

HENNEPIN COUNTY
MINNESOTA



Green cleaning recipes



Green cleaning recipes

According to the U.S. Environmental Protection Agency, only a fraction of registered chemicals have gone through complete testing for human health concerns. Some chemicals have immediate toxic effects. Others are toxic to our bodies only after repeated, long-term exposure. Hazardous household chemicals also require special disposal at drop-off sites to protect our air, land and water.

You can protect your health and the health of your family, pets and the environment by making your own cleaning products with simple, less-toxic ingredients. Many common household products, such as baking soda, lemon juice, vinegar and liquid dish soap, can make effective and inexpensive cleaners.

Basic cleaning supplies

Baking soda

Lemon or lime juice

Washing soda

White vinegar

Non-scratch scrub sponge

Drain snake

Pumice stone



Tips and tricks

- Mix your homemade cleaners in small batches.
- Label all containers with ingredients, intended use and date made.
- Keep all containers out of reach of children and pets.
- Keep all containers closed when not in use.
- Never use food or beverage containers for cleaning chemicals of any type.
- Never mix bleach and ammonia together or with any other product. Avoid using bleach or ammonia.
- Avoid using chemical pesticides.
- Read and follow all label directions on purchased products.
- Check product on a small area to test for colorfastness (carpet and clothing stain removal). Vinegar can leach color from some items.

Basic properties and uses for cleaning supplies:

Baking soda (sodium bicarbonate)



- Odorless
- Anti-fungal properties
- Deodorizer
- Stain remover when diluted with warm water
- Fabric softener when added to rinse cycle
- Polisher – removes dirt without damaging surfaces

Lemon or lime juice



- Smell symbolizes cleanliness
- Acidic – can provide antibacterial/antiseptic properties
- Stain removing – let sit for a few minutes

Washing soda (sodium carbonate)



- Similar to baking soda (not for use in cooking)
- Odorless
- Stain remover – has alkaline properties
- Water softener - treats hard water
- Descale coffee machines or bathroom tiles

White vinegar



- Antibacterial
- Kills most mold
- Deodorizer
- Lime deposit remover
- Stain remover
- Fabric softener when added with laundry detergent
- Use to eliminate bacteria, mold and germs

Non-scratch scrub sponge



- Helps remove stains
- Helps scrub surfaces
- Must be dried completely after each use to avoid bacteria growth

Drain snake



- Helps clear clogged piping

Pumice stone

- Helps remove lime build up in toilets

Borax, non-chlorine bleach and washing soda



can be used by themselves as household cleaners and laundry products in accordance with label directions. All of these products are harmful if swallowed. Washing soda is not the same as baking soda and should not be used in place of baking soda.

- Use only non-chlorine bleach if you feel you must use a bleach product. Use it by itself.
- Avoid using bleach or ammonia. Never mix these products with each other or any other product.

Around the home

All-purpose cleaner

- ¼ cup white vinegar
- 1½ teaspoons non-antibacterial liquid dish soap

In a 16 oz. spray bottle, add the vinegar and fill with water. Add dish soap last. Add lemon juice if desired.



Air fresheners

Try one or all of these air freshener recipes in your home. Two of them will add humidity to the air while they sit on your stove. The third passively freshens the air when placed around your home. These are not fresheners to be sprayed.

Air freshener 1:

- 1 tablespoon white vinegar
- 1 cup water

Boil vinegar and water to eliminate unpleasant smells.

Air freshener 2:

- 2 cinnamon sticks
- 1 orange
- 4 whole cloves
- 1 pot of water



Boil water with cinnamon sticks, oranges and cloves for a natural air freshener.

Tip: keep out of reach of children and pets to avoid spilling.

Non-oily stains

- 1 teaspoon white vinegar
- 1 teaspoon liquid soap
- 1 pint lukewarm water

Apply to stain with towel and rub gently, rinse with water and dry with towel.



Sanitizer 1*

- 4 ounces white vinegar

Heat 4 oz (½ C) white distilled vinegar in a sauce pan to 150°F or 66°C (handle CAREFULLY when heating as the liquids will be warm but not hot). Using a funnel, pour the warm solution into a spray bottle. Immediately spray on kitchen surfaces, counter tops, sink, refrigerator interior and faucets. Let sit for 1 minute then wipe with a clean white absorbent towel/cloth.

Sanitizer 2*

- 4 ounces white vinegar

Use 4 oz (½ C) white distilled vinegar. Using a funnel, pour room temperature solution into spray bottle. Spray onto kitchen surfaces, counter tops, refrigerator interior and faucets. To be effective, solution MUST sit for 10 minutes then wipe with a clean paper towel.



*Source: Yang, H., Kendall, P., Medeiros, L., Sofos, J. (2009) Inactivation of *Listeria monocytogenes*, *Escherichia coli* O157:H7, and *Salmonella* Typhimurium with compounds available in households. *J. Food Prot.* 72(6); 1201-1208

Tips and tricks

Check the labels for these ingredients when shopping for household cleaners. Avoid these ingredients because they may have health or environmental impacts.

- 2-butoxyethanol (or ethylene glycol monobutyl ether) and other glycol ethers
- alkyl dimethyl benzyl ammonium chloride (ADBAC)
- Alkylphenol ethoxylates (some common ones: nonylphenol and octylphenol ethoxylates, octoxynols)
- Benzalkonium chloride
- Bisphenol A
- d-Limonene
- dodecyl-dimethyl-benzyl ammonium chloride
- Ethanolamines (common chemicals to look out for: monoethanolamine [MEA], diethanolamine [DEA], triethanolamine [TEA])
- Fragrances
- lauryl dimethyl benzyl ammonium chloride
- Parabens
- Phthalates
- Triclocarban
- Triclosan

Source: Green Cleaning, Sanitizing, and Disinfecting: A Toolkit for Early Care and Education http://www2.epa.gov/sites/production/files/documents/ece_curriculumfinal.pdf

Carpet stains

- White absorbent towels/cloth
- Warm water
- ½ cup vinegar
- 1 teaspoon liquid soap

Mix vinegar and soap together in a bowl. Absorb as much moisture as you can from the stained area with towels, rinse area with warm water and apply vinegar and soap solution, leave for 15 minutes, then rinse a towel with clean water and blot dry.

Wood furniture scratch repair

- Unsalted almonds

Rub unsalted almonds on scratches on wood furniture, doors, window trim, etc. to conceal them.

Floor cleaner (including wood)

- White vinegar

Mix ½ cup vinegar per gallon of water.

Ant control

- Mint tea bags (or crushed mint leaves)
- Cloves
- Cayenne pepper

Use one of the above ingredients by putting it at the ants' point of entry.

General pest control tips

- Control pests without using toxins by eliminating their food, water and access.
- Use white vinegar in place of chemical pesticides.
- Avoid using chemical pesticides.

Kitchen

Oven cleaner

- 1 cup or more baking soda
- 1 or 2 teaspoons of non-antibacterial dish soap



Sprinkle water generously over bottom of oven, then cover the grime with enough baking soda so surface is totally white.

Sprinkle or spray more water over the top. Let sit overnight. Wipe up the next morning; then with a bit of liquid soap on a damp scrub sponge, wash remaining residue from oven.

Produce cleaner

- Baking soda
- Scrub sponge

Option 1: Sprinkle baking soda on wet scrub sponge, scrub lightly and rinse.

Option 2: Wash produce in a bowl of cool water with 2-3 tablespoons of baking soda and rinse.

Dishwasher detergent (for dishwashing machines)

- ¼ cup washing soda
- 3 drops of non-antibacterial dish soap
- ¼ cup lemon juice (optional)



This recipe will clean one load of dishes.

Recipes for sinks/tile, rust removal and unclogging drains are located in the bathroom section.

Laundry room

Laundry detergent

- 4 tablespoons borax
- 4 tablespoons washing soda
- 4 tablespoons non-antibacterial dish soap
- 1 gallon warm water
- ¼ cup lemon juice (optional)



Combine water, borax, lemon juice and washing soda in a gallon container. Add dishwashing liquid last, cover and shake until combined. Use ¼ cup per load of laundry.

Fabric softener

- 1 cup white vinegar

Add to load of laundry when you add the detergent.

Stains and odors on fabric

- 1 cup baking soda
- 1 cup white vinegar
- ¼ cup warm water



Make a thick paste with baking soda and water. Rub into stain before washing. Add remaining baking soda and vinegar to washing machine when adding detergent.

Bathroom

Toilet bowl cleaner

- 1 cup baking soda
- 1 cup white vinegar
- 1 pumice stone
- 1 toilet brush

Sprinkle baking soda into toilet bowl, then drizzle vinegar and scrub with toilet brush. Next, use a pumice stone to remove lime in bowl.

Rust remover for sinks and tubs

- ½ cup salt
- 1 lemon
- 1 scrub sponge



Sprinkle a little bit of salt on the rust and squeeze a lemon over the salt until it is soaked in lemon juice. Leave the mixture on the rust for two to three hours. Use the leftover rind to scrub the rust away and then rinse.

Unclog and deodorize drains

- 1 box baking soda
- 1 cup white vinegar
- Drain snake



Sprinkle a generous amount of baking soda in and around the drain opening. Follow with a cup of white vinegar. Finish by flushing with very hot water. Use drain snake to remove remaining clogs. Repeat if needed.

Soft scrubber: basin, tub and tile cleaner

- ½ cup baking soda
- Enough non-antibacterial dish soap to make frosting-like consistency
- Juice from one half of a lemon

Place baking soda in a bowl; slowly pour in liquid soap, stirring continually. Add lemon. Scoop mixture onto scrub sponge, then wash surface and rinse.



Product purchasing tips

If you choose to purchase cleaning products instead of making your own, you can reduce exposure to harmful chemicals by purchasing less hazardous household products.

- Look for products that list all their ingredients on the label. Generally, fewer ingredients are better.
- See page 4 for a list of ingredients to avoid when buying household cleaners.
- Use a multi-purpose cleaner rather than buying many specialty cleaners.
- Choose products that are made from plant-based materials like citrus, seeds, vegetables, herbs or pine oils.
- Choose products that have low or no volatile organic compounds (VOCs). VOCs are toxic chemicals that are released into the air.
- Choose chlorine-free products.
- Choose water-based glues, adhesives and paints.
- Choose the least toxic product to do the job. A product with the signal word Caution on its label is less hazardous than a product with the signal word Warning, Danger or Poison.
- Look for environmentally friendly certifications:
 - Green Seal certification: Products have been assessed for meeting rigorous performance, health and environmental criteria.
 - U.S. EPA Design for the Environment (DfE): Each ingredient in the product has been screened for potential human health and environmental impacts. Based on currently available information, the product contains ingredients that pose the least concern among chemicals in their class.
- Learn more about the products you buy:
 - U.S. Department of Health and Human Services, Household Products Database: householdproducts.nlm.nih.gov/index.htm

