

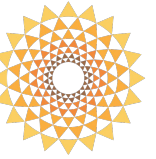
**Anticancer**  
LIFESTYLE PROGRAM

# Clean Cleaning:

## Nontoxic Ways to Tidy Up Your Home

**Deborah de Moulpied**  
Green Living Expert  
Anticancer Lifestyle Program





# About Deborah

Deborah de Moulpied, a green living expert, created the Environment pillar of the Anticancer Lifestyle Program.

Deborah was the founder of an environmental green goods store in New Hampshire. In order to choose the cleanest possible products for her store, she spent years researching and vetting companies and products so that her customers could be confident that the brands she carried were the safest ones available.

Deborah is active in the environmental community and is a frequent guest lecturer for cancer support groups and organizations promoting a less toxic lifestyle.



# Who We

**Are** The Anticancer Lifestyle Program (ACLP) offers free, doctor-recommended, expert-led resources to help you reduce your risk of cancer, cancer recurrence, and chronic illness.

Get started at [anticancerlifestyle.org](https://anticancerlifestyle.org)

# Learn Your Way

Our goal is to "meet people where they are" by offering a wide variety of access points to healthy living, including:



**Online Course** >  
Expert-guided, evidence-based.  
Wellness starts here!



**eBooks** >  
Informative + inviting quick  
reads at your fingertips.



**Webinars** >  
Listen and learn from our  
seasoned health professionals.



**Blog & Recipes** >  
Learn, cook, thrive! Tasty tips  
for a healthier life.

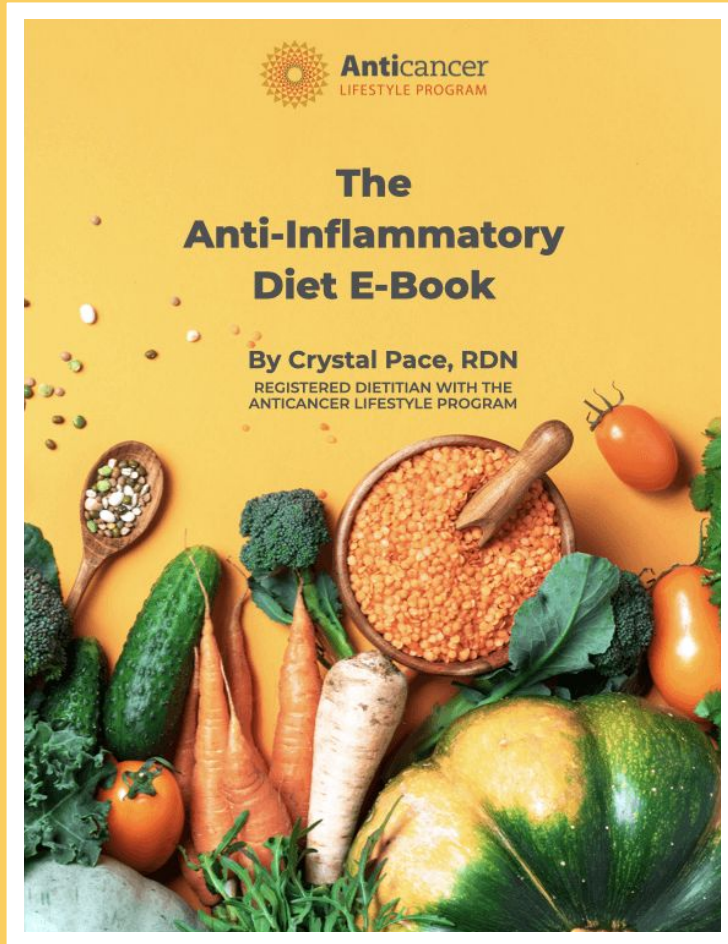


**Lifestyle Toolkit** >  
Your go-to resource for living an  
Anticancer lifestyle.



**7-Day Kickstarts** >  
Healthier diet, fitness, mindset,  
and home in 15 minutes/day

# Check out our eBooks




# Our nontoxic cleaning resources



**Best Nontoxic Cleaning Products: Which Brands Can You Trust?**

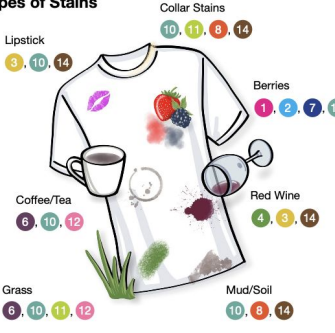
By Deborah de Moulpied  
Green Living expert for the Anticancer Lifestyle Program



## Anticancer Environment NONTOXIC STAIN REMOVAL GUIDE

Remove any type of stain with our Nontoxic Stain Removal Guide! Just match your stain to the corresponding removal method by number, in order, for the best results.

**Types of Stains**




**Removal Methods**

1 Scrape off excess stain material	9 Blot with rubbing alcohol
2 Flush back side with <b>cold</b> water	10 Pre-soak with laundry soap in <b>cool</b> water
3 Flush back side with <b>hot</b> water	11 Add baking soda
4 Cover with salt	12 Launder in <b>cold</b> water
5 Use enzyme cleaner	13 Launder in <b>hot</b> water
6 Flush with hydrogen peroxide	14 Launder in <b>hot</b> water w/ 1/4 cup washing soda
7 Flush or soak in white vinegar	15 Disinfect with rubbing alcohol 70%
8 Rub fabric and stain together gently	16 Rinse

\*Remove stains as quickly as possible before they dry.

Anticancerlifestyle.org



## Anticancer Environment NONTOXIC DIY CLEANING RECIPES

**KITCHEN**

**Dish Soap**  
1 part Castile soap/10 parts water  
Mix together

**Glass Stovetop Cleaner**  
1 part water/1 part vinegar  
Let sit 10 minutes, wash with general cleaner, rinse

**Oven Cleaner**  
1 cup baking soda  
Add enough water to make a loose paste  
Spread around, let sit overnight  
Wipe clean and rinse. Do not get down cracks  
\*For extreme cases, add 1/4 cup washing soda

**Burnt Pots and Pans**  
1/4 cup baking soda  
Boiling water  
Let sit overnight  
Lightly scrub and wash with dish soap

**LAUNDRY**

**Laundry Detergent**  
1 cup Castile soap  
1/4 cup washing soda  
Mix to one-gallon water  
Use 1/4 cup at a time  
Pre-soak for dirtier items

**Fabric Softener**  
1/4 cup of white vinegar in rinse cycle  
(never mix with bleach)

**Static Cling**  
Use wool dryer balls or  
Don't over-dry, use lower heat or  
Hang dry

Castile soap is a vegetable oil-based soap originating from Castile, Spain. It's gentle yet effective.

**GENERAL TIPS**

Always Rinse  
Use protective clothing and gloves  
Mark bottles with ingredients  
Store in safe places

Anticancerlifestyle.org

**BATHROOM**

**Toilet Bowl Cleaner**  
Pour 2-4 cups white vinegar into toilet bowl  
Let sit 3 hours or longer  
Scrub with brush, flush

**Scouring Powder**  
1/4 cup baking soda  
1 teaspoon salt  
For a paste: add 1 tablespoon Castile soap

**Soap Scum**  
1 part vinegar/1 part water  
Let sit a bit if possible  
Rinse

**GENERAL PURPOSE**

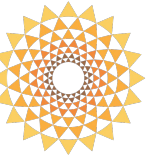
**All Purpose Spray Cleaner**  
1/4 cup Castile soap to 1 quart water  
Mix in spray bottle, rinse after cleaning  
\*Add more Castile soap for greasier jobs

**Drain Cleaner**  
Remove stopper  
First, attempt to pull out any hair or clog with long wire that is hooked at the end.  
Pour 1/2 cup baking soda down the drain  
Follow with 1/2 cup vinegar  
Let fizz for at least 15 minutes  
Follow with very hot water  
Use plunger or snake if needed

**Window/Glass/Mirror Cleaner**  
1 part vinegar/4 parts water  
Spray and wipe clean

**Floors**  
1/4 cup Castile soap in bucket of warm water, rinse

**Sanitizer/Disinfectant**  
70% Isopropyl Alcohol  
Leave on for 1-5 minutes  
Rinse

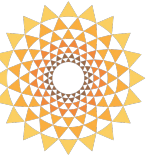


# What does it mean *to clean*?

**Cleaning is the act of removing unwanted substances – usually dirt, dust, food and microbes.**

Typical items you might clean in your home include:  
countertops, floors, cupboards, stoves, ovens, sinks, dishwashers, refrigerators, laundry, toilets, bathtubs, showers, tile, glass, clothing, linens, rugs, furniture, upholstery, electronics, silver, brass, and knick-knacks.





The idea of cleaning is to reduce your exposure to dust, toxins, and microbes in hopes of being healthier.

**However, we run the risk of exposing ourselves to additional toxins, dust and, in particular, VOCs (volatile organic compounds) depending on *how* we clean and *what* we clean with.**



# Cleaning and your health

Exposures to chemicals from VOCs, dust and skin contact can cause:

- Eye, nose and throat irritation
- Headaches
- Cough
- Asthma
- Nausea
- Fatigue
- Dizziness
- Long-term health risks, including cancer

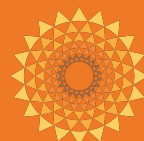


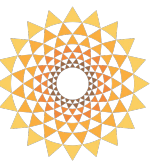
# Chemicals in products

Typically, household cleaners and laundry products contain many ingredients for a variety of reasons.

**Many of these ingredients are responsible for releasing VOCs into the air. These include:**

- Antibacterial agents
- Foam enhancers
- Thickeners
- Dyes
- pH adjusters
- Optical brighteners
- Fragrance
- Enzymes
- Solvents
- Builders
- Surfactants



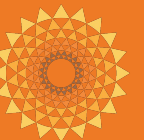


# Cleaning products in your home that emit VOCs

<b>Kitchen</b>		Oven cleaner, Stove-top, All-Purpose, Cupboards, Sink, Countertop, Dishwasher, Silver Polish, Disinfectant, Stainless steel cleaner
<b>Laundry</b>		Laundry detergent, Bleach, Fabric softener, Stain remover, Window cleaner, Rug cleaner
<b>Bathroom</b>		Toilet, Tile, Grout, Shower, Sink, Scouring powder, Drain cleaner, Floor cleaner, Grout cleaner, Air freshener
<b>Bedroom</b>		Linens washed with scented detergent or fabric softener, Dry cleaned clothing, Carpet shampoo
<b>Living Room</b>		Fabric cleaner, Fabric spray, Floor polish, Furniture polish

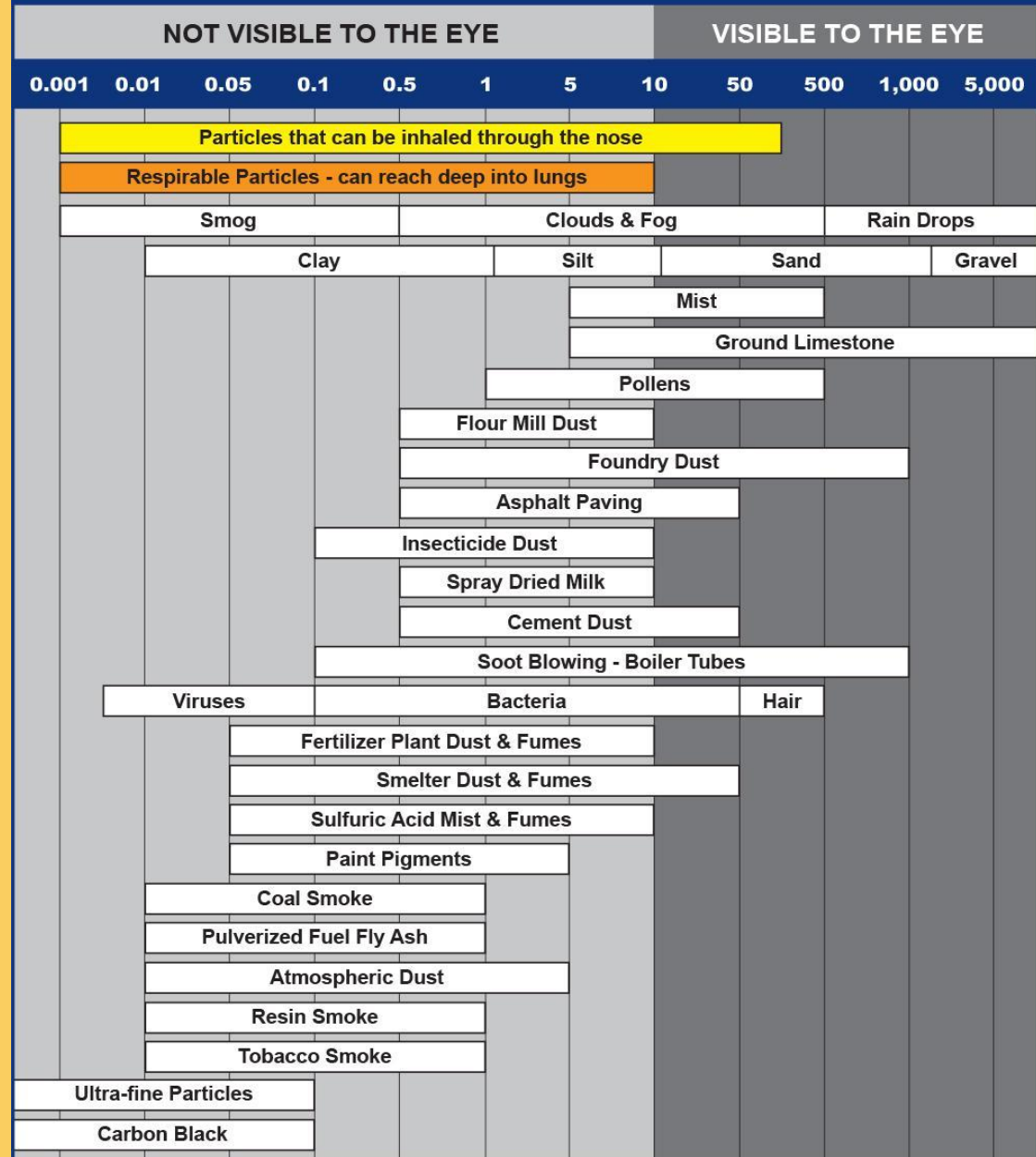
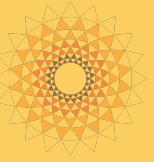
# Common toxins and carcinogens in VOCs in Cleaning Products

chlorine xylene fragrance  
terpenes toluene  
phthalates benzene  
dioxane chlorinates  
ethanol pfas quats  
formaldehyde  
glycol-esters



# Micron Size Chart

Common Sizes of Particles in Microns





# Exposure to cleaning products in first 3 months of life can increase risk of childhood asthma

February 18, 2020

THE JOURNAL OF  
**Allergy AND Clinical  
Immunology**

ENVIRONMENTAL AND OCCUPATIONAL DISEASE | VOLUME 149, ISSUE 1, P422-431.E5, JANUARY 2022

Maternal preconception occupational exposure to cleaning products and disinfectants and offspring asthma

## Respiratory health in professional cleaners: Symptoms, lung function, and risk factors

Collin Brooks, Tania Slater, Marine Corbin, Dave McLean, Ridvan Tua Firestone, Jan-Paul Zock, Neil Pearce, Jeroen Douwes ✉

First published: 11 March 2020 | <https://doi.org/10.1111/cea.13597> | Citations: 10

## Women who clean at home or work face increased lung function decline, study finds

*Date:* February 16, 2018

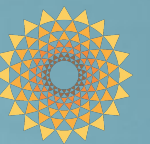
*Source:* American Thoracic Society

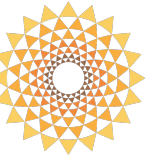
*Summary:* Women who work as cleaners or regularly use cleaning sprays or other cleaning products at home appear to experience a greater decline in lung function over time than women who do not clean, according to new research.

**Original Investigation** | Occupational Health

October 18, 2019

## Association of Occupational Exposure to Disinfectants With Incidence of Chronic Obstructive Pulmonary Disease Among US Female Nurses



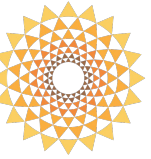


# Nurses exposed to cleaning products risk respiratory health, study finds

Nurses may be at risk of developing chronic obstructive pulmonary disease (COPD) as a result of regularly using chemical disinfectants, occupational health research suggests.

This study\* found that, between 2009 and 2015, exposure to cleaning products and disinfectants was associated with a **25-38% increased risk of developing COPD in nurses** – independent of asthma and smoking.

*published in [Journal of the American Medical Association](#)*



# Professional Cleaning Activities Increase Lung Cancer Risk in Women

- Impact of Cancer Risk and Resilience study\* investigated occupational cleaning activities and lung cancer risk
- Occupational history collected via interviews and categorized by sectors
- Women with long-term housemaid or domestic service jobs had higher lung cancer risk
- Confirms and redefines the association between lung cancer and occupational cleaning

\*published in [Journal of Occupational and Environmental Medicine](#), June 2016.



A few things to  
keep in mind  
about  
exposures to  
toxins



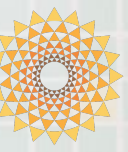
**The 3 main routes of exposure are:**

- Inhalation
- Dermal (skin)
- Ingestion

**Most of your exposure during cleaning is through inhalation. However, some VOCs can also be absorbed through the skin.**

**The formula for the degree of health risk:**

$$\text{RISK} = \text{Hazard} \times \text{Exposure}$$



# Five Basic Components to Cleaning

**Mechanical**

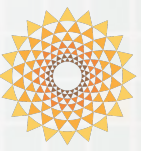
**Thermal**

**Chemical**

**Time**

**Procedure**





# Five Basic Components to Cleaning

**Mechanical**

**Thermal**

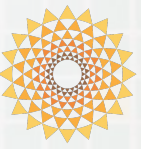
**Chemical**

**Time**

**Procedure**

**Vacuums, dusters, scrubbers, brushes, steam cleaners, scrapers, sponges, wipes – suck, rub, push, tumble, blow, beat ... “elbow grease.”**

- **Vacuums** – Good HEPA filters, change frequently. Central Vac is ideal
- **Steam clean** wall to wall carpeting; avoid chemical cleaning
- **Dust** with damp cloth or microfiber cloth. Avoid feather duster
- **Shake** smaller rugs outside
- **Scrubbing** powders for *agitating* biofilms like “pink slime”



# Five Basic Components to Cleaning

Mechanical

**Thermal**

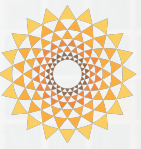
Chemical

Time

Procedure

**Steam, heat**

- **Heating oils, fats and dirt** softens them so that soap and removal is more efficient. Heat can also kill microbes.
- **Steam cleaning rugs and upholstery** is safer and more effective than using chemicals. Steam cleaners can also be used on most hard, non-porous surfaces, such as tile. Very effective for killing microbes and dust mites.



# Five Basic Components to Cleaning

Mechanical

Thermal

Chemical

Time

Procedure

**Dissolving or break apart dirt, polish, disinfect, fabric softeners  
UV exposure**

**Cleaning chemicals work at the molecular level, either by:**

- 1 – Bonding** with (encapsulating) the dirt so that it can be carried away
- 2 – Breaking** apart or dissolving the dirt so it can be carried away
- 3 – Killing** the microbes by destroying the cells

**Sun or UV exposure** is effective at killing microbes due to the radiation causing DNA damage. UV rays also degrade stains and brighten clothing.

**Fabric softeners** work by coating the fabric with electrically charged, synthetic compounds to reduce static cling.

**Polishers** are chemicals designed to leave the surface either shiny, protected or both.

# Five Basic Components to Cleaning

Mechanical

Thermal

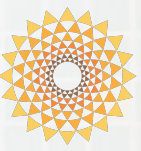
Chemical

Time

Procedure

- The **longer** you use mechanical, heat or chemical methods, the more effective they may be.
- **Dwell time** or “contact time” is used for cleaning and disinfecting. It takes time for the molecular processes to take place, encapsulate all of the dirt particles, and kill all the microbes.
- This is the concept behind “**pre-soaking**” or “**let it work overnight.**”
- Many cleaners recommend the “**contact time**” in the directions.

**Length of time  
needed to complete  
cleaning or  
disinfecting**



# Five Basic Components to Cleaning

Mechanical

Thermal

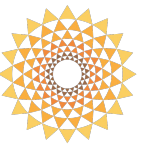
Chemical

Time

Procedure

- In general, **cleaning top to bottom** is a good idea – allowing for the dust to settle, so to speak.
- Using soap should always be **followed by rinsing**.
- **Washing and rinsing should always be done before** disinfecting and polishing.
- Except for polishing, **all cleaning should be followed by a rinse and dry**.
- **Allowing for enough time** for your cleaner to work makes a difference.

**The order of accomplishing a task – e.g., spray, wipe, rinse, dry**



# Signal Words

**Cleaning products are poorly regulated.**

Manufacturers are not required to list the ingredients unless it has *disinfecting* properties.

These will be listed as “active” ingredients. “Inactive” ingredients are not necessarily any safer than “active”.

However, California requires a complete ingredient list on their labels, including “fragrance allergens.” (However, other fragrance chemicals will not have to be listed.)





# When reading labels *(before*

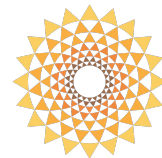
*using)* Always read the directions for safety and to be sure the product is appropriate for its intended use.

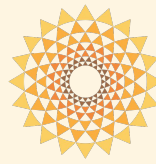
## Look for

- signal words
- storage and disposal directions
- precaution directives
- first aid instructions, if there are any

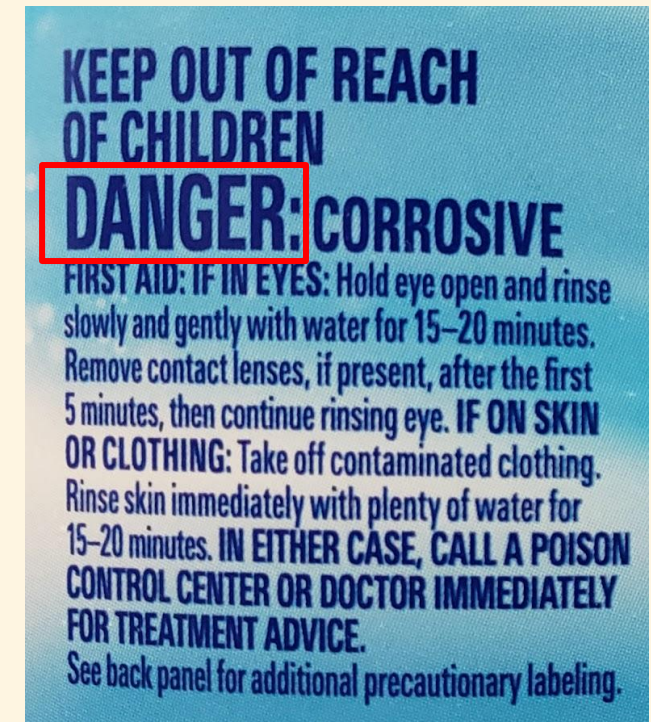
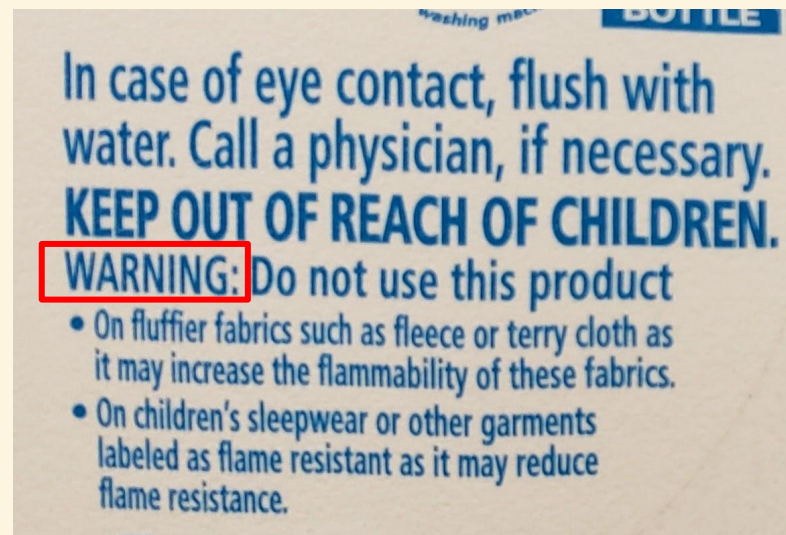
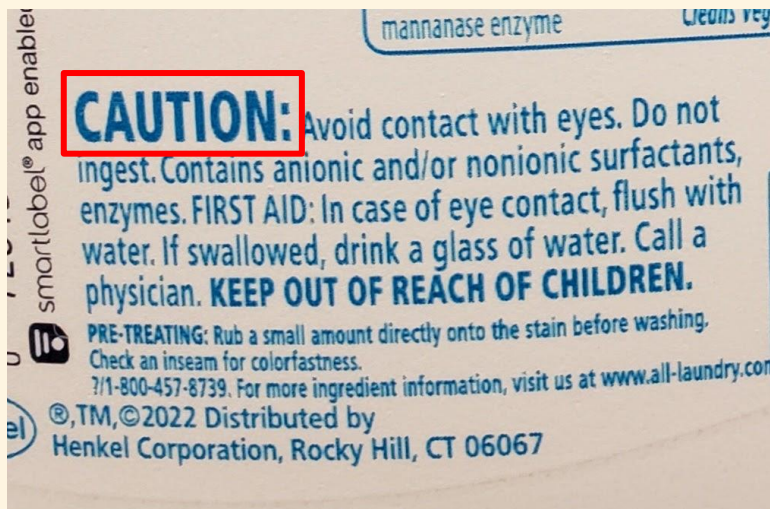


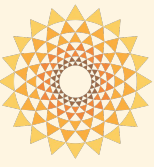
**Be aware that marketing terms like Free & Clear, Natural, Non-Toxic, Biodegradable, Unscented, Green, Plant-based, and Eco-friendly are unregulated. These words have no legal meaning and cannot be enforced for false claims. Buyer beware!**





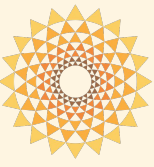
# Signal words to look for





# Look for these labels





# Reading labels: Buyer beware

INGREDIENT:	PURPOSE:
water	
C12-15 alcohols ethoxylated	stainlifter
sodium citrate	Water Softener
sodium laureth sulfate	stainlifter
sodium C10-16 alkylbenzenesulfonate	stainlifter
triethanolamine	Adjusts pH
ethanol	Dissolves Ingredients
sodium cocoate	Reduces Foam
sodium polyacrylate	Prevents Dirt Redeposition
tetrasodium iminodisuccinate	Improves Cleaning
disodium distyrylbiphenyl disulfonate	Brightens Colors & Whites
calcium chloride	Enzyme Stabilizer
protease enzyme	Cleans Protein-Based Stains
methylisothiazolinone	Inhibits Microbial Contamination in Product
methylchloroisothiazolinone	Inhibits Microbial Contamination in Product
mannanase enzyme	Cleans Vegetable-Based Stains


**DIRECTIONS**

Pre-treat for best results, wet fabric and apply detergent directly onto spots and tough stains. Rub gently, wait 5-10 minutes, then wash as directed. Always test an inside seam for colorfastness. Fill cap to Bar 5 for medium loads or 1/2 capful for energy saving cold wash settings\*\*. Use full cap for large or heavily soiled loads.

**CAUTION: KEEP OUT OF REACH OF CHILDREN.**  
In case of eye contact, flush with water. If swallowed, drink a glass of water. In either case, call a physician. If on skin, rinse thoroughly with water.


**INGREDIENTS:** Water, sodium laureth sulfate, C12-15 or C12-16 alcohols ethoxylated, sodium carbonate, sodium C10-16 alkylbenzenesulfonate, sodium bicarbonate (baking soda), acrylic acid homopolymer, colorants, disodium distyrylbiphenyl disulfonate, fragrances, sodium hydroxide, tetrasodium EDTA. Contains fragrance allergens. Contains no phosphates.

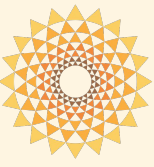
**OUR PROMISE TO YOU AND THE PLANET**

 **Arbor Day Foundation**  
We help plant millions of trees in the Mississippi River Valley for cleaner air & water

 Cleans in cold water

 **Green-e**  
Made with 100% certified renewable electricity

 **Recycle Friendly package**  
Empty & Replace Cap  
how2recycle.com  
PLASTIC BOTTLE



# Dangerous cleaners are not necessary



**SIMPLE INGREDIENTS, SIMPLE SOLUTIONS**  
 INGREDIENTS: SODIUM CARBONATE & WATER

**ARM & HAMMER™ Super Washing Soda is a natural detergent booster and freshener and can be used all around the home – not just in the laundry room!**

**NATURAL CLEANING ALL AROUND THE HOME**

**HACK 1: LAUNDRY**

**FOR BEST RESULTS ADD TO EVERY LOAD ALONG WITH DETERGENT:**  
 In Traditional or High Efficiency Washing Machines

1. ADD ½ cup of ARM & HAMMER™ Super Washing Soda along with your regular detergent at the beginning of the wash cycle.
2. ADD clothes and let washer fill completely. Always check color-fastness of garments first, and use hottest water garment will allow. Not for use on leather, silk, wool, or garments labeled dry clean only. Always test in an inconspicuous area first. Rinse and allow to dry.

**FOR TOUGH LAUNDRY STAINS, PRESOAK:**

1. In a tub of water, ADD 2 tablespoons of ARM & HAMMER™ Super Washing Soda per gallon of water.
2. PRESOAK for at least 30 minutes before washing. For best results presoak overnight. Then add ½ cup of ARM & HAMMER™ Super Washing Soda along with detergent and wash.

**WATER SOFTENING:**  
 For hard water conditions, add 1 cup of ARM & HAMMER™ Super Washing Soda along with the usual amount of either liquid or powder detergent at the beginning of the wash cycle.

**HACK 2: HOME**

**KITCHEN AND BATHROOM SURFACES AND APPLIANCES:**

1. Dissolve ½ cup of ARM & HAMMER™ Super Washing Soda in a gallon of warm water.
2. Wash surface, rinse thoroughly while using rubber gloves.

**DO NOT USE ON ALUMINUM. DO NOT USE ON NO-WAX FLOORS OR TREATED WOOD SURFACES.**

**SPOT CLEANING ON SURFACES AND WASHABLE UPHOLSTERY:**

1. MIX ¼ cup of ARM & HAMMER™ Super Washing Soda per 16 ounces of water. Remove excess stains before treating.
2. Do not apply solution directly on stain. Apply with clean white towel and use towel to blot out stain. Repeat until stain is not visible. Then, dampen a clean white towel with water and blot area to rinse.

**HACK 3: SILVER**

**SILVER, COPPER & BRASS:**  
 ARM & HAMMER™ Super Washing Soda can be used with special cleaning plates to remove tarnish from silver, silver plate, jewelry, gold, copper, bronze, stainless steel and most brass. Please follow manufacturer's guidelines.

**HACK 4: KITCHEN**

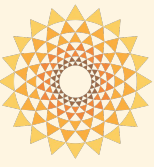
**POTS & PANS:**  
 To help remove greasy, burned-on stains from cookware:

1. Sprinkle dry ARM & HAMMER™ Super Washing Soda on a damp sponge to scour stains. For tough stains, apply a paste of 2 parts ARM & HAMMER™ Super Washing Soda, 1 part water to stained areas.
2. Let stand for 30 minutes; then wash and rinse as usual. DO NOT USE ON ALUMINUM.

**DID YOU KNOW YOU CAN MAKE YOUR OWN LAUNDRY DETERGENT?**  
 Super Washing Soda is an important ingredient in most Do-It-Yourself Laundry Detergent recipes. Try our recipe at [armandhammer.com/diy-detergent](http://armandhammer.com/diy-detergent)

**MAKE YOUR OWN LAUNDRY DETERGENT**

**CAUTION: EYE IRRITANT. HARMFUL IF SWALLOWED.** Avoid eye contact. If contact occurs, flush immediately with water for 15 minutes. If swallowed, rinse mouth and drink a glass of water. In either case, call a physician. If on skin, rinse thoroughly with water. Safe for Septic Tanks. Not a food product. Do not consume. **KEEP OUT OF REACH OF CHILDREN**



# Not always what you think



**CONTENTS ARE BIODEGRADABLE.**  
Keep out of reach of children and pets.

**CONTAINS:** Water, Laureth-7, Lauryl Glucoside, Sodium Methyl 2-Sulfolaurate, Fatty Acid, C8 – C18 and C18 unsatd., Fragrance, Sodium Citrate, Pelargonium Graveolens (Geranium) Flower Oil, Cananga Odorata (Ylang Ylang) Flower Oil, Subtilisin (Protease) Enzyme Blend, Amylase Enzyme Blend, Mannanase Enzyme Blend, Lipase Enzyme Blend, Tetrasodium Glutamate Diacetate, Glycerin, Calcium Chloride, Sodium Chloride, Sodium Sulfate, Potassium Hydroxide, Methylisothiazolinone, Benzisothiazolinone, Contains Fragrance Allergens.

\*Learn about these and other ingredients at [MRSMEYERS.COM/Ingredients-Glossary](https://www.mrsmeyers.com/Ingredients-Glossary).

# method. MULTI-PURPOSE CLEANER

ANT MULTI-SURFACES

pink grapefruit  
plemousse rose



PLANT-BASED CLEANING POWER  
BIODEGRADABLE FORMULA

CUTS GREASE + GRIME

828 mL (28 FL OZ)

powerful plant-based cleaning agents that aren't a myth.

we help you put the hurt on dirt



- c** counters
- t** tile
- s** stone
- w** wood
- g** glass

to use: spray, wipe, admire.  
suitable for most non-porous surfaces.  
test: test in an inconspicuous place first.

pour utiliser: vaporisez, essuyez, admirez.  
convient à la plupart des surfaces non poreuses.  
test: avant d'utiliser, faites un essai dans un coin discret.

WHAT'S IN THE BOTTLE | **Fait de:** WATER (AQUA), DECYL GLUCOSIDE\*,  
LAURYL GLUCOSIDE\*, CITRIC ACID\*, LAURETH-7\*, POTASSIUM CITRATE\*,  
POTASSIUM HYDROXIDE\*, SODIUM CARBONATE\*, SODIUM GLUCONATE\*,  
FRAGRANCE (PARFUM), POLYMERIC PINK, POLYMERIC YELLOW, \*DENOTES  
PLANT OR MINERAL ORIGIN | **INDIQUE UNE ORIGINE VÉGÉTALE OU  
MINÉRALE. CONTIENS FRAGRANCE ALLERGENS | CONTIENT DES  
FRAGRANCES ALLERGENS: HEXYL CINNAMAL, LIMONENE. SEARCH  
FOR MORE INGREDIENT INFO AT METHODHOME.COM/PRODUCTS**

**CAUTION: AVOID CONTACT WITH EYES. IN CASE OF EYE CONTACT, FLUSH  
WITH WATER. IF SWALLOWED, DRINK A GLASS OF WATER AND CONTACT  
A PHYSICIAN. KEEP OUT OF REACH OF CHILDREN | ATTENTION: ÉVITER  
TOUT CONTACT AVEC LES YEUX. EN CAS DE CONTACT AVEC LES YEUX,  
RINÇER AVEC D'EAU. EN CAS D'INGESTION, BOIRE UN VERRE D'EAU ET  
CONSULTER UN MÉDECIN. TENIR HORS DE LA PORTÉE DES ENFANTS.**



cruelty free, tested by people, not on animals.

bottle (minus nozzle) made from 100%  
recycled plastic (PCR). recycle for good karma.



©2020 method products pbc,  
san francisco, ca 94111  
1-866-9-method  
methodhome.com  
made by and for  
people against dirty®  
U.S. PATENT #0649,062

PETE BOTTLE 1124099

- k** kitchen surfaces
- c** countertops
- h** high chairs
- d** door knobs
- g** garbage cans

©2017 manufactured for:  
method products pbc, san francisco, ca 94111  
1-866-9-method | [methodhome.com](http://methodhome.com)

MADE IN THE USA. | E5L050316N | REV062317  
EPA REG. NO. 75277-2 | EPA EST. NO. 075277-IL-001  
93-1128-00924-02



# method ANTIBAC all-purpose cleaner

bamboo

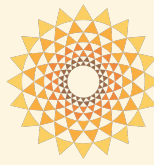


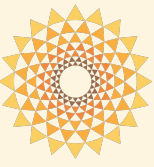
ANTIBACTERIAL  
KILLS 99.9% OF HOUSEHOLD GERMS

NET CONTENTS:  
28 FL OZ (828 mL)

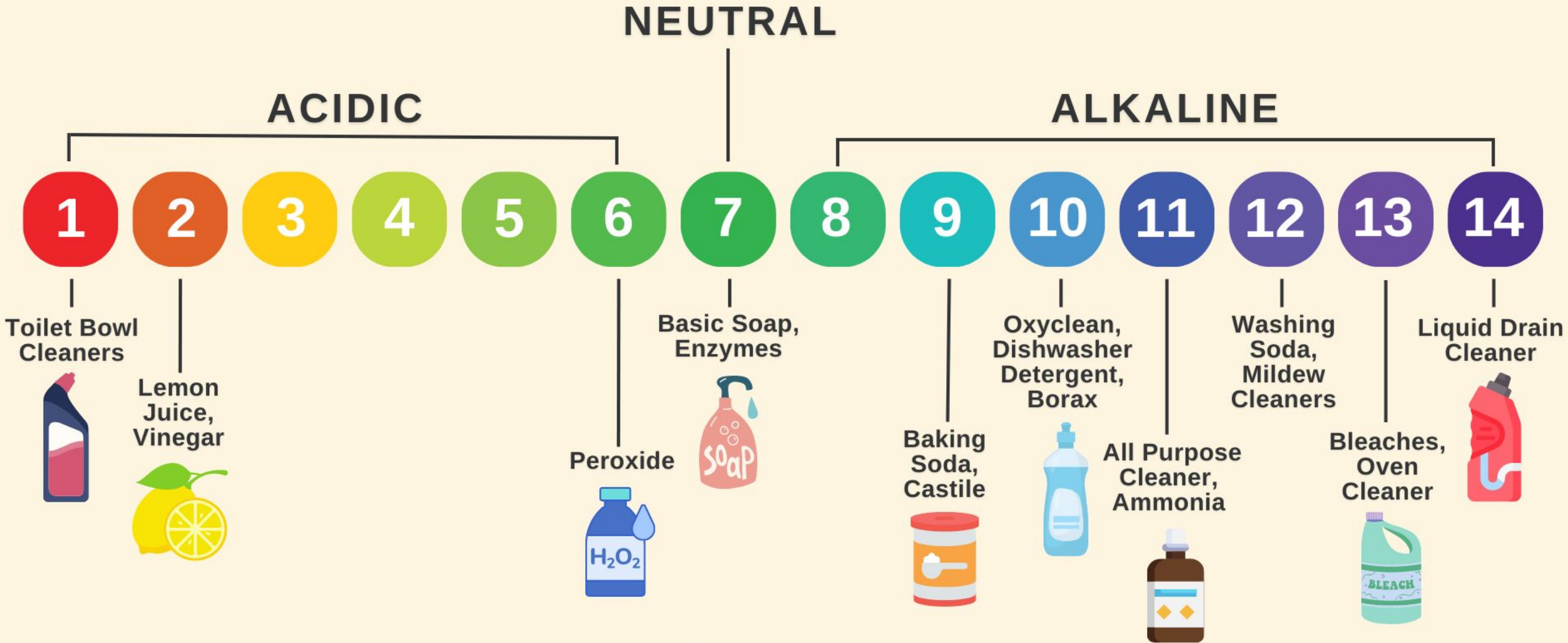
ACTIVE INGREDIENTS:  
CITRIC ACID: 5.0%  
OTHER INGREDIENTS: 95.0%  
TOTAL: 100.0%

KEEP OUT OF REACH  
OF CHILDREN

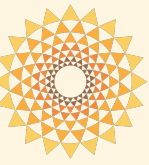


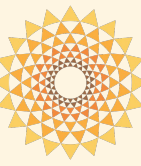


# The pH scale



# The pH scale





# What's the difference between soap and detergent?

Most products are actually detergents, but manufacturers are allowed to call these products “soap”.

## Soaps

- 100% plant-based ingredients
- Made from combining alkaline with fats or oils
- 100% biodegradable
- Less foam production
- Mild on skin
- Inexpensive
- Less effective in hard water

## Detergents

- Some or all synthetic ingredients; petroleum by-products
- Chemicals used as binders
- Not biodegradable
- High foaming action
- Can be harsher on skin
- More expensive
- Effective even in cold or hard water

# Cleaning products: How they work and safety considerations



Product	Ingredient/ Chemical Name	PH	How It Works	Special Considerations	EWG	Bio	Rec
Toilet Cleaner	Hydrochloric Acid	1 -2	Dissolves limescale; calcium deposits; metals	Considered a POISON. Do not let it splash. Ventilate. Wear PPE. Can corrode pipes. NEVER mix.	F	No	No
White Vinegar	Acetic Acid 4-7%	2.5	Dissolves rust, minerals deposits, soap scum, hard water stains	Good window, glass, drain, and toilet cleaner. Neutralizes some odors. Mild disinfectant killing most microbes. Do not leave on surface area.	A	Yes	Yes
Soap – Basic bar/liquid	Surfactants from potassium hydroxide & fats	5-9	Soap molecules encapsulate dirt & microorganisms, are then rinsed away	Good, safe, mild (if lower PH) overall basic cleaner. Can be used on plants. Does not foam well in hard water, creating soap scum. Natural ingredients.	A	Yes	Yes
Peroxide 3%	Hydrogen Peroxide	6	Oxidizes organic materials creating heat and oxygen	Used as a mild bleach, disinfectant and on certain stains. Best on stains before they dry. Works well on all types of molds.	A	Yes	Yes
Enzymes	Specialized proteins	6-8	Speeds up the breakdown of organic matter	Proteases break down proteins like blood, poop, vomit, egg, gravy; Amylases break down starches; Lipases break down fats; cellulases break down cellulose	B	Yes	Yes
Baking Soda	Sodium Bicarbonate	8-9	Dissolves organic compounds like dirt & grease. Used as abrasive.	Great as basic mild alkaline cleaner mixed with water. Wet slightly for mild abrasive. Deodorizes acidic odors. Do not use on aluminum. Mix with vinegar when fizzy action is desired. Cleans silver.	A	Yes	Yes
Laundry Detergent	Many ingredients, mostly synthetic	7-10	Synthetic surfactants: builders and enzymes help release and breakdown fats	Many additional synthetic chemicals make it possible to breakdown dirt in cold and hard water. Optical brightening agents brighten fabrics.	A - F	No	Yes & No
Castile	Surfactants from potassium hydroxide & vegetable fats/oil	9	Soap molecules encapsulate dirt & microorganisms, are then rinsed away	Due to a higher PH, known for its grease-grabbing qualities. With its plant-based and minimal ingredients, it is hypoallergenic, hydrating and non-comedogenic. Excellent multipurpose cleaner.	A	Yes	Yes
Borax	Sodium Borate	10	Reacts slightly to create hydrogen peroxide; acts as buffer to stabilize PH	Brightens clothing and reduces stains; considered a laundry booster. Used as a natural pesticide, it is not meant for ingestion or inhalation; use safely.	F	No	No
Oxyclean Brand	Sodium percarbonate, sodium carbonate ...	10.5	Oxidizes and breaks the magnetic charge between stains and fabrics	Works well pre-soaking. Spot test first, especially carpets and fabrics, as it may work “too well.” Do NOT mix with other chemicals. Wear gloves. Not for delicates. Good on grass stains.	A	Yes	Yes
All-Purpose Cleaner	Many ingredients, mostly synthetic	9 - 11	Surfactants breakup fats, builders stabilize PH, solvents, polymers increase release	Able to release VOCs. Avoid using sprays which increases VOCs. Avoid eye & skin contact. Ventilate. Do not mix with other products. Always rinse well. Wear gloves. Read directions.	A - F	No	Yes & No
Ammonia	Ammonium Hydroxide	11	Emulsifies grease/oils; can convert oils into other compounds	Evaporates quickly for streak-free results. Powerful degreaser. Can cause nose, eyes and throat irritation. Ventilate. NEVER mix with bleach.	F	Yes	No
Washing Soda	Sodium Carbonate	11-12	Breaks/dissolves fat and grease into small particles	Naturally from burnt plant ashes. Emulsifies grease making is water soluble. Good for laundry stains. Can be used as an oven cleaner.	A	Yes	Yes
Standard Chlorine Bleach	Sodium Hypochlorite 3-8%	12	Releases oxygen molecules that break the chemical bonds of chromophore making it colorless	Very corrosive; tough on fabrics. Kills germs. NEVER mix with anything. Reacting with organic materials can result in multiple disinfection byproducts (DBPs). Several DBPs are possible carcinogens.	F	Yes	No
Oven/Drain Cleaners	Sodium or Potassium Hydroxide (lye)	13 - 14	Dissolves/decomposes fats, grease, proteins and other materials	Extremely caustic; can cause serious burns. Contains chemicals of concern. Wear PPE. Ventilate. Follow directions. Can damage pipes and surfaces.	F	No	No

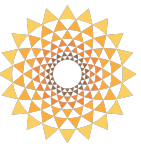


# Why You Should Avoid Fragrance

We need to retrain ourselves to not associate “clean” or “fresh” with synthetic fragrances, as **they are a major source of VOCs and indoor air pollution.**

- **Fragrances are sourced from over 3,500 chemicals, which are not listed as ingredients.**
- **Some chemicals used to make fragrances are classified as allergens, hormone disruptors (EDCs), asthma triggers, neurotoxins & carcinogens.**
- **Fragrances can cause lung irritation, nausea, headaches, and skin sensitivity.**
- **Unscented is NOT the same as fragrance-free**
- **Phthalates—used to prolong the scent—are major EDCs associated with infertility, cancer and drug resistance.**



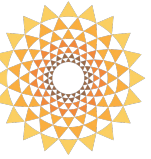


# A Word of Caution About Essential Oils

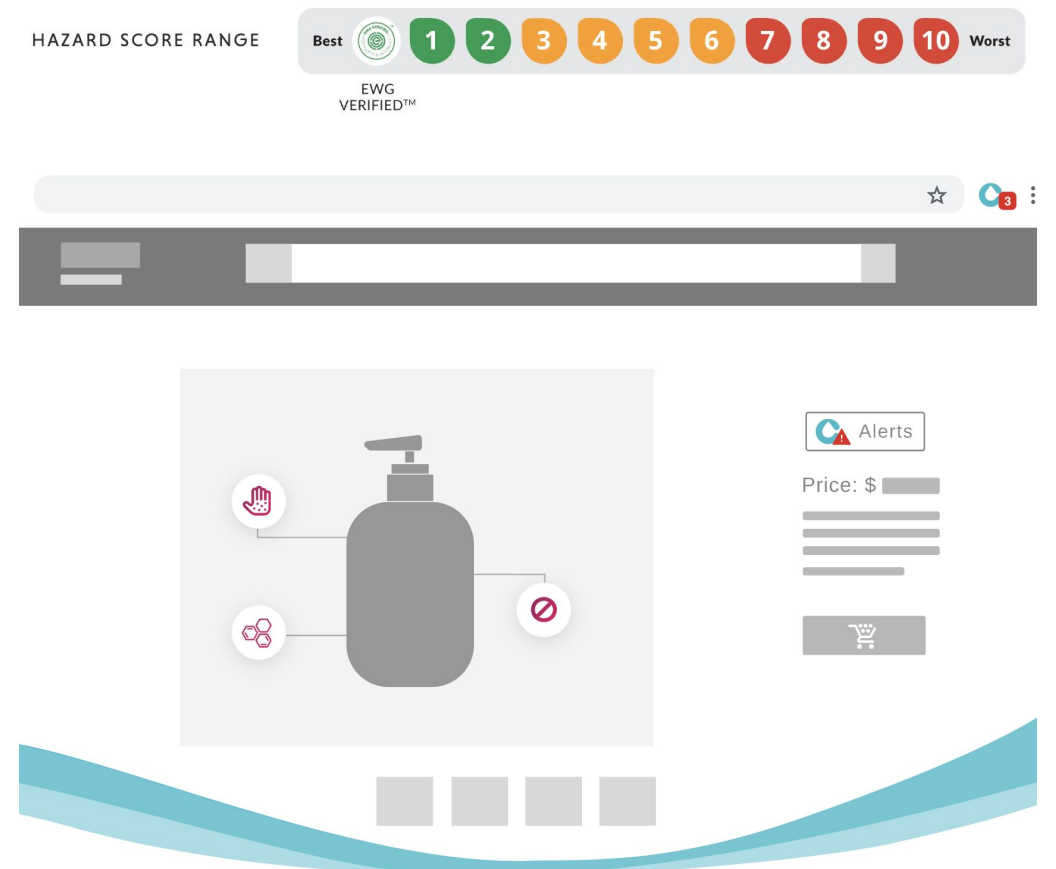
- The majority of essential oils are obtained by way of low pressure steam distillation.
- The scent from essential oils are the VOCs (volatile organic compounds) evaporating from the compounds in the oil.
- Some of these VOCs can irritate the lungs, or cause allergies and may disrupt the endocrine system.
- Because this is “emerging science,” **it is best to avoid or limit the use of essential oils**, following the Precautionary Principle.
- Do not apply essential oils to the skin. They can be very irritating.
- Adding scents to cleaning solutions can be done by cutting up citrus rinds.
- For aromas around the home try untreated cedar chips, lavender buds, or rose petals.

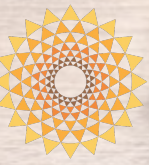


# Do your homework



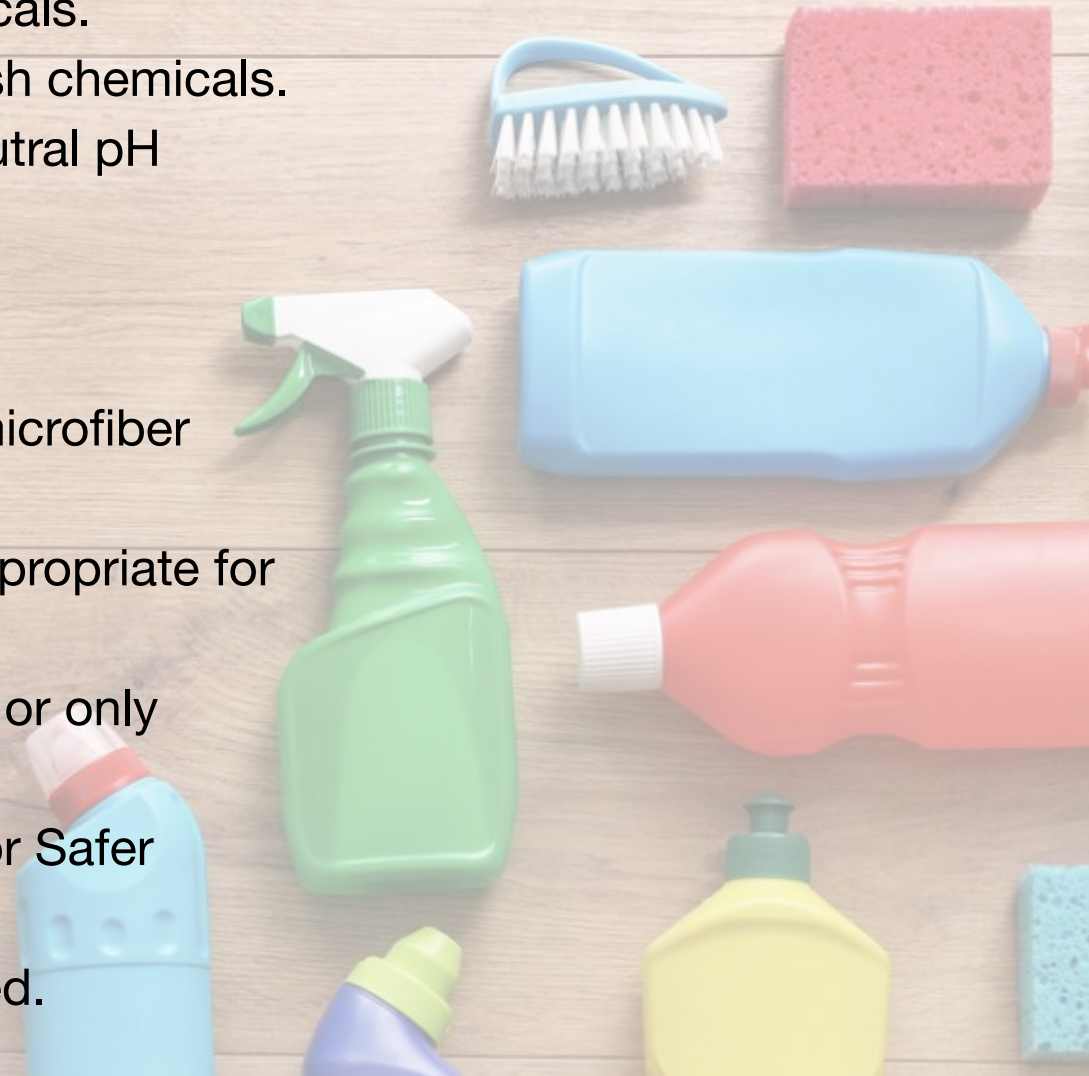
- **EWG Cleaning Guide Database:** provides you with easy-to-navigate hazard ratings for a wide range of cleaners and ingredients
- **Consumer Product Information Database:** currently links over 25,000 consumer brands to health effects has been designed to educate consumers about chemical ingredients of household product
- **EWG Healthy Living Mobile App:** Ratings for more than 120,000 food, personal care, and cleaning products, now at your fingertips.
- **Think Dirty Mobile App:** an independent source with a product barcode that allows you to compare products as you shop.
- **Clearya Mobile App and Chrome Extension:** Notifies you when there are unsafe ingredients in your makeup, personal care, baby care, cleaning and more.

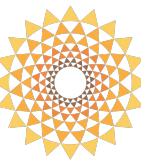




# How to Reduce Your Exposure to Harmful Cleaning Products

- **Increase mechanical cleaning** to rely less on chemicals.
- **Increase “contact time”** to counter the need for harsh chemicals.
- **Use temperature or heat** to enhance safer, more neutral pH cleaners.
- **Wear protective clothing**, gloves and mask.
- **Ventilate your space**, open windows.
- **Avoid products with nano-silver**, like antibacterial microfiber cloths.
- **Use the pH scale** to help choose which cleaner is appropriate for your needs.
- **Read labels** – look for products with no signal words or only “Caution.”
- **Choose Certified Products** – Ecologo, Green Seal, or Safer Choice
- **Read Directions** – Never mix products unless directed.



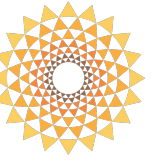


# Tips and Tricks

- **Hydrogen Peroxide** is safe and effective for all types of molds and mildew. Bleach not needed.
- **Use baking soda** in the fridge for odors, needs surface area exposure.
- **4:1 water to vinegar OR baking soda** are good cleaning solutions. Just remember to rinse.
- **Vacuum and dust** once a week to keep air clean.
- **Rub a little coconut oil over clean stainless steel** to shine and make easier to wipe as needed.
- For odor control, ***clean source of odor***; use activated charcoal.

# Myths

- Magic Eraser is not magic – it is plastic that is a very fine abrasive.
- Mixing vinegar *AND* baking soda does NOT make a cleaner – it makes a water and salt solution after CO<sub>2</sub> has fizzed away.
- Simple Green – is not simple or green.
- Pods (PVA) are not eco-friendly, it's still plastic; creates microplastics
- Air Fresheners do NOT freshen the air.



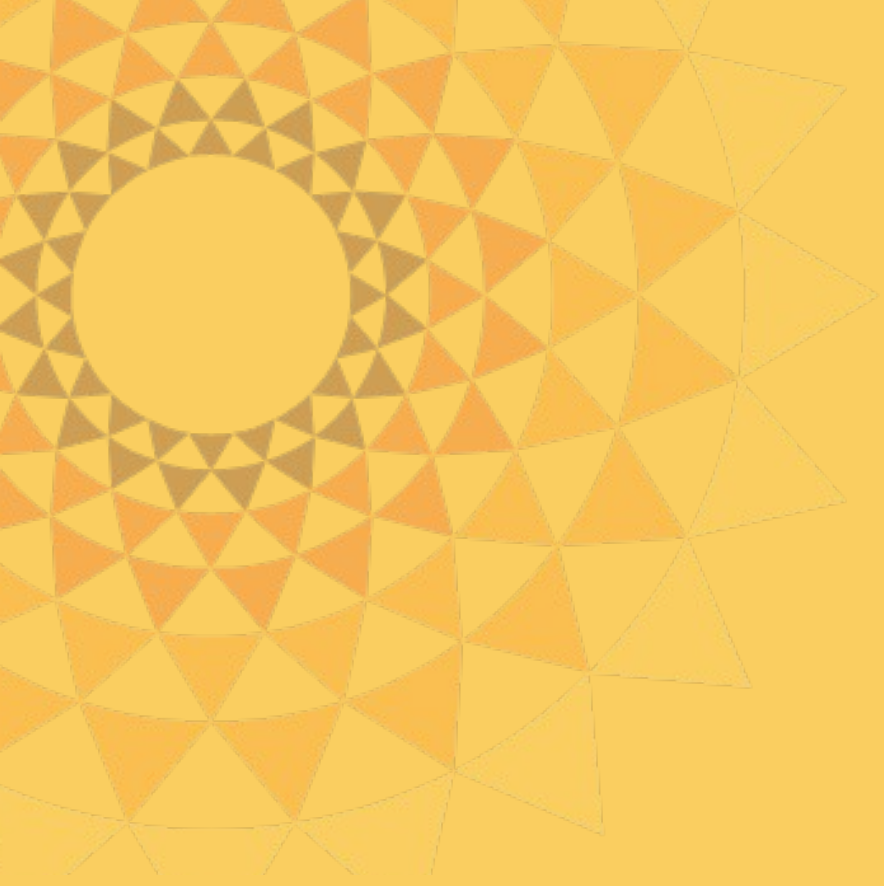
# In Closing

- **Remember:** the goal is to reduce your exposure to toxins by choosing safer products and safer cleaning methods.
- Do not expect to be able to disinfect or sterilize your environment. This is unachievable and undesirable.
- With these tips and tools, you can enjoy cleaning knowing you are making a difference in your environment and in your overall health.

**Think Progress, Not Perfection**

Happy Cleaning!





**Thank you!**