



Greywater-Compatible Cleaning Products

Greywater-Compatible Products

factsheet

Greywater is the used water that drains from washing machines, bathroom sinks, showers, and tubs. In California, greywater can legally be used to irrigate plants in the yard, if certain rules are followed. Many common household soaps and detergents have high levels of salts and synthetic compounds that can build up in the soil, so it's important to use plant-friendly products with your greywater system. Additionally, toxic discharges such as rinse water from paint, chlorine bleach, or hair dye should never be released into the greywater system. Instead, they should be routed to the municipal sewer. All greywater systems should have a three-way valve installed to easily switch the discharge water flow to the sewer or yard.

Product Ingredients

When choosing products to use with a greywater system, generally seek out cleaning products that are "biodegradable" and free of 1) salts, sodium compounds; 2) boron, borate, and borax; and 3) chlorine bleach.

Ingredients to Avoid:

- sodium and ingredients with the word "sodium" or salt in them
- boron/borax (toxic to plants)
- chlorine bleach (acceptable alternative: hydrogen peroxide)
- sodium perborate
- sodium tryochlorite
- petroleum distillate
- sodium-based water softeners
- anti-bacterial soaps & cleaners
- "whiteners" and "softeners"

Other Synthetic Compounds that Degrade Soil Quality:

- chromium oxide
- artificial colors, FD&C colors
- synthetic fragrance
- artificial preservatives
- parabens (methyl, propyl, butyl, and ethyl)

Mulch Basin

The effect that certain cleaning product ingredients will have in your yard depends in part on what type of greywater system is in place. If the greywater is going into the soil through a mulch basin ("terrestrial"), Nitrogen (N) and Phosphorus (P) ingredients are not a problem and in fact end up as soil nutrients. This is the case for greywater systems that follow California code and typical "laundry-to-landscape" type systems. If greywater is discharged in or near a creek or other body of water, however, these same nutrients will cause harmful algae to grow. For this and other reasons, greywater should not be used within 100 feet of a creek or body of water.

Contaminants

Send to sewer all water used to wash diapers or similarly soiled items and when members of the household or guests have a communicable disease such as Staph or Hepatitis. Divert all water containing hazardous chemicals and water from oily or greasy rags. When in doubt about whether a cleaning product is compatible, don't use it in your greywater system. Don't plant root vegetables or edible leafy greens in the greywater garden. Use greywater for flowers, herbs, and above-ground fruiting vegetables. Wash food before eating it, and wash hands after working in the soil.

Greywater-Compatible Cleaning Products (continued)

Laundry Greywater Systems

Look for products that list their ingredients. You're more apt to find greywater-compatible products at natural foods grocery stores and ecologically-minded stores. Choose liquid soaps over powder as they tend to contain less sodium.

Best	Limit	Avoid
Oasis Laundry Liquid	Citra Suds (sodium chloride)	Tide (enzymes +?)
Bio Pac Laundry Liquid	Biokleen Laundry Liquid	All (perfume, brightening agent, colorant, +?)
ECOS liquid detergents	Planet (salt, sodium carbonate/washing soda)	Arm & Hammer (water softener, brightener, +?)
Hydrogen Peroxide bleach	Ecover Laundry Wash (some salt)	Woolite (?)
Vaska Herbatergent	Mountain Green Laundry Detergent	Ivory Snow (enzymes +?)
	LifeTree Laundry Liquid	Clorox (chlorine bleach)
	Lullwater Soap Nuts Seventh Generation (enzymes)	Borax
	Biokleen Bac Out (sodium percarbonate, enzymes)	
	Biokleen Oxygen Bleach Plus (sodium sulfate)	

? The question marks in the table above indicate that these products do not list all of their ingredients on their labels. This is a common practice with many conventional brands. It is safe to assume that many of these products contain artificial colors and scents among their ingredients.

Bathroom Sink and Shower Greywater Systems

There are numerous ingredients to avoid in body care products. The Skin Deep database can help you find out what chemicals are in your body & beauty products: www.ewg.org/skindeep/. Many greywater-compatible soaps are available at the Ecology Center store, Berkeley Bowl stores, and other natural grocery stores.

Greywater-Compatible Body Soaps & Shampoos:

- Dr. Bronner's Magic Soaps (liquid)
- Aubrey Organics Shampoos
- Oasis dishwash/all-purpose cleaner for handwashing dishes, body & shampoo
- Most bar soaps are fine, but they make the water more basic (opposite of acidic), so don't use that greywater for acid-loving plants (eg. blueberries or rhododendrons)

Greywater-Compatible Household Cleaners & All Purpose Liquid Cleaners:

- Oasis dishwash/all-purpose cleaner for handwashing dishes, body & shampoo
- Dr. Bronner's Liquid Castille Soap
- Ecos: Creamy Cleanser, Parsley Plus, Furniture Polish, Window Kleener, Floor Kleener, Carpet Shampoo

Recommended Resources

City of Berkeley Home Graywater Guide: www.ci.berkeley.ca.us/ContentDisplay.aspx?id=45756

Laundry Detergent Ingredients: www.epa.gov/dfe/pubs/laundry/techfact/keychar.htm

Greywater Action: greywateraction.org/faqs/greywater-recycling#faq1

Create an Oasis with Greywater, 5th ed., by Art Ludwig

San Francisco Graywater Design Manual for Outdoor Irrigation (includes California greywater code requirements)
sfwater.org/modules/showdocument.aspx?documentid=55

Rainwater Harvesting for Drylands:

www.harvestingrainwater.com/greywater-harvesting/greywater-compatible-soaps-and-detergents/