



**Q: Why should I care about what is in a cleaning product?**

**A: Cleaning products often contain a complex mixture of chemical ingredients designed to accomplish specific actions such as cleaning and/or disinfection.**

- Some of the ingredients are strong chemicals that can present hazards to you and your client. Understanding the ingredients in a cleaning product may help you avoid exposing yourself or your client to a chemical to which you or your client have sensitivity.
  - For example, “bleach” containing disinfecting products will list “sodium hypochlorite” as the “active ingredient”. This chemical is the source of the familiar odor; the skin, eye and inhalation hazard; and the disinfecting ability.

**Q: How does the manufacturer of the product describe ingredients that are present in cleaning products?**

**A: Manufacturers of cleaning products typically describe ingredients in broad terms on the product label.**

- **Active ingredients:** the chemical components that result in the claimed performance of the product (“disinfection”). Also shown is percentage (%) of the liquid volume contributed by each ingredient.
- **Other ingredients:** everything else in the mixture. This might include water, fragrances, and colorants, for example.
- **Note:** A more comprehensive listing of product ingredients and potential health hazards can be found on the product Safety Data Sheet (SDS) that is available from the manufacturer or online. An SDS is available for many but not all cleaning products.

**Q: How can I protect myself and my client from chemical ingredient hazards in cleaning products?**

**A: Many of the ingredients are present in low concentrations in cleaning products, however, they can still present hazards if the chemical ingredients contact eyes or skin or are present in the air at high enough concentrations.**

- The key to safe use of cleaning products is to adopt practices that minimize contact by protecting eyes and skin and reduce the presence of the chemicals in air. These practices include:
  1. Wear gloves
  2. If recommended on the product label, wear eye protection
  3. Use ventilation by opening a window or operating a fan
  4. Apply directly to cloth or sponge then wipe or apply product to a small area and wipe
  5. Read the manufacturer’s directions for safe use

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**Q: What are some of the chemical ingredients that are present in cleaning products?**

**A: Manufacturers of cleaning products typically present limited information on the product label. Here is a table listing some of the chemicals found in common cleaning products. This table was compiled from information available on product Safety Data Sheets. Some of these ingredients are found in “green” products.**

| <b>Chemical Ingredient</b>   | <b>Commonly used for</b>   | <b>Health Concerns</b>  |
|--|--|---|
| Bleach<br>• Sodium hypochlorite solution in water  | Disinfecting, by itself or in multipurpose cleaners  | Eye injury, skin irritation or burns, irritation to respiratory system including difficulty breathing                   |
| Quaternary ammonium compounds<br>• Also referred to as “quats”<br>• If an ingredient contains the word “ammonium” or “benzalkonium” be suspicious that it’s a quat | Disinfecting, in multipurpose cleaning liquids, disinfecting wipes, floor cleaners, shower cleaners, mold removers, non-alcohol hand sanitizers          | Eye injury, skin irritation, sensitization to skin and respiratory system* including allergic and asthmatic response    |
| Sodium hydroxide<br>• Also called lye or caustic soda  | Dissolving heavy deposits or food soils and grease in oven and drain cleaners. Also used in cleaning products to control solution pH (acid-base balance) | Eye injury, skin irritation or burns, irritation to respiratory system including difficulty breathing                   |
| Aqueous ammonia (ammonia in water solution)  | Dissolving soils and mineral deposits in cleaners: glass, window, bath, oven, toilet, wax removers   | Eye injury, skin irritation or burns, irritation to respiratory system including difficulty breathing                   |
| Limonene, pinene and other terpenes  | Dissolving organic stains and providing fragrance  | Eye irritation, possible sensitization to skin and respiratory system including allergic and asthmatic response         |
| Thymol   | Providing antimicrobial/disinfectant action  | Eye and skin irritation, possible sensitization   |
| Potassium citrate, sodium gluconate and other salts of organic acids   | Dissolving mineral deposits, soap residue  | Eye irritation  |
| Sodium lauryl sulfate, lauryl glucoside, capryl glucoside, and other emulsifiers or soap-like compounds  | Removing soil/dirt/grease from surfaces in many general purpose cleaners   | Eye irritation  |
| Enzymes such as amylase and protease   | Used to break down soils/dirt containing starchy residue or proteins   | Eye irritation  |
| Ethanol and other alcohols   | Used to dissolve other ingredients and to provide anti-microbial/disinfectant  | Eye irritation  |
| Fragrances<br>• Pine or fruit scents, perfumes   | Designed by manufacturer to create a specific (usually pleasant) user experience. Many fragrances are used in cleaning products.                         | User intolerance due to dislike, possible sensitization to respiratory system including allergic and asthmatic response |

\* *Sensitization* means that a person becomes unusually reactive to a chemical or group of chemicals. Even very small amounts can cause an allergic reaction of the skin or airways.

**For more information on cleaning-related topics in home health care, see our fact sheets at: [www.uml.edu/SafeHCFactSheets](http://www.uml.edu/SafeHCFactSheets)**

Last reviewed: 9/21/17