

# DISINFECTANTS TO AVOID

Available in English & Spanish



By Katherine Marin, UF/IFAS Extension  
Miami-Dade, Community Development

FACT SHEET  
PUBLISHED  
YEAR 2023

## Eco-friendly cleaning products are created using safe, non-toxic, and biodegradable ingredients.

While we stay safe in our homes, we must be aware of the potential impacts our use of disinfectants can have on the environment. Here is a simplified guide to disinfectants to avoid using:

- **Soaps and detergents with high surfactant.** Soaps and detergents must have specific chemical structures that make surfactants act as detergents. Unfortunately, according to the US Consumer Product Safety Commission, many light-duty cleaning products (or detergents with these surfactants) contain contaminants, carcinogens, phosphates, and petroleum derivatives, which are not necessarily biodegradable or break down slowly and become harmful to the environment and other organisms, especially marine life.
- **Petroleum and palm oil.** Petroleum, also called crude oil, is a fossil fuel. Like coal and natural gas, petroleum was formed from the remains of ancient marine organisms, such as plants, algae, and bacteria. Palm oil is an edible vegetable oil that comes from the fruit of oil palm trees. The scientific name is *Elaeis guineensis*. Both petroleum and palm oil can cause air, soil, and water pollution.
- **High concentrations of chlorine.** Chlorine is a toxic, corrosive, greenish-yellow gas irritating the eyes and the respiratory system. Chlorine is used as a bleach in manufacturing paper and cloth, but it is also used to make pesticides (insect killers), rubber, and solvents. In addition, chlorine is used in drinking and swimming pool water to kill harmful bacteria.
- **High-concentration quaternary ammonium compounds (QACs).** Quaternary Ammonium Compounds (QACs) are based on a chemical that kills bacteria, viruses, and mold. At high concentrations, QACs pose a threat to aqueous ecosystems. An example of a QAC is benzalkonium chloride, often used as a cleaner and sanitizer for various home food surfaces and industrial applications such as dairy equipment.

### Resources sites:

- <https://www.sciencedirect.com>
- <https://edis.ifas.ufl.edu>
- <https://www.ncbi.nlm.nih.gov>
- <https://osha.washington.edu>
- <https://www.cdc.gov>

**National Institute of Health**  
9000 Rockville Pike  
Bethesda, Maryland 20892  
301-496-4000

**Miami-Dade Home  
Chemical Collection Centers**  
Miami-Dade County:  
305-514-6666  
2525 NW 62nd Street Miami, FL 33147

An Equal Opportunity Institution. UF/IFAS Cooperative Extension, University of Florida, Institute of Food and Agricultural Sciences. Single copies of UF/IFAS Extension publications (excluding 4-H and youth publications) are available free to Florida residents from county UF/IFAS Extension offices.