



# 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

2020-356

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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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