

# Day 7: Organic (Greener)

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Time to investigate products, their ingredients, and their effects on us and the environment!

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## Where I Went

# Walgreens!

It's one of the closest stores near our residence hall, which is the closest hall to campus. A lot of college students come here.



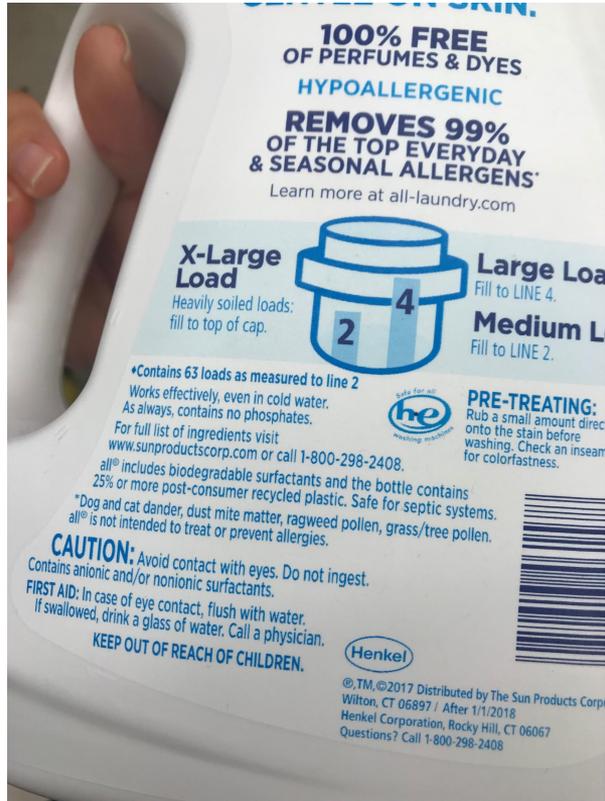
# Laundry Detergent



What's potentially misleading:

- The phrases “free and clear” and “100% free of perfumes and dyes” implies that the product is free of any harmful substances
  - The “#1 recommended by dermatologists” suggests that the product doesn't have any irritating ingredients
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# Ingredients



Ingredients were not listed on the product, so I looked it up:

- Water - Solvent
- Sodium Dodecylbenzenesulfonate - Surfactant
- Ethoxylated Lauryl Alcohol - Surfactant
- Sodium Silicate - Builder
- Sodium Hydroxide - pH Adjuster
- Coconut fatty acid salt - Defoamer
- Sodium Xylenesulfonate - Surfactant
- Stilbene disulfonic acid triazine derivative - Brightening Agent
- \*\*\*recommended by dermatologists because doesn't contain dyes, which is said to be irritating on sensitive skin

# 3 Ingredients

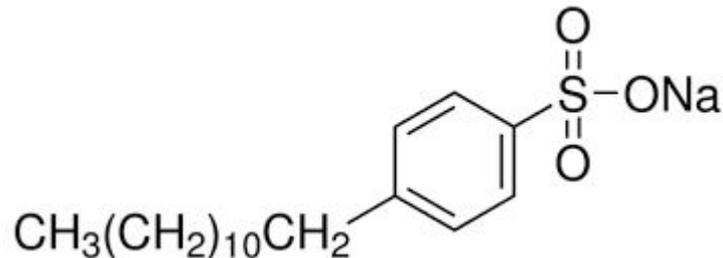
- Sodium Dodecylbenzenesulfonate - Surfactant
- Ethoxylated Lauryl Alcohol - Surfactant
- Sodium Xylenesulfonate - Surfactant

What are these ingredients used for, and what are their effects, if any, on humans and the environment?

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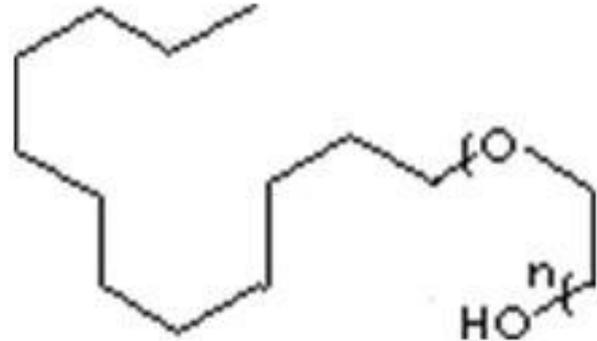
# Sodium Dodecylbenzenesulfonate

- Used in detergent, cleaning products, and pesticides
- On Hazardous Substance List
- Can affect you if breathed in
- Contact can irritate eyes and skin
- Breathing it can irritate nose, throat, lungs causing coughing, wheezing, and/or shortness of breath
- \*according to the New Jersey Department of Health and Senior Services



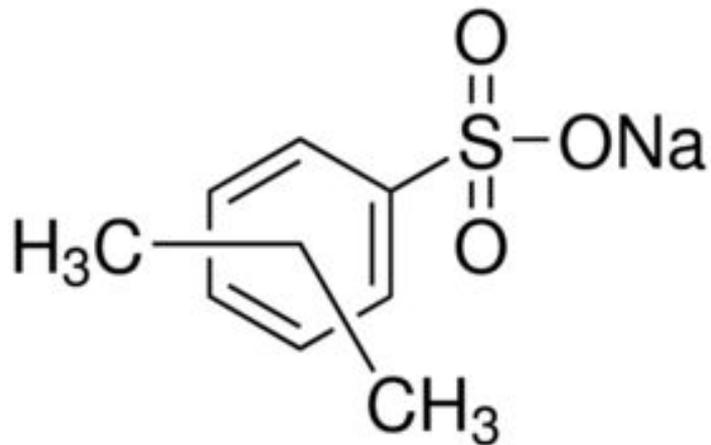
# Ethoxylated Lauryl Alcohol

- Used as cleaning agents, scouring agents, wetting agents
- According to a study by **Ecotoxicol Environ Saf**, “The two surfactants tested, an alcohol ethoxylate (AE) and an alcohol ethoxy sulfate (AES), demonstrate both teratogenic and toxic effects in *Xenopus laevis* embryos and tadpoles.”



# Sodium Xylenesulfonate

- Gives off irritating or toxic fumes in a fire
- Can cause cough or sore throat if inhaled
- Short-term effects: irritating to eyes, skin, and respiratory tract
- \*according to the Center of Disease Control



# Effects of Surfactants on the Environment

- Toxic effects on marine organisms
- \*However, this is contested -- another study showed that it's not likely that surfactants have a negative effect on the environment
  - According to Aarhus University. "Down the drain: Do surfactants harm the environment? Not likely, report finds." ScienceDaily. ScienceDaily, 3 October 2014.

**“There was an effect of the addition of detergent (RINSO, SURF and ATTACK) with different doses to the growth of bacterial population in the sea water column... The higher the concentration of detergent added, the stronger the impact of the suppression of bacterial population growth resulted.”**

- According to the study “Detergent Disposal into Our Environment and Its Impact on Marine Microbes” (Effendi et al 2017 IOP Conf. Ser.: Earth Environ. Sci. 9)

# Ecofriendly Alternative

## The Simply Co. laundry detergent

- contains 3 ingredients: baking soda, washing soda, and organic, vegan castile soap
- company is owned by Lauren Singer, a zero waste advocate



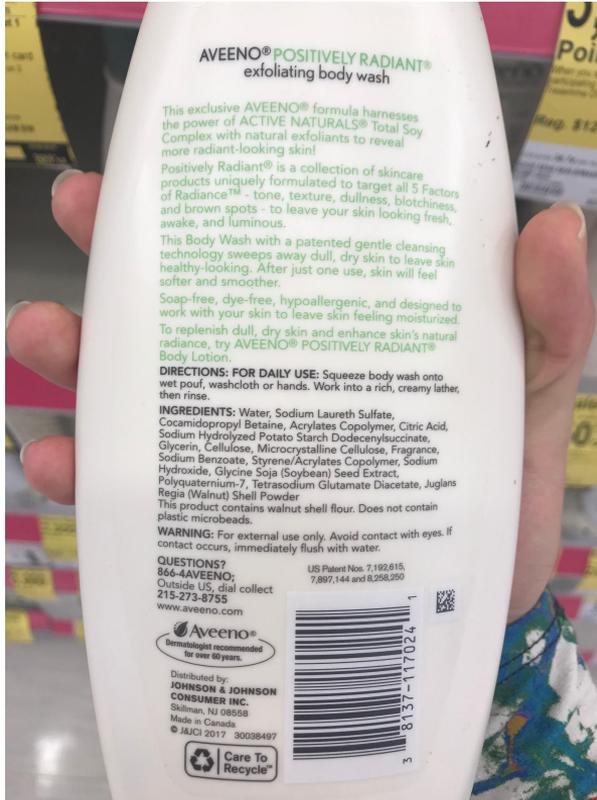
# Body Soap



## What's potentially misleading:

- The title of the product “Active Naturals,” the green and white packaging, and the plant image makes the product seem to be free gives the impression that it's free of “bad” ingredients
  - The box at the bottom right that says “Active Naturals: Total Soy Complex” makes the product seem to be made of natural ingredients
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# Ingredients



- Water
- Sodium laureth sulfate
- Cocamidopropyl betaine
- Acrylates copolymer
- Citric acid
- Sodium hydrolyzed potato starch dodeceny succinate
- Glycerin
- Cellulose
- Microcrystalline cellulose
- Fragrance
- Sodium benzoate
- Styrene/acrylates copolymer
- Sodium hydroxide
- Glycine soja (soybean) seed extract
- Polyquaternium-7
- Tetrasodium glutamate diacetate
- Juglans regia (walnut) shell powder
- This product contains walnut shell flour. Does not contain plastic microbeads.

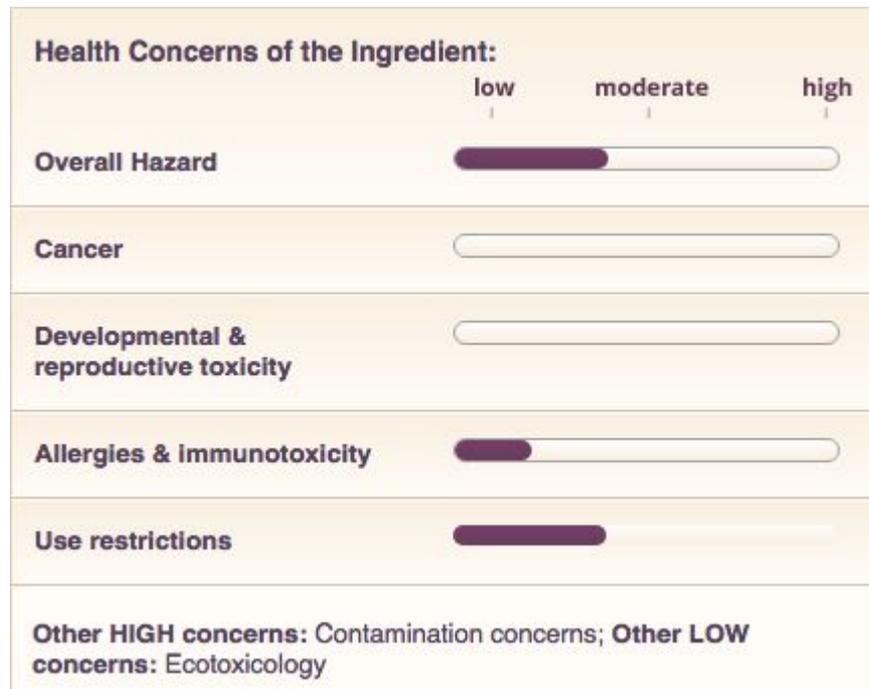
# Sodium Laureth Sulfate

- Used as a surfactant in cleaning products, cosmetics, personal care products
- NOT acutely toxic, but some people become sensitive to it over time and develop an allergy
- Sometimes contaminated with 1,4 dioxane, a possible carcinogen
- Sometimes contaminated with ethylene oxide, a known carcinogen
- No easy way for consumers to know whether the sodium laureth sulfate underwent the process that leads to 1,4 dioxane or ethylene oxide



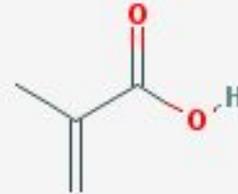
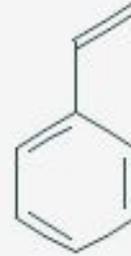
# Cocamidopropyl Betaine

- Mixture of organic compounds derived from coconut oil and dimethylaminopropylamine
- associated with irritation and allergic contact dermatitis (due to ingredient or impurities in it)
- Suspected to be environmental toxin (according to Environment Canada Domestic Substance List)
- \*according to EWG's Skin Deep Cosmetics Database



# Styrene/Acrylates Copolymer

- Added to cosmetics for color
- Chain of polymers consisting of styrene and acrylate which is added to cosmetics for color
- considered safe because there is a low likelihood of absorption of the full compound
- However, contamination with the possible carcinogen styrene is a concern
- \*according to safecosmetics.org



# Ecofriendly Alternative

## Dr. Bronner's All-One Pure-Castile Bar Soap!

- Made with organic and fair trade ingredients
- Score of 1 (lowest hazard possible) on EWG's Skin Deep Cosmetics Database



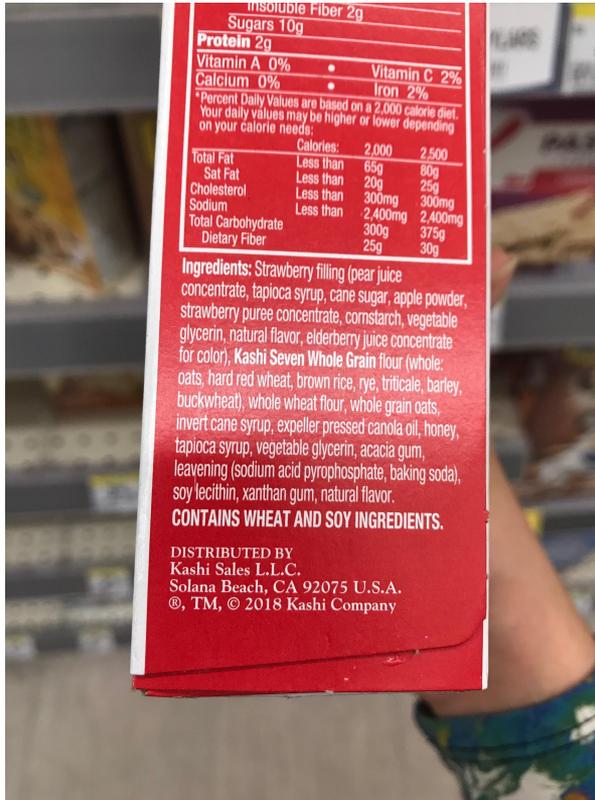
# Cereal



What's potentially misleading:

- “Made with Fiber, B Vitamins, and Iron” gives the impression that the product is healthy and good for you
  - “Made with Real Strawberries” implies that the ingredients are real, nontoxic, and good for you
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# Ingredients



- Rice
- Whole grain wheat
- Sugar
- Wheat Bran
- Freeze-dried strawberries
- Brown sugar syrup
- Soluble wheat fiber
- Contains 2% or less of salt, malt flavoring

# Sugar

- Eating excessive amounts of sugar can have many negative health effects
- can lead to weight gain, blood sugar problems and an increased risk of heart disease
- The American Heart Association (AHA) recommends no more than 6 teaspoons (25 grams) of added sugar per day for women and 9 teaspoons (38 grams) for men
- Cereal contains 9 grams per 1 cup serving



# Brown Sugar Syrup

- “Avoid the health halo of sugars including brown sugar, honey, molasses, agave, evaporated cane syrup (which is white sugar with the water removed), or other “healthy” sounding sugars. It’s not a health plus to swap out table sugar for one of these. Cutting down on all added sugars is the major health advantage.”
- Excessive consumption of sugar tied to weight gain, increased risk of heart disease, and blood sugar issues
- \*according to Today.com



# Freeze-dried Strawberries

- Freeze-dried strawberries means real fruit!
- Not sure whether the strawberries are organic or not
- If not organic, potentially contains chemical and/or synthetic pesticide residue



# Conventional vs. Ecofriendly Alternative

## Barbara's Original Puffins Cereal!

- 5 grams of sugar per  $\frac{3}{4}$  cup serving
- 5 grams of fiber
- Non-GMO project verified



# Conventional



# Organic



# Social Media Post!

Conventional



Organic



\_zerowastegirl\_ PGC DAY 7: ORGANIC (GREENER)  
Today I played detective and investigated the ingredients of some products that we use everyday!



I investigated a body wash that's similar to mine and was surprised to find that despite its green packaging, it contained a bevy of ingredients that are potentially irritating, such as sodium laureth sulfate.



I'm switching to Dr. Bronner's All-One Soap from my body wash (not this one, but similar!) Although the left product looks natural and eco-friendly, it does contain a bevy of ingredients, such as sodium laureth sulfate. Dr. Bronner's contains simpler, organic, and fair-trade ingredients. ✨

What are your favorite eco-friendly and organic products?



@turninggreenorg #PGC2018

3 MINUTES AGO

