

## SAFETY:

- Alcohol based hand rubs are flammable and accidental or deliberate ingestion can cause the adverse effects.
- Since the flash points of ethanol 80% (v/v) and isopropyl alcohol 75% (v/v) are 17.5°C/63°F and 19°C/66°F, respectively, special attention should be given to proper storage in tropical climates.
- These formula configurations are strictly for home use and not commercial production.

## FOR MORE INFORMATION:

Visit: [www.cdc.gov/coronavirus/2019-ncov](http://www.cdc.gov/coronavirus/2019-ncov)



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COVID-19 Preventative Measures Homemade Hand Sanitizer (2020). NC State Extension, NC State University, Raleigh, NC.  
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<https://www.federalregister.gov/documents/2019/04/12/2019-06791/safety-and-effectiveness-of-consumer-antiseptic-rubs-topical-antimicrobial-drug-products-for> (August 2019)

**4-H Youth Development Program**  
College of Natural & Applied Science  
Cooperative Extension & Outreach  
Tel: (671) 735-2040/46  
[uog.edu/extension](http://uog.edu/extension)

**Clifford J. Kyota**  
State 4-H Program Leader  
Email: [ckyota@triton.uog.edu](mailto:ckyota@triton.uog.edu)

**Jiang Yang, PhD**  
Professor/Extension Specialist  
Email: [jyang@triton.uog.edu](mailto:jyang@triton.uog.edu)

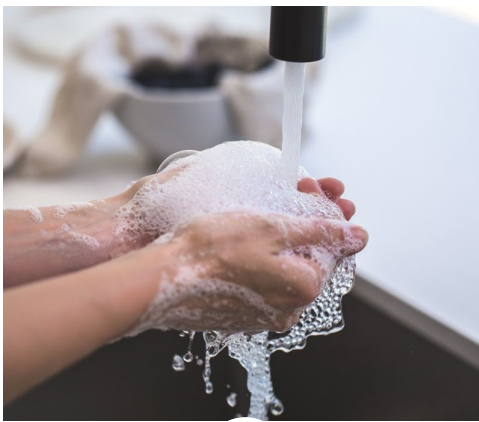


# 4-H Activity: Hand Washing & Hand Sanitizer



**4-H Youth  
Development  
Program**





## These are important steps to understand hand washing and hand sanitizer

1. **Always**, the first sanitary recommendation is to wash hands with soap and water often.

- Wash hands for at least 20 seconds.

2. Use hand sanitizer when *soap and water is not available*. Commercially produced hand sanitizers are created and packaged with protocols to ensure consistent, safe products for consumer use.

- Per manufacturing guidelines and regulatory oversight, proper use guidelines are included with commercially created products, usually on the label.

3. Homemade hand sanitizer as part of the COVID-19 response can be made *only in the absence* of commercially produced hand sanitizers, The World Health Organization recommends the following recipe for homemade hand sanitizer.

- Homemade hand sanitizers is only for extreme situations when handwashing or commercial products are not readily available. “The FDA does not recommend that consumers make their own hand sanitizer.” -U.S. FDA
- **Caution:** Do not use homemade hand sanitizers on children’s skin because improper use may lead to a greater risk of injury.

## Homemade Hand Sanitizer

The following information contains mixing chemicals that could be hazardous to children. **Adult supervision is strongly advised.**

### INGREDIENTS/SUPPLIES:

- Small spray bottle
- 1 tablespoon of 3% hydrogen peroxide
- 1 teaspoon of 98% glycerin (aloe vera gel is an example)
- Isopropyl alcohol and sterile distilled **OR** boiled cold water in ONE of the following combinations:
  - ⇒ 1 cup + 2 tablespoons of 99% isopropyl alcohol PLUS 1/4 cup + 1 teaspoon water
  - ⇒ 1 cup + 3 tablespoons of 91% isopropyl alcohol PLUS 2 tablespoons + 2 and 1/2 teaspoons water

### STEP BY STEP MIXING:

- Pour alcohol into a medium container, ideally with a pouring spout.
- Add hydrogen peroxide, then glycerin and stir.
- Measure and add water.
- Sanitize spray bottles by adding in a small amount of leftover alcohol, swirling around and allowing to air dry.
- Fill bottle with solution and label clearly with contents.

### USE:

- To use, spray on all surfaces of your hands and rub them together until they feel dry.
- Store in a cool, dry area away from any heat source or open flame.

