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:


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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.

**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

**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.

**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.