



Storage box to facilitate decontamination and reuse of face masks

A safe and well-ventilated storage box for N95 masks - design files and instruction videos.



Technology ID

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Category

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COVID-19

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Applications

- Masks/respirator storage and decontamination in healthcare organizations.

Overview

The ongoing pandemic of SARS-CoV-2 resulting in COVID-19 has created severe shortages of personal protective equipment (PPE) including N95 filtering facepiece respirators (N95 FFRs/N95 masks). In an effort to extend the stockpile of N95 FFRs, [CDC has established protocols for decontamination and subsequent reuse of FFRs](#) where FFR shortages exist. One such protocol is to store the used N95 masks in a paper bag for a 5-day duration (to allow for decontamination) before reusing.

Researchers at the University of Minnesota have developed a mask storage box designed specifically to facilitate safe storage, decontamination, and reuse of N95 masks. Designed in accordance with CDC guidelines, this storage box

- allows an organized and informed storage of five N95 masks based on the 1-5-2 protocol;
- has a unique design of ventilation (bottom and sides) keeps the box moisture-free and prevents bacteria and mold/fungus development. The ventilation placement also prevents airborne respiratory droplets from entering the box;
- has a wobble-free stacking feature of the box helps with organizing and saving the storage space;
- has labels that are angled ergonomically to provide the best visibility and allow healthcare staff to write the date/shift/rotation;
- ergonomic features to facilitate easy handling from a stack;
- and, suitable for storage after ultraviolet germicidal irradiation.

Phase of Development

TRL: 5-6

Pilot scale demonstration. Set of design files and accompanying instruction videos for a N95 mask storage box available for download.

Ready for Download

The design files and instruction videos are now available for download at no cost upon execution of the license agreement (provided on the right column of this page).

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