

Tread Lightly Cleaning Guide

**Simple recipes that use pure, natural
cleaning powders and products.**

- Washing Soda
- Borax
- Baking Soda
- Soap Flakes
- Vinegar Concentrate



www.eco-pioneer.com

The protection of the planet is a shared responsibility. Please do your part by adopting a more environmentally sustainable lifestyle and reducing your ecological footprint.

Revenues from the sale of this guide are donated to charitable organizations that support environmental and social justice causes.

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INDEX

GENERAL HOUSEHOLD CLEANERS

Lemon Oil Furniture Polish	4
Olive Oil Furniture Polish	4
Carpet Cleaner	4
Carpet Deodorizer	4
Silver Polish	5
Brass & Copper Cleaner	5
Glass Cleaner #1	5
Glass Cleaner #2	5

KITCHEN / BATHROOM CLEANERS

All-Purpose Cleaner #1	6
All-Purpose Cleaner #2	6
All-Purpose Cleaner #3	6
All-Purpose Cleaner #4	6
Toilet Bowl Cleaner	7
Scouring Cleanser	7
Ceramic Tile & Grout Cleaner	7
Mould Remover	7
Dish Soap	7
Automatic Dishwasher Powder #1	8
Automatic Dishwasher Powder #2	8
Aluminum Pan Cleaner	8
Calcium Deposit Remover	8
Drain Cleaner	9

LAUNDRY

Laundry Soap	9
Fabric Softener	9
Delicate-care Soap	9
Spray Starch	10
Clothing Rust Remover	10

MISCELLANEOUS

Scented Shower Pucks	10
Septic Tank Treatment	10
Safe Car-Washing Solution	11
Vinyl Upholstery Cleaner	11
Fire Extinguisher	11
Ant Bait	11

Before commercial cleaners were introduced in the 1940's, cleaning was done with soap, water and a lot of elbow grease. Today, Canadian households use approximately 54 kilotons of general purpose cleaners per year, resulting in the contamination of our fresh water, soil and air resources. Although cleaning products may be necessary for reasons of hygiene, consumers should take steps to reduce their use of cleaners and choose products that are environmentally responsible and leave a small ecological footprint.

The following is a compilation of environmentally responsible cleaning recipes. They are easy to make, work well, do not abuse the environment and use limited resources in their production. Probably the most important ingredient that our recipes require is elbow grease!

All of these recipes follow the 3 E's of Environmental Sustainability. They are Effective, Economical & Environmental Responsible. They cost the same as or less than conventional harsh detergent products and they do not contain phosphates, enzymes, dyes or E.D.T.A.

A WORD OF CAUTION: We have tested most of these recipes. In some cases we use them regularly. In some cases, we have only tried them once or twice for the compilation of this booklet. We are unaware of any long term effects on the items being cleaned.

These are the most commonly used ingredients in the recipes:

- ▶ **Soap Flakes or Powder (sodium palmitate, cocoate or tallowate)** are molecules which attract dirt and grease on one end and are water soluble on the other end.
- ▶ **Baking Soda (sodium bicarbonate)** is produced when carbon dioxide reacts with water and then is neutralized to its sodium salt. It is perfect for deodorizing, softening water and scouring.
- ▶ **Washing Soda (sodium carbonate)** is related to baking soda. It cuts through grease, softens water and disinfects. It can also be used in swimming pools to increase the pH level.
- ▶ **Borax (borax pentahydrate)** is composed primarily of sodium and boron and is a naturally occurring mineral. It can be used for disinfecting, cleaning and deodorizing.
- ▶ **Vinegar** is a dilute acetic acid that results from the fermentation of ethyl (human consumable) alcohol. Its acidic quality enables it to cut through grease. Eco-Pioneer Vinegar Concentrate is 5 times the strength of regular vinegar (acetic acid).
- ▶ **Ammonia** is a gas which is condensed into a liquid, and diluted with water for household use. It can be used for cleaning and disinfecting. But be careful; ammonia can irritate the skin and eyes and it can inflame the respiratory tract if deeply inhaled. It is also toxic if mixed with other cleaning products such as bleach or tub cleaners.

These six ingredients are listed by Pollution Probe as six of the safer cleaning substances currently available for household use.

GENERAL HOUSEHOLD CLEANERS

Lemon Oil Furniture Polish

250 ml (1 cup) mineral oil
5 ml (1 teaspoon) lemon oil

1. Mix the above ingredients together and store in a pump dispenser of your choice.
2. Spray directly onto furniture and buff surface to a shine. Use sparingly to prevent build up.

Lemon Juice is naturally acidic, which enables it to cut through grease and stains. Its fragrance can also serve as an air freshener.

Mineral Oil is a safe and odour-free petroleum-based oil. It is a mild laxative if swallowed in small quantities.

Olive Oil Furniture Polish

30 ml (2 tablespoons) olive oil
3 ml (1/2 teaspoon) vinegar concentrate
1 litre (4 cups) warm water

1. Mix ingredients and store in a pump dispenser.
2. Place bottle near heat before use as the polish works better warm. (e.g. place bottle in a pan of warm water).
3. Apply to furniture and rub dry with a soft cloth.

Carpet Cleaner

500 ml (2 cups) baking soda
4-5 bay leaves (crumbled)
125 ml (1/2 cup) cornstarch
15 ml (1 tablespoon) ground cloves

1. Mix ingredients together and store in an air tight container.
2. Shake the cleaner onto your carpet.
3. Leave overnight and vacuum thoroughly the next day.

Editor's Note: This is more or less a carpet freshener. It will pick up dirt and dust. It will remove stains left by moisture.

Carpet Deodorizer

125 ml (1/2 cup) cornstarch
60 ml (1/4 cup) borax

1. Mix cornstarch with borax.
2. Sprinkle on carpet and leave for 1 hour.
3. Vacuum.

Silver Polish

Aluminum foil

1 litre (4 cups) of water

15 ml (1 tablespoon) of baking soda

15 ml (1 tablespoon) of salt

1. Put a piece of aluminum foil in an enamel or stainless steel saucepan.
2. Pour in water.
3. Add one tablespoon of baking soda and salt and bring to a boil.
4. Add your silverware and like magic, the tarnish will disappear from your silverware and coat the foil.
5. Polish the silverware with a dry cloth as you remove it from the pan.

Editor's Note: This formula works very well on heavily tarnished items. The only problem we found was it tended to leave a dull coating on the surfaces. We do not recommend you use this method on a patina design as it may remove the accents.

Brass & Copper Cleaner

30 ml (2 tablespoons) baking soda

15 ml (1 tablespoon) salt

15 ml (1 tablespoon) flour

3 ml (1/2 teaspoon) vinegar concentrate

30 ml (2 tablespoons) water

1. Mix all items into a paste.
2. Rub onto copper items and let sit for 10 minutes.
3. Rinse and shine clean with a soft cloth.

Editor's Note: This formula works okay with a lot of elbow grease. It was not effective on badly tarnished items. To quick-clean copper or brass, saturate a sponge with vinegar or lemon juice, sprinkle on salt and scrub vigorously. Leaves a nice shine!

Glass Cleaner #1

750 ml (3/4 cup) vinegar concentrate

1 litre (4 cups) water

Editor's Note: This works fairly well, but not as well as commercial cleaners. For best results clean the window first using isopropanol (rubbing alcohol) to remove the residue from previously used cleaners.

Glass Cleaner # 2

30 ml (2 tablespoons) borax

750 ml (3 cups) water

1. Mix ingredients together in bucket.
2. Clean windows using newspaper.

Editor's Note: This works well, but be careful not to smudge any woodwork or vinyl with the newspaper ink.

KITCHEN / BATHROOM CLEANERS

The problem with using disinfectants to clean is the highly toxic chemicals such as chlorine, cresol and phenol that they contain. Drain cleaners contain lye, hydrochloric and sulphuric acids which are even more harmful to our environment. You can deodorize and disinfect bathroom surfaces by wiping them with a solution of 125 ml ($\frac{1}{2}$ cup) of borax to 4 litres (one gallon) of water.

All-Purpose Cleaner # 1

60 ml (1/4 cup) baking soda
1 litre (4 cups) warm water

1. Dissolve baking soda in warm water.
2. Apply with a sponge.
3. Rinse with clear water.

All-Purpose Cleaner # 2

30 ml (2 tablespoons) castille soap
6 ml (1 tsp) vinegar concentrate
3 1/2 L (14 cups) warm water
Essential oil of pine

1. Combine vinegar concentrate & castille soap.
2. Add 500 ml (2 cups) warm water and mix well.
3. Add remaining warm water.
4. Clean as normal.
5. Add 8 drops of essential oil of pine per cup of cleaning solution.

Editor's Note: The pine oil gives this cleaner anti-microbial properties.

All-Purpose Cleaner # 3

2 litres (8 cups) water
125 ml (1/2 cup) of ammonia
25 ml (1 1/2 tbsp) vinegar concentrate
60 ml (1/4 cup) baking soda

1. Mix ammonia, vinegar concentrate and water in a large container.
2. Add baking soda and mix well.
3. Clean as normal.

Editor's Note: Do not use on copper or aluminum, including aluminum kitchen sinks.

All-Purpose Cleaner # 4

500 ml (2 cups) hot water in a spritzer bottle
1 tsp borax
1/2 tsp washing soda
1 tsp vinegar concentrate
1/2 tsp liquid soap

1. Shake to combine
2. Use on counters tops, glassware, stainless steel, etc.

Editor's Note: Cleans stainless steel appliances very well. After a few uses you will notice white streaks, so simply wipe with water and follow with dry cloth.

Toilet Bowl Cleaner

125 ml (1/2 cup) borax
125 ml (1/2 cup) washing soda

1. Mix above ingredients together.
2. Pour into bowl and scrub vigorously with a toilet brush.

Editor's Note: To deodorize your toilet, pour in vinegar, leave for a few minutes and flush. Another alternative is to put 1,000 mg of Vitamin C in your toilet bowl and leave to soak overnight. The result is a clean and healthy toilet!

Scouring Cleanser

10 ml (2 teaspoons) borax
125 ml (1/2 cup) soap flakes
625 ml (2 1/2 cups) hot water
5-25 ml (2-5 teaspoons) of whiting
(depending on abrasiveness required)

1. Mix soap flakes and borax with water until dissolved.
2. Add 2-5 teaspoons of whiting, until desired abrasiveness and consistency is reached.
3. Use to scour sinks, baths etc.

Editor's Note: The whiting makes this formula scratch. For a non-scratch formula, substitute the whiting with baking soda.

Ceramic Tile and Grout Cleaner

250 ml (1 cup) ammonia
250 ml (1 cup) baking soda
25 ml (1 1/2 tbsps) vinegar concentrate
3 1/2 litres (14 cups) warm water

1. Mix baking soda, ammonia and vinegar concentrate in a 4L plastic jug or pail.
2. Add warm water and mix well.
3. Spray solution directly onto tile and wipe with a damp sponge or scrub pad.

Editor's Note: Ceramic surfaces can also be cleaned with baking soda sprinkled on a sponge or a nylon scrub pad. For a more abrasive cleaner, rub soiled surfaces with one half of a lemon dipped in borax, then rinse.

Mould Remover

500 ml (2 cups) spray container
30 ml (2 tablespoons) borax
125 ml (1/2 cup) apple cider vinegar
2 ml (1/2 teaspoon) lavender essential oil
2 ml (1/2 teaspoon) eucalyptus essential oil

1. Add ingredients to bottle and shake.
2. Fill with water and shake again.
3. Spray surface, scrub with brush and rinse.

Dish Soap

Use soap flakes as a substitute for your normal dishwashing liquid.
For more suds simply add more powder!

Automatic Dishwasher Powder # 1

250 ml (1 cup) washing soda
250 ml (1 cup) borax

1. Mix ingredients together.
2. Use as normal.

Editor's Note: We wish it was this simple to come up with an automatic dishwasher powder, but unfortunately it isn't. This formula works well for a couple of loads, but then you will notice a white film on your cutlery and dishes, which is extremely tough to remove. However, by using this every 8-10 loads, you will stretch your dishwashing dollar and help the environment. For higher performance, use vinegar in the first compartment and the powder in the second. Handwashing dishes is more effective and uses less energy.

Automatic Dishwasher Powder # 2

250 ml (1 cup) washing soda
250 ml (1 cup) borax
125 ml (1/2 cup) citric acid

1. Mix ingredients together.
2. Use as normal.

Aluminum Pan Cleaner

60 ml (1/4 cup) baking soda
60 ml (1/4 cup) cream of tartar
12 ml (2 tsps) vinegar concentrate
30 ml (2 tablespoons) soap flakes
250 ml (1 cup) water

1. Mix baking soda, cream of tartar, vinegar concentrate and water.
2. Stir in soap flakes.
3. Place a small amount of cleaner onto the aluminum pan and scour with fine steel wool.

Editor's Note: Another hint to brighten darkened aluminum is to boil cream of tartar and water together in the pot. A hint to clean a burned saucepan is to liberally sprinkle with baking soda and add enough water to moisten. Leave to stand for several hours and clean.

Calcium Deposit Remover

By removing the scale that accumulates in your kettle, teapot or iron, you will increase its energy efficiency.

6 ml (1 tsp) vinegar concentrate
250 ml (1 cup) water

1. Simmer the water and vinegar concentrate in your kettle or teapot and leave for 30 minutes.
2. Once the calcium deposits have loosened, use steel wool to remove them.

Editor's Note: This method only works well if you can scrub the deposits with steel wool. For sealed kettles and coffee makers, use full strength vinegar and run it through 2-3 times.

Drain Cleaner

Instead of using a harsh caustic, each week pour one cup of baking soda into drain, followed by one cup of vinegar. As the soda and vinegar foam, flush the drain with very hot water. This is designed to keep kitchen or bathroom drains clear.

Editor's Note: Works well, especially with a good plunger.

LAUNDRY

Most laundry detergents are petroleum-based, using up a non-renewable resource. Many of them are not readily biodegradable and when they are in the waste stream, they may take a long time to break down. Phosphates are another culprit in detergents. When the phosphates are eventually dispersed into lakes, they fertilize the natural algae. The algae then absorbs the oxygen, killing the marine life. One remedy for this is to use soap flakes or powder instead of detergents.

Laundry Soap

250 ml (1 cup) soap flakes
125 ml (1/2 cup) washing soda*
125 ml (1/2 cup) borax

1. Mix ingredients together and stir well.
2. For regular loads: Measure 1/2 cup of mixture and add to cold water in your washing machine.
3. Wash as normal, making sure you rinse with cold water.
* For very hard water, add more washing soda.

Even with the extra cost of incorporating all of the above ingredients, doing your laundry this way is still more economical than conventional methods! Also, never forget to dry your clothes in the sun whenever possible. Sunshine is the oldest and best natural bleach and disinfectant available.

Fabric Softener

100 ml (1/2 cup) vinegar concentrate
500 ml (2 cups) baking soda
1 litre (4 cups) water

1. Mix the baking soda and vinegar concentrate together. Add the water and stir well.
2. Add 60 ml (1/4 cup) of solution to the final rinse of your washing machine cycle.

Editor's Note: Clothes are soft but static cling is evident.

Delicate-care Soap

125 ml (1/2 cup) borax
250 ml (1 cup) soap flakes
1 litre (4 cups) boiling water

1. Combine the borax, soap flakes and boiling water.
2. Leave to cool and pour into a container.
3. Use approximately 125 ml (1/2 cup) of this solution to one litre (4 cups) water.
4. Add clothing and wash gently. Rinse thoroughly.

Spray Starch

20 ml (4 teaspoons) cornstarch
500 ml (2 cups) warm water
3 or 4 drops of essential oil

1. Mix ingredients together and pour into spray bottle.
2. Shake well.
3. When ironing, spray sparingly onto clothing and press.

Clothing Rust Remover

125 ml (1/2 cup) pickling salt
25 ml (1 1/2 tbs) vinegar concentrate
125 ml (1/2 cup) water

1. Mix salt, vinegar concentrate and water together.
2. Add just enough water so that the garment is immersed.
3. Soak rust stained clothing for an hour or more.
4. Wash as normal.

Editor's Note: This seems to work only if the stain is not set. Do not wash the clothing before soaking as this will set the stain. Vinegar is also ideal for removing deodorant and antiperspirant stains. It also removes cola, wine and ketchup stains.

MISCELLANEOUS

Scented Shower Pucks

250 ml (1 cup) baking soda
1/3 cup water (enough to make paste)
NOW Essential oils
(lavender, eucalyptus & peppermint)
Mini Muffin tin
Muffin liners (foil)

1. Preheat oven to 325 degrees.
2. Line a mini-muffin tin with foil liners.
3. Mix the baking soda and water together to form a thick paste.
4. Pour by tablespoon into mini muffin tin. Bake at 325 degrees for 15 minutes. Remove from oven and let cool.
5. Top with one drop each of eucalyptus essential oil, lavender essential oil, and peppermint essential oil. Remove puck from liner, place on the shower floor and enjoy the vapours.

Editor's Note: This recipe is great for the cold season. Regular paper muffin liners will absorb the paste and even stick to it. For best results, use foil liners. For a selection of different oils or scents, please reference www.nowfoods.com/newsolutions for multiple blend options and essential oil information chart.

Septic Tank Treatment

500 ml (2 cups) brown sugar
15 ml (1 tablespoon) baker's yeast
1 1/4 litres (5 cups) warm water

1. Dissolve sugar and yeast in warm water.
2. Pour solution into toilet and flush.

Safe Car Washing Solution

60 ml (1/4 cup) soap flakes or powder
60 ml (1/4 cup) baking soda
4 litres (1 gallon) warm water

1. Mix all ingredients together and stir well.
2. Use 250 ml (1 cup) of the solution and add to a bucket of water.
3. Wash as normal.

Vinyl Upholstery Cleaner

60 ml (1/4 cup) soap powder
125 ml (1/2 cup) baking soda
500 ml (2 cups) warm water

1. Mix soap powder and baking soda together and add to water.
2. Wipe vinyl with solution and rinse well.

Fire Extinguisher

Baking soda
Decorated container (tin)

1. Baking soda makes an excellent fire extinguisher in the kitchen. It works well at smothering flames from any kind of fire and it will not spread grease fires.

Editor's Note: We have tested this and it works well.

Ant Bait

60 ml (1/4 cup) sugar
125 ml (1/2 cup) very warm water
15 ml (1 TBS) Borax

Be careful to keep the mixture and pads away from children and pets as it can be toxic to them.

1. Mix ingredients together until all the sugar is dissolved.
2. Dip a cotton cosmetic pad into the liquid until saturated.
3. Place pad on a plastic container lid (e.g. yogurt container)
4. Wait for the ants to arrive, enjoy the solution and take back to the queen to share.
5. Resist killing them and just be patient.
6. Enjoy your ant free rooms.

Cleaning Products - Making Environmentally Responsible Purchases

Most of us have a limited understanding of chemistry and ecology, so it is difficult to know what products are the best to buy. Many cleaners make claims about their “environmental friendliness”, but these claims cannot always be trusted. Consumers should question manufacturers about the presence of any chemical constituents that can have far-reaching and devastating effects on our environment and health. Products formulated without the following chemicals are the most environmentally responsible.

Phosphates - accelerate the growth of algae, robbing marine ecosystems of life- sustaining oxygen supplies.

NTA & EDTA - (nitritotriacetic acid or ethylene diaminetetraacetic acid or any of their salts) are chelating agents that allow heavy metals to actively enter our water and food supplies.

APEO - (alkylphenol ethoxylates) This family of chemicals includes NPEs, considered to have hormone-disrupting effects in wildlife. Because wildlife and human hormone systems are similar, their link to declining sperm counts, increased breast, prostate and testicular cancers and childhood hyperactivity and learning disorders are being explored.

Halogenated organic solvents - can be carcinogenic. They biodegrade relatively slowly and accumulate in the liver and lymph nodes.

Butoxyethanol VOCs - (volatile organic compounds) readily evaporate and react with oxygen to create ozone. Ozone is corrosive to the lungs.

Reducing Your Ecological Footprint

The ecological footprint is an accounting tool used to measure the environmental impact of human activities. The ecological footprint is defined as the area of biologically productive land and water needed to supply a population and assimilate the wastes generated by that population, using the prevailing technology. There are many ways to reduce your ecological footprint, whether it is through improved water efficiency, transportation choices, energy use, food consumption or waste production and disposal. For a list of tips on reducing your ecological footprint, visit our website, www.eco-pioneer.com

If you have your own cleaning recipes or tips on how to reduce your ecological footprint, why not jot them down here or share them with us by sending them to:

info@puresource.ca or Puresource Inc., 5-5068 Whitelaw Rd RR6 Guelph, ON N1H 6J3

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Eco-Pioneer reminds you to tread lightly on our planet.