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Please visit [Open Source COVID19 Medical Supply Guide] for updated links to document

~~OSCMS - Hand Sanitizer~~

~~The Problem:~~

~~Coronavirus survives for hours to days on surfaces, which can easily cause transmission of the virus when a person touches a contaminated surface. Washing hands with soap and water is considered to be the most effective way of removing the virus from your hands, but this is not always possible during everyday activities. Hand sanitizer allows individuals to prevent infection from touching their face after they touch infected surfaces when soap and water aren't available.~~

~~Current Global Resources:~~ ~~Supply chain shortages of hand sanitizers have persisted for many weeks now. Retailer giants Amazon, Walmart, and Target have been unable to keep stock and are quickly depleted. Companies like Purell have increased production, but have not indicated when the supply shortage will be corrected. At a local level, distilleries have turned to producing hand sanitizer to meet the demand.~~

~~References:~~

~~What hand sanitizer shortages on Amazon say about global supply~~
~~Purell Ramps Up Production~~
~~Distillers Turn Whiskey and Gin Into Hand Sanitizer~~

Worst Case Expectation: Prolonged supply chain shortages contribute to a sustained reduction in the abilities of people to maintain good hand hygiene. People will be less able to practice hand hygiene while away from their homes at times when certain essential activities (like shopping at a grocery store or visiting a bank) increases their risk of potential exposure. Homeless populations who do not have regular access to soap and water for handwashing may be particularly vulnerable with no way to clean their hands if hand sanitizer is unavailable to them.

Engineering Requirements:

- Use of additives (such as aloe, tea tree oil, and fragrances) is not recommended.
- Use when soap and water is not available.
- For use as a hand sanitizer, not for household cleaning

Assembly/Fabrication Requirements:

- Ethanol 96%
- Hydrogen peroxide 3%
- Glycerol 98%
- Sterile distilled or boiled cold water

Or

- Isopropyl alcohol 99.8%
- Hydrogen peroxide 3%
- Glycerol 98%
- Sterile distilled or boiled cold water

Projects/Resources:

- CDC Guidelines for Disinfection & Sterilization
- FDA Policies for Temporary Hand Sanitizing Creation During Crises
- CDC Guide on When and How to Wash Your Hands
- NIH Study on Hand Sanitizer
- WHO guide to DIY sanitizer
- Calculator for WHO Sanitizing Handrub
- Health Canada guide to ethanol production for hand sanitizers

Reviewed Designs:

~~Project Name: FDA Guidance Document~~
~~Design link:~~**~~https://www.fda.gov/media/136289/download~~**
~~Notes:~~

- ~~Reviewed 3/20~~
- ~~Reviewed by: FDA~~

~~Project Name: WHO Recommended Handrub Formulations~~
~~Design link:~~ ~~https://www.who.int/gpsc/5may/Guide_to_Local_Production.pdf~~
~~Notes:~~

- ~~Reviewed: April 2010~~
- ~~Reviewed by: World Health Organization~~

~~Not Recommended:~~

~~Project Name:How to Make Your Own Sanitizer- Healthline~~
~~Design Link:~~ ~~https://www.healthline.com/health/how-to-make-hand-sanitizer~~
~~Notes:~~

- ~~Reviewed: 3/31~~
- ~~Reviewed by: OSCMS Medical Review Team~~
- ~~*Reason: The recommended addition of aloe, fragrances, oils, and lemon juice are NOT recommended by the FDA and WHO. Additives risk diluting the formula to a strength that is insufficient for disinfecting hands*~~