

Temporary protocol for the disinfection of N95 masks during the coronavirus crisis

The Nocospray Disinfection System is a vaporized hydrogen peroxide system that is a Health Canada-approved sporicide and that has demonstrated efficacy against a broad spectrum of viruses including small non-enveloped and enveloped viruses. Products that are approved as effective against more robust species, like spores and non-enveloped viruses, are expected to be effective against enveloped viruses, such as HIV, Ebola and coronavirus, which are the least resistant to inactivation by disinfection.

As with many activities, during the coronavirus outbreak, protocols and guidance may have to be adapted to the reality of the healthcare center. The following are guidelines and directions for using the Nocospray System to extend the usable life of certain PPE including N95 masks.

Guidance:

1. All masks that have debris that cannot be removed (vomit, blood etc.) should be discarded.
2. Designated, trained staff should operate the disinfection process. Those individuals should perform hand hygiene and wear PPE when executing the procedure.
3. A specific schedule of Nocospray treatment for this purpose should be established and communicated to the responsible manager of PPE or to another designated individual.
4. A designated location, such as a supply room, that does not interfere with operations but that can be locked or blocked is ideal. Barring that, a patient room with low air exchange can be used. If possible, the room should be equipped with shelving units, preferably wire racks to allow the gas to circulate around the entire mask. This also will support many items to save space. Prior to the shelving units being placed in the designated room the room surfaces and units should be cleaned to remove dirt, dust and debris. Trays can be used if available and if appropriate. Once this process is in place, the designated location should not be accessed for purposes other than for the Nocospray disinfection of this equipment. The room volume should be measured and a dose of 7x volume should be set on the Nocospray machine(s) and a 60 minute contact time should be allowed to elapse. Those doses and the total time for the treatment should be established and should be maintained whenever the process is employed.



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5. Individual containers that can be closed, such as plastic bags, should be prepared - one for each submitting department. They should be made available to the staff that will be operating the Nocospray for this purpose. If the containers are not disposable, they can be left, open, in the room for disinfection alongside the PPE.
6. Where items that are designated to an individual are being disinfected, the item should be marked with the name of the individual and/or department using a permanent method such as a Sharpie pen.
7. On a predetermined schedule, batches of equipment should be transported to the designated room.
8. A cycle record including, at the very least, the date and time of the disinfection, the name of the department whose material is being disinfected, the location within the room of the material for each department, and the recipient of the disinfected material (see point 3) should be maintained, ideally electronically.
9. At each location, for example specific shelves, a set of equipment to be disinfected should be placed separately from one another by at least 3 inches. No part of the items should be touching in order to ensure maximum circulation of Nocolyse gas.
10. Once the chamber is set up, the staff should activate the system, leave the room, lock or bar access to it, and follow their hospital's protocols for exiting a contaminated space. The re-enter time should be recorded and entered into the record.



11. When the process is complete the designated individual should perform hand hygiene and put on the relevant PPE. Only designated individuals should enter the room, collect the disinfected equipment by department, place it into the designated container and close it (see point 5). The closed containers should then be removed from the room. Once the designated individual has exited the room, locked or barred access to it and performed the relevant protocols for removing PPE and hand hygiene, the closed packages should be returned to their departments. Transport of these disinfected sets should be limited to these packages. In other words this transport should not be combined with deliveries of other items even if they are unused.
12. The recipient of the disinfected equipment should be the same responsible managers that are coordinating the disinfection schedule with their departments (see point 3). Delivery of the items should also be recorded in the cycle record.