

## Harm from Disinfectants During COVID-19

*Protect yourself and family by avoiding disinfectants containing respiratory-irritating toxic substances. Instead, choose safer effective disinfectants.*

Many disinfectants used to disinfect against COVID-19 that meet EPA's criteria contain the active ingredient Quaternary ammonium. **Quaternary ammonium compounds (QAC)** are registered with the EPA as pesticides and increasingly are being found to cause serious health effects. Mount Sinai Selikoff Centers for Occupational Health report on [Quaternary Ammonium Compounds for health professionals](#) cautions QAC exposure from cleaning products for **triggering asthma symptoms even in people with no prior asthma history**, among other serious harmful impacts.

**Chlorine-based disinfectants** also cause respiratory irritation and illness. (see sidebar) [Nurses' regular use of disinfectants is associated with developing COPD, 24-32% higher.](#)

### AVOID and replace disinfectants and cleaners containing these chemicals:

- ✗ Quaternary ammonium compounds  
Label does not specify a substance is a QAC but often ends in "ammonium chloride"  
Most common QAC in disinfectants are the **Benzalkonium chlorides**.
- ✗ Chlorine compounds / Bleach  
(sodium hypochlorite, hypochlorous acid, sodium chlorite & sodium chloride)
- ✗ Sodium Dichloro-S-Triazinetrione

- ✗ Ammonium Carbonate
- ✗ Ammonium Bicarbonate
- ✗ Peroxyacetic acid (peracetic acid)
- ✗ Glutaraldehyde
- ✗ Glycolic acid
- ✗ Hydrochloric acid
- ✗ Octanoic acid

**WARNING: Do not mix products.** Mixing bleach with vinegar, ammonia or alcohol is very toxic. Clean surface dirt and rinse before disinfecting.

### CHOOSE SAFER disinfectant ingredients approved by CDC and EPA N List:

- ✓ Hydrogen peroxide
- ✓ Isopropyl alcohol / isopropanol
- ✓ Ethanol
- ✓ Thymol
- ✓ L-lactic acid
- ✓ Citric Acid

Contact times vary, read label.

### Finding Safer Disinfectant Products Approved for COVID-19

**SEARCH the EPA List N database to find safer disinfectant products:**

[Use this link](https://bit.ly/2wQMIG5) (https://bit.ly/2wQMIG5) to access database, scroll down page to Search Table of List N products by Active Ingredient, input active ingredient from SAFER list. Eliminate product results with active ingredients that are listed in AVOID list (above).

**Or download these PDF files of List N products with safer active ingredients:**

- ✓ Isopropol/isopropanol - Klercide 70/30 IPA, EcoLab Inc. or other 70/30
- ✓ Hydrogen peroxide – [Download the product list](#)
- ✓ Ethanol product – [Download the product list](#)
- ✓ Thymol – [Download the product list](#)
- ✓ L-lactic acid – [Download the product list](#)
- ✓ Citric Acid – [Download the product list](#)

When using downloaded PDF lists, only choose products with YELLOW highlight on Active Ingredients, DO NOT USE PRODUCTS with AVOID active ingredients.

More at Beyond Pesticides SAFER Sanitizers and Disinfectants: <https://bit.ly/2TJJ3fw>

### Choose Safer Disinfectant Products

#### Hydrogen peroxide

- Angel
- Vaprox Hydrogen Peroxide Sterilant
- Proxi Home General Disinfectant Cleaner Spray
- B-Cap 35 Antimicrobial Agent
- Peroxy HDOX
- Binary Ionization Technology Solution
- Oxy-1 Wipes
- Accell Disinfectant Cleaner
- Peroxide Multi Surface Cleaner and Disinfectant
- Peroxide Disinfectant and Glass Cleaner RTU
- Clorox Commercial Solutions Hydrogen Peroxide Cleaner Disinfectant Wipes
- Clorox Commercial Solutions Clorox Disinfecting Biostain & Odor Remover
- Oxyteam Disinfectant Cleaner
- Oxivir Wipes
- Sani-HyPerCide Germicidal Spray
- HaloSpray
- Phato 1:64 Disinfectant Cleaner
- Suretouch
- Accel 5 RTU

#### L-lactic Acid

- Windex Disinfectant Cleaner
- Fangio
- Gurney
- Sani-Cide EX3 RTU

#### Citric Acid

- Cleancide
- SBT 2 to 1 Concentrate
- Tristel Duo for Surfaces
- Lysol Bathroom Cleaner
- Cleancide Wipes
- Axen @ 30
- Sdc3a
- Comet Disinfecting Bathroom Cleaner

#### Ethanol

- Mittersaw
- Saginaw
- Purell Professional Surface Disinfectant Wipes
- Urthpro
- Lysol Neutra Air 2 in 1

#### Thymol

- SBT 2 to 1 Concentrate
- Benefect Botanical Daily Cleaner Disinfectant Spray
- Benefect Botanical Daily Cleaner Disinfectant Towelette
- Thymox Disinfectant Spray
- Ready to Use Thymol