

# Green Living Recipes

*Here are some easy to make recipes and tips for keeping your home clean while being more earth friendly by using less harsh ingredients. Many of these are made with common household ingredients or ingredients that can be found at Chemistry Connection.*

## Useful Ingredients

**Castile soap and/or Decyl Glucoside** in liquid or bar form serves as a biodegradable, vegetable-based surfactant and all-around cleaner (avoid mixing with vinegar, which neutralizes its cleansing properties). Our renewable, corn derived Decyl Glucoside is a better (higher) foamer, and cleans grease more effectively than Castile Soap.

**Baking soda (sodium bicarbonate)** cleans, whitens, neutralizes odors and softens water. It's an excellent scrubbing agent for bathrooms, refrigerators and ovens.

**Borax**, a natural mineral, improves the effectiveness of laundry soap. Although classified (as is salt) as a low-level health hazard that should be kept away from children and animals, borax is non-carcinogenic and isn't absorbed through skin.

**Soda Ash**, otherwise known as washing soda, a caustic chemical cousin of baking soda, softens water and can help remove many stains from tile floors, outdoor furniture, etc. Washing soda and water can be very alkaline, so WEAR GLOVES! IF you want foam and extra cleaning boost, especially with outside jobs, add a small amount of one of the following, listed in order of cleaning strength: Lauramine Oxide, Decyl Glucoside, or Coco-Glucoside.

**Hydrogen peroxide** is considered an effective disinfectant and bleach alternative by the Environmental Protection Agency. Use it to whiten grout and remove stains. Always test first.

**Essential oils** derived from plants infuse cleaners with fragrance and boost germ-fighting power. Tea tree, Eucalyptus and lavender oils all boast antibacterial, antiviral, and antifungal properties. Although essential oils can be pricey, many say that the investment will pay for itself many times over.

**Lemon juice or citric acid** cuts through grease, removes mold and bacteria and leaves dishes streak-free.

**Coarse** salt helps soften dishwasher water and acts as a scouring agent.

**White vinegar** is a very effective and popular cleaner! Vinegar cleans, deodorizes, and cuts most household grease, and it reportedly disinfects against bacteria, viruses, and mold.

## Easy Recipes

**All-purpose cleaner:** Try combining 1 cup vinegar and 1 cup water, and add to it 10 to 15 drops of lemon oil in a spray bottle. Use it anywhere, including glass and mirrors. For serious

disinfecting, follow up with a hydrogen peroxide spray. If you want foam, try adding decyl glucoside, an all natural surfactant made from corn.

**Foaming hand/dish soap:** Shake one cup of water, a quarter-cup of castile soap (or Decyl glucoside), and 15 drops of essential oil in a foaming dispenser. Use in bathrooms and kitchens.

**Dishwashing detergent:** Mix 1 cup of borax powder, 1 cup of Soda Ash (washing soda), 3/4 cup of citric acid, and 1/2 cup of coarse salt. Leave it uncovered for several days, stirring often to prevent clumping. Cover and refrigerate. Use one tablespoon per load with a half-cup of citric acid in the rinse to combat streaks.

**Chlorine Bleach Foam** (interesting "trade secret"): To make a foamy, bleachy soap (like a house cleaner), add Lauramine Oxide or our ChemConx AIOS-40 to household bleach. Warning: Be careful when handling bleach and follow directions on container.

**Laundry detergent:** Combine 1 cup of borax, and 1 cup of Soda Ash (washing soda) and one 14-ounce bar of a grated soap. Use one tablespoon per load, adding a half-cup of lemon juice to the rinse cycle. Add a very small amount of decyl glucoside for more foamy cleaning.

**Alternative Laundry detergent (Bulk):** Grate 3 bars of Fels Naptha Soap. Combine the grated fels naptha soap with 3 pounds of Soda Ash (washing soda), 2 cups of Baking Soda, 4 pounds of powder Borax. Optional: add 1 pound of Oxyclean type cleaner for booster and stains. Optional: add Tea Tree Oil or Eucalyptus Oil for fragrance.

**Bathroom soft scrub:** Create a thick paste with liquid castile soap or a small amount of decyl glucoside and 3/4 cup of baking soda. Scour tubs, showers, and stainless steel surfaces with a sponge, and then rinse.

**Toilet bowl cleaner:** Sprinkle one cup of powdered borax into the toilet at bedtime and then clean the loosened grime with a brush the next morning. Wipe outer surfaces with the all-purpose spray.

**Hard floor cleaner:** The Environmental Working Group's DIY Cleaning Guide suggests combining a half-gallon of hot water with one cup of white vinegar in a bucket to mop. For foam, try our sulfate free Chemconx AIOS-40 or Decyl Glucoside

**Carpet cleaner:** Freshen rugs by sprinkling baking soda at night and vacuuming in the morning. For deeper cleaning, combine one cup of vinegar and two-and-a-half gallons of water in a steam cleaner. For extra fragrance, add a tablespoon of our fresh lavender buds and just vacuum up with the baking soda!

**Wood polish:** One popular blend is to mix one quarter of a cup of vinegar or lemon juice with a few drops of olive oil and lemon oil.

**Simple Sulfate Free Shampoo and Wash:** To 2/3rd Water (66%), Add 3 tbsp Vegetable Glycerin (moisturizer/humectant, 4%), then add Cocamidopropyl Betaine (coconut based surfactant, 10%). Finally, add the primary surfactant Decyl glucoside (surfactant, 17%). This is a

starting formulation for an excellent, green, and skin friendly shampoo/body wash. Experiment and make it your own.

*Optional: To thicken, add Crothix 2% OR Table Salt at 0.5%*

*Optional: Add a favorite fragrance or Essential Oil in with Decyl Glucoside.*

## Bath Bomb Recipes

### Recipe 1

**Supplies:** 1¾ cups Baking Soda, 1 cup Citric Acid, 2 cups Corn Starch, Spritzer bottles or droppers, Fragrance or Essential Oil, and colorants.

1. Sift baking soda, citric acid, and cornstarch through a sieve to blend (and remove lumps). To make different tints, fill small spritzer bottles or droppers with water and add 4 to 6 drops of food coloring to each.
2. Pour 1 cup of the powdered blend into a glass bowl. Lightly spritz, stirring after each spritz, until the powder is desired color. Add water slowly, so mixture does not fizz. If mixing two tints, alternate colors as you spritz. Check the consistency of powder with your fingers; when it can be tightly packed or shaped, stop spritzing. This may take a little while.
3. Select your fragrance oil or essential oil (or oils). Add 3 to 5 drops if it's a strong scent (peppermint, lavender), 6 if it's a weaker one (lemon, grapefruit). Mix well. Firmly pack mixture into your bath bomb molds. We used ¼ cup for each fizzy, which is good for one bath. Allow the molded bath bombs to firm up in the mold and then carefully pop them out. Repeat with different tints for remaining powder.

### Recipe 2: Lavender Bath Bomb

**Supplies:** 1 cup Baking Soda, ½ cup Citric Acid, ½ cup Corn Starch, 3 tablespoons Epsom Salt, 2 teaspoons Sweet Almond Oil, ¾ tsp water (or witch hazel), Lavender Essential Oil, Dried Organic Lavender Flowers, and Bath Bomb Molds.

1. In a large bowl combine baking soda, citric acid, cornstarch, epsom salt and dried lavender.
2. In a small bowl combine almond oil, water, and essential oil.
3. Pour the wet mixture into dry mixture. Mix with a whisk until fully blended. Test mixture by pressing a handful together. If the mixture doesn't hold LIGHTLY, with a spray bottle, spray with water once or twice (or add a little more oil). Avoid adding too much water or the mixture will fizz and not form in the mold correctly. Once it's the right consistency tightly press the mixture into mold and allow to dry at least 2 hours before removing. Set bath bombs on a soft towel to dry overnight (in high humidity, drying may take longer).