Matthew Smith
Yesterday at 12:35 PM ·

EFFECTIVE MASK IMPROVISATION PROCEDURE 2.0 // SURFACTANT ENHANCEMENT OF SALT DEPOSITION

SARS-COV-2 spreads through the air in aerosol mists with the virus attached to a water particle

Under the current conditions of totally unavailable N95+ masks, improvisation of effective masks becomes extremely important

This study:
https://www.nature.com/articles/srep39956
has shown that salt in the path of virus laden water particles will cause the water droplet to adhere to the salt and quickly deactivate the virus, this may improve air filtration efficacy, and will certainly improve the sterility of the improvised mask cloth, as the virus can live on fabric surfaces for up to a week, depending on conditions

This study:
https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2440799/#!po=44.2308
has shown that surfactants such as dishsoap improve the penetration of the salt into hydrophobic materials and is generally instructive of the concept of home made masks

PROCEDURE:

-Cut cloth into strips approximately 2-3 foot long, approximately 8-10 inches wide

-Launder these cloths w bleach and store them in a fresh trash bag, tightly sealed and clearly labeled

-Fill a pot with water, distilled or boiled is ideal but any water is fine

-Water can be optionally heated up to about 190f (light boil) so as to improve salt solubility and overall saturation of the solution with salt

-Add salt until the point of saturation (undissolved salt accumulates at the bottom of the pot after stirring)

-Add drops of dish soap until the solution becomes foamy

-Add your cloth strips, stir

-Allow them to soak for ten minutes

- Remove your cloth strips and allow them to dry completely, either hanging or on a clean flat surface

-Again store in a fresh trash bag, tightly sealed and clearly labeled

-These masks will protect you and others for an unknown and variable amount of time before the moisture of your breathing or sweat has impaired the efficacy of the salt, best practices is to assume a day at

-Multiple layers of these masks will be more effective than just one as this increases surface area of salt the viral water particles will be exposed to

-See comments below for full size images

Good luck and Godspeed, please share this procedure

Additional notes:

Salt will destroy the electrostatic charge in N95+ masks, do not attempt to salt treat n95+ respirators or it will ruin their efficacy

This procedure is only intended for cloth

Door handles, mailboxes and other frequently touched surfaces can be sprayed with saline until they acquire a crystalline layer of salt to increase their sterility in a persistent manner

Bleach is effective down to low concentrations but 1-2%+ is highly effective and rapid for appropriate surfaces

If you have no access to rubbing alcohol (isopropyl alcohol) vinegar in a spray bottle can be used for routine hand sterilization when soap and water are not readily accessible (in your car etc), 10% is much better than 5% but 5% is much better than nothing

This study:
https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0008987
found 10% malt vinegar and 1% bleach to rapidly deactivate influenza virus

This study:
https://www.nejm.org/doi/full/10.1056/NEJMc2004973
has shown the longest viral lifespan on plastics, which means fabrics which have plastics in them likely harbor the virus longer than 100% cotton fabrics



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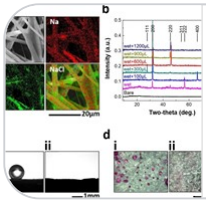

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Jörgen Slet
Chlorine bleach dilution, I think 0.1% hypochlorite, should make a cheap disinfectant. Verify the concentration though.

Food industry rinses perishable "fresh" vegs with diluted

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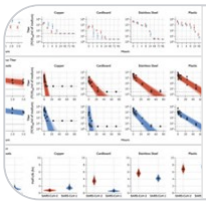
https://www.nejm.org/doi/full/10.1056/NEJMc2004973



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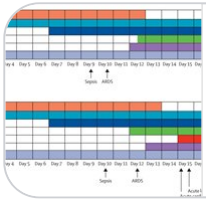

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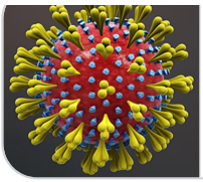

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