

# COVID N95 DECON & REUSE



# TIME

## CONSIDERATIONS FOR ROOM-TEMPERATURE DECONTAMINATION

## CORONAVIRUS INACTIVATION

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- SARS-CoV-2 on the surface of an N95 FFR slowly becomes inactive over time
- Storage at room temperature (22°C, 40-65% humidity) for 7 days is expected to significantly reduce risk of exposure to SARS-CoV-2 via a re-used N95 FFR<sup>1,2,3\*\*</sup>**

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- Storage at temperatures below 22°C could significantly increase the appropriate waiting time<sup>2</sup>

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- There is an urgent need for more experimentation to provide clearer guidance
- The time to reduce infection risk is expected to be extremely sensitive to initial viral load, N95 FFR material,<sup>1,2</sup> storage temperature<sup>2</sup>, and humidity<sup>4</sup>**

## KEY CONSIDERATIONS

N95 should be isolated and returned to original user

N95 user seal check should be performed before each reuse<sup>6</sup>

N95 damaged or soiled with cosmetics, blood, other bodily fluids should be discarded<sup>6,7</sup>

Lower temperatures could significantly increase the appropriate waiting time

Storage conditions should not deform or crush the N95

## N95 MASK INTEGRITY

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- Room temperature conditions are not expected to reduce mask integrity

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- Multiple don/doff cycles have been shown to reduce user fit<sup>5</sup>

## RISKS

**Virus may survive substantially longer if the temperature is lower than 22°C**

Virus may survive substantially longer at lower or higher humidity

Infection risk from extraordinarily large viral loads may not be sufficiently reduced after 7 days

**This approach does NOT decontaminate against bacterial and mold co-infection risks**

## IMPLEMENTATION

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Between uses, each N95 should be stored separately in a clean, breathable environment (such as in a new, clean container)<sup>6</sup>

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Method has not been validated in an FDA-approved process

## CONCLUSION

IF THERE IS NO OTHER CHOICE, appropriately storing an N95 FFR between re-uses may adequately inactivate SARS-CoV-2. FDA specifies inactivation based on a 1000-fold reduction in viral activity. Based on very sparse data and this FDA specification, 7 days in clean, room temperature conditions may result in sufficient SARS-CoV-2 inactivation in most scenarios. More data are urgently needed to sharpen this assessment. This approach does NOT decontaminate against bacterial and mold co-infection risks.

### SUPPORTING RESEARCH \*\* = not peer-reviewed

[1] Van Doremalen, et al 2020; [2] Chin, et al 2020; [3\*\*] Fischer, et al 2020; [4] Lin & Marr 2020; [5] Bergman, et al 2012; [6] CDC, 2020; [7] OSHA, 2020; [8] FDA, 2020

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