and tear, and discard any respirator with any fluid or stain.
2. Use gloves or a decontaminating wipe to open the Lumin drawer to avoid contaminating the outside of the Lumin device.
3. Place the **N95 respirator concave side up** on the acrylic rack. Please see graphic on right.
4. Press the start button. Lumin is pre-programmed for a 5 minute cycle to allow the Concave side to be exposed to the UV dose.
5. After the 5 minute cycle is completed, flip the respirator to the **convex side** and ensure straps are untangled to permit UVC light to reach all areas without shadowing.
6. Press the start button and allow for the convex side to be exposed to the UVC dose for a 5 minute cycle, for a total of 10 minutes per respirator.).
7. Lumin is pre-programmed for a 5 minute cycle. After completed, flip mask to convex side and ensure straps are untangled to permit UVC light to reach all areas without shadowing. Press start button again. (Another 5 minute cycle, for a total of 10 minutes per respirator.).

8. Wash hands thoroughly for 20 seconds or use hand sanitizer prior to removing your respirator from Lumin to avoid cross contamination.
9. At conclusion of the first cycle (i.e. bell chimes), open the drawer and flip the respirator over. Press start button again. (5 minutes each side.)
10. Each successive use of the respirator should be marked as a check on the respirator.
11. Discard respirator after 10 uses.



N95 Respirator Marking and Collection, and Instructions for Institutional Use

If the Lumin LM3000 Bioburden Reduction UV System is used in a higher volume institutional setting, it may become more practical to assign an employee to handle all respirator decontamination. In that setting, personnel depositing masks for decontamination should individually mark their mask with name or employee number and place individually in a poly bag before depositing.

Chain of Custody:

3B Medical Inc., recommends that healthcare personnel pouch their respirators at the end of use with their name or other identifier written on the mask and pouch with a permanent marker. To maintain the decontamination cycle count, the healthcare worker should place a tick mark on the respirator each time the healthcare worker prepares the respirator for decontamination. The healthcare worker should confirm that their name is legible prior to placing the respirator in the bag and that there is no visible soil or damage to the

respirator. If any visible soil or any damage is present, the respirator should be discarded.

3B Medical Inc., recommends that each department utilize clean trays or containers that are normally utilized to deliver surgical instruments to the Operating Room to collect the masks. When the pouched respirators are ready to be transported to the Sterile Processing Decontamination area, they should be transported in a closed case cart to minimize risk of environmental contamination. The case cart should have a hospital-controlled tag or identifier that indicates the location in the hospital where the respirators were utilized. The case cart should be transported to Sterile Processing to the decontamination area by transport personnel assigned by the healthcare facility with training for transport of the material. Unload the respirators in the decontamination area. 3B Medical Inc., recommends that the sterile processing staff following existing processes to decontaminate the case carts and sterilize the transport trays or container for re-use and delivery back to patient areas. Transfer the pouched respirators through the pass-through window along with the location identifier. Retrieve the pouched N95 respirators and place in the Lumin LM 3000 Bioburden Reduction UV System for processing. The sterile processing staff should adhere to department policy for documenting load contents for the sterilizer. Upon completion of the bioburden reduction cycle, the respirators should be loaded back in sterilized trays or containers and placed in a closed case cart following department policy for identifying/labeling processed loads. The documentation needs to include a clean copy of the location identifier to ensure return of the respirators to the original location in the facility for distribution of each respirator to the original healthcare worker. Upon return of the respirators to the appropriate individuals, they should be checked to ensure that the name or other identifier is still legible. If not legible, or if the respirator is damaged, the respirator should be discarded.

1. Assigned employee should use gloves and exercise caution and aseptic technique in transferring respirators from the poly bag
2. Healthcare personnel should place one single respirator at a time concave side up in the Lumin LM3000 Bioburden Reduction UV System.
3. To ensure bioburden reduction of the straps, remove any tangles or knots from straps so that there is clear UVC light access to the full length of the straps.
4. Press the start button. Lumin is pre-programmed for a 5 minute cycle. After completed, flip respirator to convex side and ensure straps are untangled to permit UVC light to reach all areas without shadowing. Press start button again. (Another 5 minute cycle, for a total of 10 minutes per mask.)
5. Each successive decontamination of the respirator should be marked as a check on the respirator
6. Upon completion of the cycle, the decontaminated, compatible N95 respirators are ready for use. N95 respirators with convex and concave surfaces **may be processed a maximum of 10 times.**

General Instructions for Care and Maintenance of the Device

1. Avoid cross-contamination by using disinfecting wipes to wipe the exterior of the Lumin LM3000 Bioburden Reduction UV System. Particular care should be used in frequent disinfecting of the drawer handle.
2. Replace the Lumin UVC lamp annually to ensure that the device consistently delivers high performance germicidal levels of UVC.
3. If you have any problems or questions concerning this device, please contact 3B Medical Technical Support at email: TechSupport@3Bproducts.com , or by visiting the Support tab on our corporate website at www.3Bproducts.com and creating a support ticket. Alternatively, our technical support team is available during normal business hours (i.e. M-F 8:30 am to 5 pm) at (863) 226-6285.