

Green Cleaning - Frequently Asked Questions

MAKING & STORING PRODUCTS

How long can I store homemade products?

It is best to store products for no longer than one month. Make small amounts of cleaners to reduce storage time. Label and date the containers. As with all cleaning products, store ingredients out of reach of children and pets. Just because it is natural doesn't mean it is safe.

INGREDIENTS – Surfactants are the primary ingredients in soaps and detergents. They are used to cut grease and grab onto the dirt to help remove it from the surface. Traditional products tend to be petroleum-based. Greener options are plant-based oils, such as vegetable or coconut oils.

What is vegetable oil based soap?

This type of soap is made from some type of vegetable oil instead of petroleum. It is available in liquid or bar form.

Where to find: Specialty and health food stores and some drug stores. It may be called castile soap. A commonly found brand is Dr. Bonner's.

Uses: General purpose cleaning

Cautions: Direct contact may irritate eyes

What is Murphy's oil soap?

It is a vegetable-oil based soap used for general household cleaning.

Where to find: Grocery store

Cautions: Direct exposure to large amounts may cause eye or skin irritation. Contains 1% to 5% potassium hydroxide, which is lye.

What is Fels Naptha soap?

This is a large bar of soap that has been around since the 1800's. It originally contained benzene which worked great on oily stains, but that is no longer an ingredient.

Where to find: It can be found in the laundry stain removal section in most grocery stores.

Uses: Stain removal.

Cautions: It can irritate eyes and should not be used directly on your skin. Over exposure can cause headaches and nausea.

What are soap flakes?

Pieces of soap grated off a hard block. It's made from vegetable or animal fat. The first U.S. brand of soap flakes was Lux. Some may remember Ivory. You can make your own by grating a bar of vegetable oil based soap. Check with your appliance manufacturer before using soap flakes in your washing machine or dishwasher.

INGREDIENTS – Alkalis are soluble salts that range in strength from the mildest (baking soda) to the strongest (washing soda). They work well on oily dirt.

What is baking soda?

This is Bicarbonate of Soda, which is a mild alkali.

Where to find: Grocery store, baking aisle

Uses: Removing stains from tile, glass, oven doors, and china; absorb odors; cuts grease with rubbing.

What is borax?

This is Sodium Borate, a powder or crystalline salt. It is a white odorless powder.

Where to find: Laundry aisle of most grocery stores. A commonly found brand is 20 Mule Team Borax.

Uses: Laundry booster, water softener, freshen laundry, all-around deodorizer.

Caution: Dust may cause irritation to throat and respiratory system. Recent studies indicate that chronic exposure to borax and boric acid may impact reproductive systems.

What is washing soda?

Carbonate of soda sodium carbonate or soda ash. It is a strong alkaline that is sold as a white granular powder. It works well at dissolving grease, soap scum and mineral deposits.

Where to find: Laundry aisle of some grocery stores. A common brand is Arm & Hammer.

Uses: A water softener in conjunction with laundry detergents; cuts grease; mild abrasive.

Cautions: Gloves recommended as it may irritate skin; not to be used with silks, woolens or vinyl. Avoid breathing the dust.

Don't use on surfaces that are aluminum, waxed, or varnished. Don't mix with acids, like vinegar.

INGREDIENTS – Acids are used to remove hard-water deposits, discoloration on metal surfaces and rust stains. Vinegar and lemon juice are mild acids.

What type of lemon juice should be used for cleaning?

Use food grade lemon juice. It is acidic and will help lighten stains and cut grease. It can also be used to remove tarnish on brass, copper, bronze and aluminum. Don't use it on silver.

What is white or distilled vinegar?

Weak acid commonly used in food preparations. It is made from fermented corn or grains.

Where to find: Grocery store

Uses: Variety of household cleaning tasks; stain removal; absorb odors (odor dissipates quickly); remove hard water spots; dissolve soap scum. Don't use on acetate fabrics, because it can dissolve the fibers.

Cautions: Prolonged inhalation of vapors may irritate respiratory tract.

Can brown vinegar be used for cleaning?

Yes. Apple cider vinegar is made from fermented apples. Most people choose white vinegar since it costs less and the brown vinegar could leave a stain on the surfaces you are cleaning.

Cautions: Prolonged inhalation of vapors may irritate respiratory tract.

What is cream of tartar?

Potassium bitartrate is a mild acid that is commonly used for baking but may also be used to remove stains from sinks and bathtubs. It also removes stains from aluminum cookware.

Where to find: Grocery store, spices section of the baking aisle.

INGREDIENTS – Essential Oils & More

What are essential oils?

Highly concentrated oils extracted through a distillation process. They are generally sold in blue or brown bottles and prices start at \$5. Products have a long shelf life if stored out of direct light.

Where to find: Health food stores; online

Uses: Add fragrance to cleaners

Cautions: May irritate throat or lungs, especially with prolonged or repeated exposure.

Are essential oils the same as scents used for hobbies like candle and soap making?

No. Oils used to scent candles, soaps and in aromatherapy are usually essential oils diluted by a carrier oil like almond or jojoba.

Can I make my own essential oils?

Yes, but it does require a large quantity of plant material to produce a small amount of essential oil.

How can cornstarch be used?

Cornstarch is used to absorb oil and grease.

How can salt be used for household cleaning?

Salt is sodium chloride. It is used as an abrasive.

Where to find: Food or grocery store

Cautions: Direct eye contact may cause irritation

BLEACHES and DISINFECTANTS *must be registered with the EPA as a sanitizer or disinfectant. Some alternatives to bleach are registered and grouped together as “quaternary ammonium compounds.” These include hydrogen peroxide. Effectiveness depends on dilution of the product along the amount of time the solution is on the surface and if the surface was pre-cleaned. More info @ [EPA Registered Hard Surface Disinfectants Comparison Chart](#)*

Chlorine bleach is sodium hypochlorite. The concentration in name-brand bleaches is from 5-10%. The label should disclose the percentage of the active ingredient.

Uses: Disinfecting, sanitizing and laundry.

Caution: Extremely irritating to the lungs and eyes. When mixed with ammonia it produces a poisonous gas. Always use in a well-ventilated area and don't use undiluted. CDC states that bleach is not needed for mold cleanup and if you choose to use a biocide then don't use more than 1 cup of bleach per gallon of water.

Hydrogen peroxide is a mild alternative to chlorine bleach used in products labeled “chlorine free” and in some green cleaning products.

Where to find: Liquid form at most grocery and drug stores where medications and personal care products are located.

Uses: Removal of stains.

Cautions: Avoid eye contact.

Thymol is a component of thyme oil which can be extracted from a common thyme plant. It is registered with EPA and is

rated to be “effective against a broad spectrum of microbes, including H1N1 (Influenza A), TB and MRSA.”

Where to find: It can be found in some green disinfectants such as cleaners from Seventh Generation. It has a strong odor.

AIR FRESHENERS *do not freshen or clean the air, instead they mask odors that could indicate unhealthy housing conditions, like mold or sewer gas. They introduce volatile organic compounds (VOCs) into your home, some of which have been associated with respiratory problems. Common chemicals include fragrance mixtures (may contain 100+ chemicals); phthalates (affect hormones and could cause cancer); hydrocarbons (propellants); ethanol and glycol ethers (irritants); benzene and formaldehyde (cancer causing).*

Spray: A simple recipe of 1 teaspoon baking soda, 1 teaspoon vinegar (or lemon juice), and 2 cups hot water in a spray bottle can be sprayed in the air to help remove odors.

Essential oil: In a spray bottle, mix 1 cup of water with a few drops of essential oil. You can also put a few drops of oil on a piece of cotton and place it out of a child's reach.

Vinegar: Set out a bowl of white vinegar. The vinegar smell will dissipate quickly and vinegar is great at absorbing odors. You can also use it in the microwave when something burns or to get rid of smoke or tobacco odors.

Cat litter that contains charcoal works great at absorbing odors such as burned popcorn in the microwave. Place a container of unused cat litter where the odor is and leave it until the odor is absorbed.

Simmering spices: Simmer a pot of water with spices or herbs in it, such as cinnamon and cloves. Watch the pan and don't let it boil dry.

OTHER INGREDIENTS

Boiled linseed oil is produced with linseed oil is heated, causing the oil to oxidize and turn into a polymer, which makes it thinner, and also shortens the boiled linseed oil's drying time. While boiled linseed oil in the past was purely that, many of today's products labeled as boiled linseed oil are a mixture; usually containing petroleum based solvents and metallically based dryers.

Where to find: Hardware store, paint aisle. Be careful when buying it, because some products contain a petroleum-based solvent and metallic dryer.

Uses: Used as a binder in oil-based paint, as a wood finish,

Cautions: May cause skin irritation; high vapor concentrations may irritate eyes, nose, throat & lungs.

Ammonia is a compound of nitrogen and hydrogen (NH₃). It is a colorless gas with a strong odor. It is found in household cleaners (bathroom, tile, and glass cleaner).

Caution: Poisonous when swallowed, extremely irritating to respiratory passages when inhaled; can burn skin on contact. Never mix ammonia-containing products with bleach.

Hydrochloric acid is found in toilet bowl cleaners. Can severely burn skin, irritate eyes and respiratory tract.

Petroleum-based ingredients are often found in surfactants, or soaps and detergents. Other toxic ingredients derived from petroleum, include formaldehyde, which may be present at trace levels in cleaning products.

Butyl cellosolve (also known as butyl glycol, ethylene glycol, monobutyl) is a chemical that is found in a wide variety of household cleaning agents – glass cleaners, oven cleaners, general degreasers, spot removers, air fresheners, and carpet cleaners. It is a colorless liquid with a sweet, ether-like odor.
Caution: Poisonous when swallowed and a lung tissue irritant.

Diethanolamine (DEA) and Triethanolamine (TEA) is used in sudsing products such as detergents and cleaners. It is a wetting agent that helps products spread.

Caution: Make cause eye, skin, nose, and throat irritation. It may produce carcinogenic compounds.

Phosphates were found in automatic dishwasher detergents and some laundry detergents but in 2010 they were removed because they were harmful to the environment. They have been found to contribute to the overgrowth of algae and aquatic weeds, which can kill off fish populations and other aquatic life. They helped remove the food and grease, and reduce spotting and films on dishes.

Sodium hydroxide (aka lye and caustic soda) is used in cleaners for toilet bowl, oven and drain.

Caution: Corrosive and extremely irritating to eyes, nose, and throat and can cause burns.

GREEN LABELS

Labels you may find on household cleaning products

LABEL	Government Definition	3 rd Party certification	Meaning
100% Biocompatible	None	None	No standard definition for the word. Seems to mean not having toxic or injurious effects on biological systems.
100% Vegan	None	None	Implies the product contains no animal-derived ingredients
Certified Vegan	No	Vegan Action	Registered trademark signifying that there are no animal ingredients or by-products. Somewhat meaningful.
Antibacterial	EPA regulates products that make this claim. Must display EPA registration number for active antibacterial ingredient		Meaningful. EPA requires companies to submit information.
Bactericidal	EPA		Kills bacteria. EPA regulates use of this claim, but on household products (e.g. sponges, cutting boards) it is somewhat meaningless. For cleaners it has more meaning.
Biodegradable	FTC issued general guidelines for use of this term	None	Implies that the product and/or packaging will break down in nature in a reasonably short period of time when exposed to air, moisture, bacteria and other organisms.
Biodegradable without effluent treatment processes	FTC	None	“without effluent treatment processes” is not well defined.
Certified biodegradable		Scientific Certification Systems (SCS)	SCS verifies that products degrade safely in an aerobic environment.
Eco-safe	None		Implies product or packaging has some kind of environmental benefit or causes no harm to environment. All products have some environmental impact. FTC considers this claim too vague to be meaningful.
Environmentally friendly	None	None	Implies product or packaging has some environmental benefit or causes no harm to environment.
Natural	None	None	No standard definition for this claim so manufacturers can use it anyway they please. Natural does not mean it is less toxic or non-irritating. Even cleaners like lemon juice can be irritating to eyes or skin.
Non-toxic	None	None	Implies that product will cause no harm to consumer or environment.

What to look for on the label?

Instead of looking for an eco-friendly label, check the ingredient list.

Greenwashing resources:

Federal Trade Commission Green Guides – issued in 1992 and revised in 1996, 1998, and 2012. They provide guidance about marketing claims. <https://www.ftc.gov/news-events/media-resources/truth-advertising/green-guides>

The “Sins of Greenwashing” is a website develop by UL Environment. They conduct surveys and help bring awareness to the public about greenwashing. <http://sinsofgreenwashing.com/findings/the-seven-sins/index.html>

What does a cleaning product label mean?

Manufacturers are not required to list all the ingredients in their cleaning products, unless they are active disinfectants or known to be potentially hazardous. The order in which the ingredients are listed does not represent the amounts in the product. For more information on ingredients visit the Household Products Database

(<http://householdproducts.nlm.nih.gov/>).

If you are concerned about specific ingredients in a product, call the company.

The manufacturer’s name and address must be listed on all cleaning products so that consumers can contact them with questions, comments, or problems. Manufacturers are not required to disclose all of their ingredients, unless the product makes claims about disinfecting or sanitizing.

Material Safety Data Sheet (MSDS) contains information on the more-toxic ingredients or formulations used to make household products. Manufacturers may also post MSDS reports on their Web sites. You can also search for safety information on brand-specific products and their ingredients by visiting the National Library of Medicine’s [Household Products Database](#). The guide includes the potential health effects of more than 2,000 ingredients contained in 6,000 common household products.

An ounce of prevention... If you can prevent stains from setting in by taking care of them right away, you will reduce the need for tough specialty cleaners, which are often relatively expensive, more toxic, and harmful to surfaces. Even better, try to prevent stains from happening in the first place. For example:

- To avoid using oven cleaners**, put a layer of aluminum foil in the bottom of the oven and replace it periodically.
- To avoid drain cleaners**, put fitted screens over drains and pour kitchen grease into empty containers that can be disposed of in the trash.
- To avoid air fresheners**, open windows to air out the house occasionally.
- To avoid bathroom mildew removers**, wipe down the shower curtain and walls after showering.
- To avoid carpet cleaners**, take off shoes at the door.