



# How to make and use the cleaning products

Brazilian Women's Group

## Mission

The mission of Vida Verde cooperative is to support Brazilian housecleaners in their vocational development, encouraging healthy cleaning methods that will not harm the environment.

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## This daring move

The main objective in making these recipes available to all is to encourage the use of non-toxic products for cleaning houses and other environments.

This practice protects not only the health of those who clean - and Vida Verde coop members can attest to that - but also of those who live, work and play in places that have been carefully cleaned.

Beyond the obvious health benefits, creating and sharing recipes of green cleaning products is a small step in the much bigger task of saving the Earth's streams and oceans. Vida Verde is proud to do its part!

While seen as "lighter," the products presented here work well and have pleased many. They have also been tested by the Massachusetts Toxics Use Reduction Institute, UMass/Lowell and found to be up to par with traditional cleaners. Please turn to pages 11 and 12 to read a summary of the lab results.

## History

It was Mônica Chianelli, a housecleaner and volunteer with the Brazilian Women's Group, who started to research and use alternative cleaning products in place of the toxic chemicals that were making her sick. While she experimented on her own in Somerville and Allston - places where she lived and worked, respectively - a special program named Projeto Parceria had started an unrelated public awareness campaign about safety in the workplace at the University of Massachusetts/ Lowell.

In 2004, Mônica joined Projeto Parceria and began speaking at churches in the Brazilian community all around Massachusetts, hoping to raise awareness about the health risks associated with hazardous chemicals in cleaning products.

Meanwhile, Tufts Professor David Gute, of the School of Engineering, became interested in developing a project in the community and got in touch with the Immigrant Services Providers Group (ISPG/ Health) in Somerville – of which BWG is a member. ISPG, led by Alex Pirie, chose a program on “environmental justice,” and Vida Verde cooperative was formed in the Fall of 2006 -- thanks to a special grant from the National Institute for Occupational Safety and Health (NIOSH), with Gute as the principal investigator.

As Vida Verde housecleaners excel in their ability to make the green products, they have learned the benefits of good posture via Pilates classes and several special stretches during their work – in keeping with their new healthy lifestyle!

Most importantly, coop members are no longer exploited housecleaning “helpers,” but as they like to say, they are the “owners of their own schedules.” In other words, they are able to control their businesses and receive fair payment for their work.

## Common chemicals in mainstream cleaning products and some of the health risks associated with them

1. Ammonia-- Used to make plastics, explosives, paint, cloth and pesticides, ammonia is also among the most common ingredients in glass cleaners, toilet bowl cleaners, all-purpose cleaners, furniture polish and disinfectants. Health risks from ammonia are serious because this is a corrosive gas. Breathing without a special nose protection near any product that contains ammonia may cause immediate eye, nose and throat irritation and this gas may also cause blindness.
2. Bleach -- Possibly one of the most used cleaning products, especially for bathrooms and laundry, bleach can be easily overused causing very serious problems for people and the environment. Health risks: if bleach is ever mixed with ammonia, it will create fumes so strong it may cause the lungs to suddenly stop. If it comes in contact with the skin, bleach will certainly burn. If mixed with common soap, it may create “mustard gas,” the same that was used to kill the enemy during World War I. Bleach mixed with any organic matter will generate chloroform, a carcinogen. This may happen when someone is simply cleaning the kitchen counter.
3. Butyl Celosolve -- Found in glass cleaners, oven cleaners and products advertised as “excellent to cut grease,” as well as carpet cleaners and stain-removers. Health Risks: made by Eastman Kodak, this chemical, with a sweet smell, is associated with reproductive problems, fertility reduction, embryonic death and birth defects, in studies done in animals. In humans, it has been associated with serious kidney and liver problems, also being a neurotoxin that may destroy the nervous system.

4. **Formaldehyde** -- Used as a disinfectant, germicide and embalming fluid, formaldehyde is among the 25 most abundantly produced chemicals in the world. It is found in plastics, glass mirrors, explosives, artificial silk, dyes, and in the manufacture of slow-release fertilizers, as well as in rubber, food, makeup, petroleum, pharmaceuticals, and in textile industries. Health risks: people sensitive to formaldehyde don't even need to smell it to be victims of terrible headaches. Children are more sensitive and show signs of respiratory difficulties. Burning of the eyes, bronchitis, asthma, pneumonia and dermatitis are some of the effects of this chemical for those in close contact with it. According to the Environmental Protection Agency, in a special 1987 report, formaldehyde causes cancer.
5. **Hydrofluoric Acid** -- With a variety of industrial uses, this highly corrosive chemical is also an ingredient in metal and toilet bowl cleaners. Health Risks: more than 1,000 burns from HF are reported every year. It is extremely dangerous, because it even eats through gloves that can be a protection with other products. It is known to destroy glass, which is otherwise indestructible. In contact with the eyes, it may cause blindness. It is also highly toxic if inhaled.
6. **Hydrochloric and Phosphoric acids** -- Found in "all-purpose cleaners," these chemicals are highly corrosive. Health Risks include serious wounds, if in contact with the skin. They can also cause damage to the liver and to the central nervous system. If they come in contact with the eyes, they can cause blindness.
7. **Sulfuric acid** -- Used in agricultural fertilizers, in plastics, paint, pharmaceuticals, soaps and detergents, this is also a common ingredient in toilet bowl cleaners, as well as metal polish products. Health Risks include burns to the skin as well as the nasal passages and the eyes. It is also a known carcinogen.

## Basic rules to make the cleaning products successfully

- Use white vinegar, 5% acidity.
- Use distilled water.
- Never reuse any container that was originally filled with commercial cleaning products. Instead, reuse plastic water bottles.
- Always place a label on the bottle with the list of ingredients in the cleaning product.
- Remember that Vitamin E may be used as a preservative agent.
- Always choose the best quality ingredients, to make sure the products will be effective.
- Use anti-allergenic gloves.

## Basic products to create the recipes for natural cleaning

**Vinegar** – Eliminates soap scum and water spots. It is also excellent to clean away grease. It kills germs because of its acidic content.

**Water** – Universal solvent.

**Borax** – A naturally occurring alkaline mineral discovered more than 4000 years ago. It is made of water, oxygen, sodium and boron. It is known as a natural laundry booster, fungicide, preservative, insecticide, herbicide and disinfectant, while it works to kill mold and pests.

**Warning: Borax is a poison if ingested and should be kept away from children and pets at all times.**

**2016 Update: Borax poses some concern for respiratory and skin irritation and high concern for developmental and reproductive toxicity. It is recommended to avoid using Borax.**

**Baking Soda** – Efficient in the absorption of odors, it is also very helpful to loosen up dirt. It is helpful when a pan is very sticky after cooking.

**Castile Soap** – Biodegradable soap made of vegetable oils; efficient to help remove grease and dirt.



The recipes included in this booklet were developed by Monica Chianelli, based on the book *Clean House, Clean Planet*, by Karen Logan. Chianelli was the dreamer of the Vida Verde coop and became its coordinator for the first two years. As with other homemade recipes, these have continued to evolve, as coop members offer feedback and make improvements in the products.

FANTASTIC  
“All-purpose cleaner”

|              |                   |
|--------------|-------------------|
| Spray bottle |                   |
| Water        | 450 ml            |
| Castile soap | ¼ cup             |
| Vinegar      | 2 teaspoons       |
| <b>Borax</b> | <b>1 teaspoon</b> |
| Baking soda  | ½ teaspoon        |

Spray and wipe with a wet cloth that may either contain just water or one of the other products: Amazing or Fabulous, which will erase the thin soap film. This is excellent in the kitchen to wipe the counter and cabinets, as well as inside the microwave oven.

**2016 Update: Borax poses some concern for respiratory and skin irritation and high concern for developmental and reproductive toxicity. It is recommended to use this recipe without Borax.**

AMAZING  
Glass cleaner

|               |          |
|---------------|----------|
| Spray bottle  |          |
| Water         | 2 cups   |
| Vinegar       | 1 cup    |
| Essential oil | 20 drops |

Spray on the glass surface and wipe with a paper towel. This product is excellent to fight odors, prevent mold and to dissolve soap scum and mineral deposits from evaporated water. Spray on the wall of bathtubs as well as shower curtains to prevent the build-up of soap scum. It works well to clean the stove. For a great finish, spray Amazing, use the kitchen sponge and dry with a paper towel.

## TERRIFIC Furniture polish

Spray bottle

|               |                   |
|---------------|-------------------|
| Light oil     | $\frac{3}{4}$ cup |
| Vinegar       | $\frac{1}{4}$ cup |
| Essential oil | 40 drops          |

Shake before using. Spray this product on a piece of cloth or directly on the floor and furniture. Wipe immediately. The oil is the conditioner and the vinegar is the cleaning agent. Use to wipe kitchen cabinets, furniture and wooden floors. For laminated floors, spray the product directly onto the surface.

## FABULOUS Floor cleaner

Spray bottle

|               |                      |
|---------------|----------------------|
| Water         | 2 $\frac{1}{2}$ cups |
| Vinegar       | $\frac{1}{2}$ cup    |
| Essential oil | 20 drops             |

Spray the product directly on the floor that you are going to clean and wipe with the mop or cloth. It works well on wooden floors, ceramic floors and also on linoleum-type floors (which were originally made from flax seeds- did you know? - long before plastics.) This product is also recommended to clean surfaces after the use of another product that contains soap, such our Fantastic or Magic. It is excellent to fight mold and to eliminate bad odors, especially in the bathroom. For stains, use a small amount of baking soda and rub it.

**MAGIC  
Antiseptic soap**

|              |             |
|--------------|-------------|
| Spray bottle |             |
|              | 2 ½ cups    |
| Water        | 3 teaspoons |
| Castile soap | 30 drops    |

Spray this magic product on the floor, on toys, on the toilet, sink, bathtub and other places. Rub the tub and sink and the inside of the toilet with Borax and Magic. Rinse with a wet cloth or use Amazing (or Fabulous) with a paper towel to finish the job.

**DUST-AWAY  
Furniture and floor polish**

|               |            |
|---------------|------------|
| Spray bottle  |            |
|               | 2 cups     |
| Water         | ¼ cup      |
| Vinegar       | 1 teaspoon |
| Light oil     | 20 drops   |
| Essential oil |            |

Shake before using. Spray on cloth or directly on furniture. Dry immediately. As with Terrific, the oil is the conditioner and the vinegar is the cleaning agent. Use to clean kitchen cabinets, furniture and floors.

## TURI lab tests confirm the efficacy of Vida Verde cleaning products

Vida Verde products were tested at the TURI laboratories and found to meet or exceed laboratory testing methodologies and Green Seal 37 standards, when compared to other cleaners.

The Green Seal GS 37 standards attest that the products:

- Have high level of degradability
- Are not damaging to aquatic life
- Work well for cleaning

[www.turi.org/content/download/1972/10243/file/Product%20Labeling.pps](http://www.turi.org/content/download/1972/10243/file/Product%20Labeling.pps)

## TURI lab information:

### **BWG Vida Verde coop household cleaning recipes**

**All Purpose Cleaning:** The Vida Verde home cleaning recipes of Fantastic, Fabulous, and Magic had overall average efficiencies greater than 85% and would be considered effective based on the Massachusetts Toxics Use Reduction Institute Surface Solutions Laboratory testing methodology for all purpose cleaning and for Green Seal GS 37 requirements. The three Vida Verde cleaners were effective in removing the lab soil with a manual wiping action. Each of the three formulations performed on the same level as the traditional cleaner it was tested against, Formula 409 All Purpose Cleaner.

**Bathroom Cleaning:** The Vida Verde bathroom cleaning recipes of Fantastic and Magic had overall average efficiencies greater than 90% and would be considered effective based on the Massachusetts Toxics Use Reduction Institute Surface Solutions Laboratory testing methodology for bathroom cleaning and for Green Seal GS 37 requirements. The two Vida Verde cleaners were effective in removing the lab bathroom soil with a manual wiping action. Each of the two formulations performed better than the traditional cleaner it was tested against, Comet Bathroom Cleaner.

**Glass Cleaning:** The Vida Verde glass cleaning recipe Amazing had an overall efficiency greater than 95% and would be considered effective based on the Massachusetts Toxics Use Reduction Institute Surface Solutions Laboratory testing methodology for glass cleaning and for Green Seal GS 37 requirements. The Vida Verde glass cleaner removed a majority of the soap scum mixture using manual cleaning. The streaking observed on the Vida Verde formulation test was less than the traditional cleaner it was tested against, Windex. The Vida Verde cleaner performed on the same level as the traditional cleaner it was tested against overall.

#### Summary:

The four cleaning recipes, Fantastic, Fabulous, Magic, and Amazing, tested by the Massachusetts Toxics Use Reduction Institute Surface Solutions Laboratory, met or exceeded laboratory testing methodologies and Green Seal GS 37 standards, when compared to traditional cleaners.

## References

Ammonia [http://www.health.state.ny.us/environmental/emergency/chemical\\_terrorism/docs/ammonia\\_general.pdf](http://www.health.state.ny.us/environmental/emergency/chemical_terrorism/docs/ammonia_general.pdf)

Why is bleach bad?

<http://www.howtodothings.com/home-garden/how-to-understand-why-bleach-is-bad>

Butil Celosolve

<http://www.thegoodhuman.com/2007/10/18/what-is-butyl-cellosolve-and-why-you-should-avoid-it/>

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Formaldehyde and Cancer

<http://query.nytimes.com/gst/fullpage.html?res=9B0DE7DC1F38F934A25757C0A961948260>

Hydrofluoric acid

<http://www.carwash.com/articleprint.asp?print=1&IndexID=4230101>

Sulfuric

acid <http://ntp.niehs.nih.gov/ntp/roc/eleventh/profiles/s164sulf.pdf>

Borax

<http://chemistry.about.com/od/howthingsworkfaqs/a/howboraxworks.htm>

The **Brazilian Women's Group** is a grassroots organization created in 1995 by a group of friends determined to encourage political participation of the Brazilian community in Greater Boston. Open to the community, BWG is the most active group of Brazilian women in the Boston area, giving opportunities and voice to people who may not have been heard otherwise.

BWG is a non-profit organization whose work is made possible via grants and donations.

BWG grantors include:

Boston Women's Fund  
Tufts University  
UMass Lowell  
Catholic Charities for Human Development (CCHD)  
Resist

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For more information, please go  
to [www.verdeamarelo.org](http://www.verdeamarelo.org)  
Or call the Brazilian Women's Group by telephone:  
617-787-0557- ext: 14 & 15

