

Common Reasons to Make Your Own

- Allergies, usually to fragrances, dyes, preservatives, stabilizers, or other additives
- Cost, homemade products tend to be less expensive, especially in bulk

Common Ingredients

- **20 Mule Team Borax**
 - Approx. \$4.25/76 oz. box (\$0.45/cup)
 - Since 1891. Natural laundry booster and multi-purpose household cleaner.
 - Only contains sodium, boron, oxygen, and water. No phosphates or chlorine.
 - Non-toxic and safe for the environment.
- **Arm & Hammer Super Washing Soda**
 - Approx. \$4.00/55 oz. box (\$0.60/cup)
 - Detergent booster, degreaser, and household cleaner.
 - 100% fragrance and phosphate free.
 - Helps to regulate the pH level in the laundry rinse water by keeping it from being too acidic or alkaline.
 - Strong water softener, perfect for use with hard water.
 - Far stronger (pH 11) than baking soda (pH 8.1), and perfect for tough cleaning using small amounts. However, if you are laundering baby diapers/clothes or other delicates, stick with baking soda.
- **Fels-Naptha Laundry Bar and Stain Remover**
 - Approx. \$2.00/5.5 oz. bar (\$1.00/cup grated)
 - Primarily formulated and marketed as a stain remover and pre-treater for oil-based stains, this heavy-duty laundry soap has been used for over 100 years.
 - 1 bar grated finely makes approximately 2 cups of shreds.
- **Zote Laundry Soap Bar**
 - Approx. \$1.50/14.1 oz. bar OR approx. \$2.50 for a 17.6 oz. box of “Laundry Flakes” (at the highest: \$0.42/cup flakes or grated)
 - Available in white (dye-free), pink, or blue. There is no difference in the formulation, beyond the addition of a laundry-safe dye.
 - The basic natural ingredients are the same used to make bath soaps, non-abrasive and popular for washing delicate garments and the clothes of people with sensitive skin or baby’s clothes.
 - Includes “optical brighteners” for whitening power.
 - Another of the distinctive feature is its fragrance: essential citronella oil, which gives the soap a pleasant smell similar to lime. Clothes washed with Zote tend smell fresh and fragrant for several days.
 - Not recommended by the manufacturer for high efficiency (HE) machines.
 - 1 bar grated finely makes approximately 5-6 cups of shreds.

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- **Ivory Soap (Original White)**
 - Appox. \$0.40/4 oz. bar (\$0.20/cup grated)
 - Free of dyes and heavy perfumes and is 99.44% Pure
 - Made in the USA
 - Proven and trusted brand for over 130 years
 - 1 bar grated finely makes approximately 2 cups of shreds.
- **Hemp or Castile Soap (Unscented) – such as Dr. Bronner’s 18-in-1 Soap or Kirk’s**
 - Unscented (Baby Mild), approx. \$12.00/32 fl. oz. bottle (\$3.00/cup) or approx. \$4.00/5 oz. bar (\$2.00/cup grated)
 - Certified organic. No detergents. 100% Vegan. No foaming agents. Cruelty-free with no animal testing.
 - 1 bar grated finely makes approximately 2 cups of shreds.
- **Original (non-concentrated) Dawn Dishwashing Soap (Blue)**
 - Appox. \$2.50/24 fl. oz. bottle (\$0.83/cup)
 - Contains biodegradable surfactants and no phosphate
 - Great for grease or oil-based stains.
- **Hypoallergenic Dishwashing Liquid, Dawn Ultra Pure Essentials OR Palmolive Pure & Clear**
 - Appox. \$3.00/24 fl. oz. bottle (\$0.75/cup)
 - Gently scented with no dyes or harsh ingredients, so it’s safe for sensitive skin.
 - This hypoallergenic formula is gentle, yet still provides grease-fighting power.
- **BIZ Laundry Stain & Odor Eliminator**
 - Appox. \$6.00/60 oz. box (\$0.86/cup)
 - Contains enzymes, peroxides, and whitening agents.
 - Introduced in 1968 by first by Procter & Gamble as the first enzyme based pre-soak and color-safe bleach.
 - Compatible with all high-efficiency (HE) and front-loading machines. In HE machines, cut the dose of BIZ Powder to 1/4 cup per load along with your detergent. A normal dose for a front-loader or top-loader is 1/2 cup per load.
- **Clorox Liquid Bleach - Regular**
 - Appox. \$4.00/121 fl. oz. bottle (\$0.26/cup)
 - Improved whitening.
 - For standard & HE machines.
 - Contains no phosphorus.
 - Made in the USA.
- **Distilled White Vinegar**
 - Appox. \$3.00/gallon (\$0.18/cup)
 - Kills 99% of bacteria on surfaces and 82% of molds on countertops.
 - Naturally softens laundry by removing the soap and residue build-up.
 - Contains small amounts of potassium and sodium, which softens hard water, dissolves mineral build up in the washing machine, and reduces static in the dryer.

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- **Hydrogen Peroxide**
 - Approx. \$1.00/16 fl. oz. bottle (\$0.50/cup)
 - A disinfectant that can be used to bleach, kill bacteria, mold, and even salmonella.
 - Used as a whitener/"optical brightener" in pre-soaking or in the rinse cycle for whites.
- **Baking Soda**
 - Approx. \$1.00/14 oz. box (\$0.75/cup)
 - Helps to regulate the pH level in the laundry rinse water by keeping it from being too acidic or alkaline. More mild than washing soda (pH of 8.1 vs. washing soda at pH 11), so perfect for delicates and fabric softener recipes.
 - In the rinse cycle, acts as a balance to suspend detergent or mineral deposits that can make clothing feel stiff.
- **Kosher Salt**
 - Approx. \$2.25/48 oz box (\$0.37/cup)
 - Used as a water softener. Hard water causes soap to be less effective, fades colors, and causes fabric to feel rough and scratchy.
 - Do NOT substitute Epsom Salt. These two items are NOT interchangeable. Epsom salt is not just another type of salt, like grey salt or Himalayan pink salt. Salt (table, pickling, kosher, etc.) is sodium chloride and Epsom salt is magnesium sulfate. Hard water is caused most often by presence of two minerals: calcium and magnesium. So by adding Epsom salt to your laundry, you may be making your water harder.
- **Distilled Water**
 - Approx. \$1.00/gallon (\$0.06/cup)
 - Use this, rather than tap water, in any recipe that is not used in the washer/anything that stays on the cloths.
 - Free of any undesirable dissolved solids and chemical tag-alongs.

Don't overdose on detergent!

Most liquid laundry detergent users don't use the recommended amount of detergent per washload. We just guess or fill the cap up to the top. It's not like the manufacturers make it easy on us, though. They want you to use too much. Then you buy more.

That "XX loads per bottle" statement is math at the recommended amount, which is usually the smallest/lowest indicator in the cap. Look inside the cap of your bottle of commercial detergent. Can you see the indicators? Probably not easily. Easiest fix? Take a permanent marker and mark the top of the smallest amount. That's what you use, unless you're using the bottle to hold homemade detergent, and the recipe says otherwise.

But it's more than just pouring money down the drain. Overdosing also creates excess suds, which results in:

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- Residue on clothes that fades colors and attracts more dirt.
- Odors in the washing machine because of trapped residue.
- Loads that haven't been properly drained because extra suds slow down the spin cycle.
- Leaking, especially in front loader washers.
- Decreased water savings, because more water is used to rinse the load if excess suds are detected.
- Extra wear and tear on the washing machine's pump and motor, because the suds act like a brake.

With an average household doing about 300 loads of wash each year, every small thing we do to reduce and reuse makes a big difference.

A Clean Washer is a Happy Washer

Many thanks to Jillee at OneGoodThing for this breakdown.

Detergent residue, dirt, mildew and minerals can build up inside washers. This results in odors and laundry coming out less than clean. Every washer should be cleaned at least twice per year, but more often (every three months) if you live in hard water area and don't use a water softener.

Top-Loading Washer

Using the bleach and white vinegar will clean away bacteria, soap scum and mineral deposits from the wash basket and hoses.

1. Add 1 quart of chlorine bleach – no detergent – and let the machine agitate for a minute, then let it sit for one hour.
2. After one hour, allow the washer to run through its longest wash and spin cycle.
3. Immediately fill the washer with HOT water again and add 1 quart distilled white vinegar. Let agitate for a minute, and again, let it sit for one hour.
4. While it is soaking, dip a scrubber sponge in the white vinegar water and detail all the nooks and crannies of your washer, including the knobs, the lid and the exterior.
5. If your machine has built-in dispensers, clean those too. I was fairly shocked at how grimy mine were! The fabric softener dispenser was all slimy feeling...and the bleach dispenser was just plain icky! If your dispensers aren't removable, warm 1 cup of white vinegar in the microwave or in a small saucepan. Pour it into the dispenser and allow it to sit for a few minutes to loosen any build up.
6. After an hour, run the longest wash and spin cycle again.

Front-Loading (High Efficiency) Washer

Begin by filling the washing machine with hot water on the largest load setting. Make sure there is no laundry in the washer.

1. Add 2 cups of white vinegar to the water to get rid of odor problems. (Most HE washers should have a "clean cycle" on it and you can add white vinegar or bleach on that setting).
2. Allow the washing machine to run through a complete wash and rinse cycle.
3. Fill the washer a second time with hot water, also on the largest load setting.
4. Add 2 cups of bleach to the water to help with stain removal.
5. Again, allow the machine to run through a complete wash and rinse cycle.
6. If all of the stains are removed, run an additional cycle without adding anything to the water. This will thoroughly rinse away any remaining residue.
7. Remove the bleach dispenser and fabric softener dispenser and soak them in a bucket of warm water. When they have soaked long enough, remove them from the water, lay them on a towel, and spray them with an all-purpose spray cleaner. Wipe away any dirt with the towel.
8. Dry the dispensers and return them to their original places in the machine.
9. Finally, inspect the rubber door seal for mold and mildew. Pull back the seal to examine the hidden crevices. Mix 1 cup of liquid chlorine bleach with 1 gallon of warm water. Moisten a clean white cloth with the bleach water solution, then wipe down the seal to remove any mold and mildew. Allow the solution to remain on the seal for five minutes, then wipe down the door seal with a clean, dry white cloth.

To keep the funk from coming back, do the following EACH time you do a load of clothes:

1. Leave the door open after washing and always take items out of the washer when not in use.
2. Wipe down the rubber seal and drum.
3. Take the soap/softener drawer out to dry.

A Clean Dryer is a Safe Dryer AKA Dryer Fires are BAD!

Fabric softener, some fabrics, laundry soap residue, lint build up...these can all lead to clogged lint screens and dryer vents. This doesn't like much a problem, but it is VERY SERIOUS. **Many dryer fires are started by lint screens and clogged dryer vents.**

But, there is a simple rule of thumb to prevent a dryer fire due to build up.

1. **Empty your lint screen after EVERY load.**
2. **Clean your dryer lint screen every month or so (15-20 loads).**
Rinse it with warm water and use a soft tooth brush to scrub it clean. It is simple

maintenance we should all do regardless of whether we use softener or not. Not sure if it needs to be cleaned? Put your screen under running water. If it holds water, clean it.

3. **Clear your lint trap with a vacuum hose or with a wire trap cleaner.**
4. **Clean and clear out the hose to the dryer for discharging vent using a vacuum.**
Unplug the dryer first.
5. **Last, don't run your dryer when no one is home.**
If a dryer fire does start, you won't know if you're not home and it could cause significant loss of property, or even life. Just don't take the risk.

Lessons Learned from Commercial Detergents

Many thanks to "Little House in the Suburbs" (<http://littlehouseinthesuburbs.com>) for their posts "10 Things You Should Know Before Making Homemade Laundry Detergent" (05/30/2012) and "Homemade Laundry Detergent: New Tutorial" (09/24/2012). The list below is condensed from these posts, but they are well-worth reading in their entirety.

1. **No commercial detergents contain Borax and Washing Soda together.**
Borax is found in commercial liquid detergents only. It's not very strong compared to washing soda, and requires hot water to really do its thing.
2. **Making liquid detergent? Use Borax.**
The gelling will help keep it stable longer than Washing Soda alone.
3. **Only Purex and Seventh Generation use salt.**
Purex powder is almost 50% salt. Seventh Generation uses a tiny amount in some of their liquids. Salt *is* a water softener, but it's far weaker than washing soda.
4. **No commercial detergents contain baking soda. Not even Arm and Hammer.**
Baking soda (pH 8.1) is only half as strong as washing soda (pH 11) at softening water and doesn't allow the cleaning pH to go nearly as high. And if you have a stronger product on hand, why dilute it with a weaker one? Unless you're washing delicate items, then use baking soda as a buffer.
5. **Most detergents contain enzymes.**
Enzymes essentially eat your protein stains, such as grass, blood, milk, and baby formula. An old trick is using meat tenderizer, but it would be a soak, not a wash, and I'm not sure about colorants. Commercial laundry boosters, like Biz, are designed to work with another detergent and includes enzymes, peroxides (for ink and dye-based stains), and whitening agents.
6. **Only dry commercial detergents use an oxygen bleach.**
You can make your own oxygen powder (Oxiclean, LA's Totally Awesom Oxygen Base Cleaner, etc.) by mixing peroxide and washing soda and dehydrating it, but there's really no point.

In water, such oxygen cleaners become peroxide and washing soda. It's easier to put peroxide in your bleach compartment or make a solution of half peroxide half washing

soda for immediate use on stains. If you're not already using a detergent with washing soda and a peroxide-based booster like Biz, your most frugal option is to add a scoop of Dollar Tree's LA's Totally Awesome Oxygen Base Cleaner.

7. Whites aren't REALLY white in the real world.

Most whiteness is an illusion – like the white/gold vs blue/black dress. There's two chemical families in most commercial detergents that trick your eyes into seeing "white" – bluing and fluorescing.

Most white garments come from the store with bluing in that eventually wears off. If you want that brilliant white back, you need to blue it periodically with a commercial product that has that effect.

Another option is fluorescing, often called "optical brighteners." This is in Zote soap or Biz laundry booster. These chemicals activate in light. If you soak something in Zote or Biz and put it in the sun....it looks really bright.

RECIPES

Liquid (No Cook) Laundry Detergent Recipe (triple strength)

- 1/2 cup Borax (\$0.28)
- 1 cup Washing Soda (\$0.60)
- 1/3 cup Liquid Soap of your choice (\$0.25)
(Dawn Original Blue, Dawn Ultra Pure Essentials, Hemp/Castile Liquid)
- 8 cups water (\$0.48) – 4 cups boiling & 4 cups very cold.
- 1 gallon jug

Put the dry ingredients in a one gallon jug using a funnel. Pour 4 cups boiling water into the jug. Swirl until ingredients are dissolved in the liquid. Let liquid cool and add remaining 4 cups as cold water. Add the liquid soap last to prevent over-foaming. Swirl or mix gently.

Use 1/8 cup (2 Tbsp) – 1/4 cup per load, depending on size and soil level.

Although I don't have a front-loading or HE washer, I've read that it works very well in those washers because it produces very few suds.

This is triple strength, and I don't recommend any stronger as the powders may not stay in suspension.

I recommend making this in these small batches, as liquid detergents lose their power over time.

At 1/8 cup, this batch makes 92 loads at a cost of <\$0.02/load.

Dry Laundry Detergent Recipe #1 (New and Improved – With Science!)

- 5 cups Washing Soda (\$3.00)
- 5 cups BIZ laundry booster (\$4.30)
- 4-5 cups of grated/crumbled Bar Soap of your choice (Zote, Fels Naptha, Hemp/Castile, Ivory) (\$2.10)

Grate the bar soap finely on a box or hand grater or put it through a food processor (used only for craft projects). Note: The older your soap (even Ivory), the more brittle and easy to grind.

OR

Place a NEW bar on a paper plate and place in a microwave on high (Ivory: 1 minute; Zote: 2 minutes; Fels Naptha: 3 minutes). Watch for burning. Once thoroughly cooled, the now soap blob can be cut into smaller pieces and either crumbled by hand or put through a food processor. WARNING: Do not touch it until it is completely cooled – 30-60 minutes. Do not open the microwave. You will clear the room with the smell of soap. Wash your microwave.

Place bar soap shavings/crumbles/powder into a large container with lid. Add the washing soap and BIZ. Mix or shake well to combine.

Use 1/8-1/4 cup per load, depending on size and soil level. At 1/8 cup, this is 126 loads at a cost of <\$0.08/load.

Optional: You can add up to ½ cup of fabric softener scent crystals (Purex, Gain, or Downy) per batch, though this will add up to \$3.00 to the batch and \$0.025/load. Be careful, though, these crystals are VERY, VERY strong.

Dry Laundry Detergent Recipe #2 (Classic)

- 3 Cups Washing Soda (\$1.80)
- 2 Cups Borax (\$0.90)
- 4-5 cups of grated/crumbled Bar Soap of your choice (Zote, Fels Naptha, Hemp/Castile, Ivory) (\$2.10)

Grate the bar soap finely on a box or hand grater or put it through a food processor (used only for craft projects). Note: The older your soap (even Ivory), the more brittle and easy to grind.

OR

Place a NEW bar on a paper plate and place in a microwave on high (Ivory: 1 minute; Zote: 2 minutes; Fels Naptha: 3 minutes). Watch for burning. Once thoroughly cooled, the now soap blob can be cut into smaller pieces and either crumbled by hand or put through a food

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processor. **WARNING:** Do not touch it until it is completely cooled – 30-60 minutes. Do not open the microwave. You will clear the room with the smell of soap. Wash your microwave.

Add the borax and washing soap. Mix or shake well to combine.

Use 1-2 tbsp per load, depending on size and soil level. Makes

Cost is <\$0.05/load at 1 Tbsp.

Optional: You can add up to 2 cups of oxygen powder (OxyClean, etc.) and/or ½ cup of fabric softener scent crystals per batch.

Fabric Softener Scent Crystals

- 2 cup of kosher salt (\$0.77)
- 20 drops of essential oils (lavender, cedarwood, peppermint, lemon, etc.) (\$0.25)

In a clean container (glass is best as it doesn't hold scent between batches), combine salt and oils and shake very, very well. Add just during the rinse cycle. These are not anywhere near as strong as commercial scent crystals but provide a nice gentle fragrance.

Use 2 Tbsp/load. Makes 16 loads at a cost of \$0.06/load.

Liquid Fabric Softener Recipe #1: White Vinegar and Conditioner

- 3 cups white vinegar (\$0.44)
- 2 cups or 1-12 oz. bottle conditioner, scent of your choice (I recommend Suave's Juicy Green Apple or Rosemary Mint.) (\$1.00)

Mix conditioner and white vinegar in empty bottle (clean fabric softener bottles work well), and mix well.

Pour into a laundry ball (Downy ball, etc.) or use approx. 2 Tbsp (1/8 cup) in the fabric softener spot in your laundry machine (topped off with water). This will separate as it sits. Shake to mix each time before adding to the dispenser or laundry ball.

Use 1/8 cup per load. Makes 40 doses at a cost of <\$0.04/load.

Liquid Fabric Softener Recipe #2: White Vinegar and Baking Soda, with Scent Crystals

- 1/4 cup scent crystals (\$1.50)
- 1 cup hot water (\$0.06)

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- 1 cup baking soda (\$0.75)
- 6 cups white vinegar (\$1.08)

Add your scent-booster of choice to the hot water (from the tap will do) and stir. Let sit while you combine the other ingredients, stirring occasionally.

Add the baking soda to a large bowl. Then VERY SLOWLY add 6 cups of white distilled white vinegar. The chemical reaction of the two will cause it to bubble up, but it will subside quickly. Once all the white vinegar has been added, stir until baking soda is dissolved. Some of it will settle to the bottom of the bowl. That's okay.

Pour the white vinegar and baking soda mixture into a large container, then add the scent booster liquid. Shake to mix. This will separate as it sits. Shake to mix each time before adding to the dispenser or laundry ball.

Use 1/4 cup per load. Makes 32 doses at a cost of <\$0.11/load.

Homemade Laundry Bombs

- 1 1/2 cup washing soda (\$0.90)
- 1 1/2 cup BIZ laundry booster powder (\$1.29)
- 1/2 cup grated soap of your choice (Fels Naptha, Zote, Hemp/Castile, Ivory) (\$0.21)
- 1/4 cup white vinegar (\$0.05)

Combine washing soda, BIZ, and soap (as finely grated as possible) in a bowl. Slowly add white vinegar and mix. Firmly press the damp mixture into a 1 Tbsp measure and pop out onto a sheet pan lined with parchment paper to dry.

Makes 50 bombs. Use 1 bomb per load at a cost of \$0.05/bomb.

Homemade Dryer Sheets, Wet method #1: "Dip and Wring"

- 1 cup homemade fabric softener of choice
- 1 cup warm water
- 2 standard kitchen sponges, cut in half
- Sealable jar

Add the homemade fabric softener and water to a sealable container. Mix well. Add sponge pieces to soak. When you're putting a load into the dryer, wring 1-2 sponge pieces out until just damp and add to the dryer.

Homemade Dryer Sheets, Wet Method #2: “Spray and Toss”

- 1 cup homemade fabric softener of choice
- 1 cup warm water
- Wash cloths or cut up towels in an easy-to-spot color
- Clean spray bottle (at least 16 oz)

Pour the homemade fabric softener and water to the spray bottle. Mix well, but gently. Keep the cloths in a convenient place. When you’re putting a load into the dryer, spray the rag until just damp and add to the dryer.

Homemade Dryer Sheets, Dry Method #1

- 1 cup homemade fabric softener of choice
- Wash cloths or cut up towels in an easy-to-spot color

Soak the rags in the homemade fabric softener. Wring just until they don’t drip. Allow to dry *thoroughly* overnight. Depending on humidity and fabric, this may take up to 48 hours. Add one rag/cloth to a load. You can expect to use the same cloth 12-20 times before it needs to be retreated. Keep the cloths in a convenient place. The perfect choice for those concerned about “spots” from the wet methods.

Homemade Liquid Stain Remover

- 2/3 cup liquid dish soap of your choice (\$0.75)
- 2/3 cup ammonia (\$0.15)
- 6 Tbsp baking soda (\$0.05)
- 2 cups hot water (\$0.12)

Mix hot water and baking soda together in a spray bottle or empty dish soap bottle. Add the remaining ingredients and swirl gently to combine. Drip onto stained fabric. Rub together or scrub gently with an old toothbrush. Launder as usual. As always, please check the stain before drying. Treat again, if needed.

Makes 52-1 Tbsp doses at a cost of \$0.02/dose.

Homemade Stick Stain Remover

- 1/3 cup washing soda (\$0.20)
- 1/3 cup BIZ laundry booster powder (\$0.28)

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- 2 cups finely grated soap of your choice (Fels Naptha, Zote, Hemp/Castile, Ivory) (\$0.84)
- 2 Tbsp white vinegar (\$0.02)
- 4-6 Tbsp water (\$0.02)
- 2 Tbsp liquid dish soap of your choice (\$0.08)
- Empty deodorant container

Add all the ingredients EXCEPT the Dawn dish liquid to a saucepan and heat together over LOW until combined and mostly melted (the soap may never completely melt).

When the mixture starts to thicken, remove from the heat and allow to cool for a few minutes before adding the Dawn. You are going to want to work quickly, because it will start to harden pretty fast. Spoon the mixture into a plastic baggie, clip off one corner, and pipe into your empty deodorant container. Fill about 1/2 way, then tap the container on the countertop to help it to settle, then continue to fill and tap until it is completely filled and there are no air pockets. Allow to cool completely before using.

When you have a stain that you don't have time to wash immediately, grab your stain stick and gently rub it on the stain. Wet your fingers and rub it across the top of the stain stick first. It glides more smoothly that way. When it's time to do the laundry, wet it again and rub either together or with an old toothbrush to get it deeper into the stain. Launder as usual, but, as with all stains, check it before you put it in the dryer. Treat again as needed.

Not sure how to clean a deodorant container?

Submerge your container in very, very hot (but not boiling) water in a large, heat-proof container. Weight it down with a butter knife or some other waterproof item. Let sit 5-10 minutes. Remaining deodorant should slide right now, but if not, gently use a butter knife or old toothbrush to encourage it.

Allow to dry thoroughly and use for whatever project you have planned.

Fabric Refreshing Spray

- 1/2 cup white vinegar (\$0.09)
- 1/2 cup distilled water (\$0.03)
- 1/4 cup homemade fabric softener of your choice (\$0.08)

In a clean spray bottle, combine ingredients. Shake well before each use. Mist lightly with bottle already in motion. Do not saturate! Allow 5-10 minutes to dry.

Wrinkle Release Spray

- 1 cup distilled water (\$0.06)
- 1 tsp. homemade liquid fabric softener (\$0.02)
- 1 tsp. rubbing alcohol (optional, helps the spray evaporate quicker) (\$0.04)

Add ingredients to an empty spray bottle with a fine mist nozzle. Lightly mist a clean, wrinkled garment with the bottle already in motion. Dampen it, but you don't need to soak it.

Tug on the garment or give it a good shake to loosen the wrinkles. Hang the garment to dry, and more wrinkles will disappear as it dries. You can also lay the garment on a flat surface (like a bed), and do a quick "iron" with your hands. This works well on wrinkly shirt sleeves: just spray, smooth from the middle of the sleeve out to the ends with your hands, and the wrinkles go away.

If you're in a hurry, you can lightly spray the garment, shake out some of the wrinkles, and toss it into an empty dryer on low to "fluff" out the rest.

Whitening Solution #1

- HOT HOT HOT water
- 1/3 cup original Dawn (\$0.24)
- 1/3 cup washing soda (\$0.20)
- 1 cup borax (\$0.45)
- 1 cup powdered dishwasher detergent (Sun, \$1.00/20 oz. box, \$0.33)
- 1 cup bleach (\$0.26)

Add ingredients as the machine fills with water as hot as you can manage. Add boiling water from the stove or an electric kettle, if it can be done safely. Use as small of a load (small, regular, large) on the machine as possible. You want concentrated cleaning power here. Add whites. Aim to just cover the clothes with water.

Let soak for as long as you can stand it. A few hours would be good. Overnight would work, too.

Why not an oxygen cleaner, too? Science!

Oxygen bleaches (peroxide, Oxiclean, Borax) react with chlorine bleach, creating a great deal of heat and harmful gases, and *cancelling each other out to a certain degree*. The DIY detergent above contains borax, the commercial dishwasher powder contains a peroxide-type bleach, and the extra borax is, well, borax! The chemical reaction contained above (said "harmful gases") are mitigated somewhat by the water.

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Also of note is that ammonia is still found in some liquid dish soaps, and makes chlorine gas when mixed with bleach. Don't risk this one. Check your bottle. Don't use with bleach if it says "Do not use with chlorine bleach."

Whitening Solution #2

- 2 gallons warm water
- 1 cup BIZ laundry booster (\$0.86)

Dissolve one cup of BIZ in two gallons of warm water. Soak for 30 minutes to remove most stains and brighten. For severe stains, soak overnight. Wash as usual.

Bleach Gel Pen

- 2 Tbsp cornstarch
- 1 cup distilled water
- 5-6 Tbsp bleach
- Empty squeeze bottle

In a saucepan, add cornstarch and water. Stir until completely dissolved. Place mixture on stove and continue stirring until it comes to a boil and then turn the stove off. The mixture will become quite thick. Allow mixture to COOL COMPLETELY (30-60 minutes), then add bleach. DO NOT ADD BLEACH WHEN MIX IS HOT! Pour mixture into an empty squeeze bottle for dispensing.

Spray Starch

- 1 Tbsp cornstarch
- 2 cups distilled water
- 1-2 drops essential oil (optional)
- Empty squeeze bottle

Add cornstarch and water to a jar with tight-fitting lid. Shake until completely dissolved. Pour mixture into an empty spray bottle with a mist nozzle for dispensing.

Lightly mist a clean, wrinkled garment with the bottle already in motion. For best results, shake before each use, and remember a little goes a long way, so use sparingly.

Color Catchers

- 1 yard of white felt, junk fabric, or old towels cut into 6" squares
- 1 Tbsp washing soda (\$0.04)
- 1 cup HOT distilled water (\$0.06)

A color catcher catches loose dyes found in the wash water and prevents the dye from running or bleeding onto other clothes. By using a color catcher in your washing machine, you can wash darks and lights together.

Dissolve the washing soda in the cup of hot water. Add one yard of chosen fabric and let it become saturated. Let it hand dry. Add one square to your load of "bleedable" fabric. Wash as usual.

DIY Wool Dryer Balls

- 1 skein 100% wool yarn (get on sale or at a yard sale)
- Pantyhose or knee-highs
- 8-12" acrylic yarn

Wool dryer balls save you money, energy and time by cutting the dryer's drying time and by eliminating the need to buy softeners. When you use 4 balls in your dryer, you can cut your dryer time by 25-50%. The balls circulate and separate the clothing and get the warm, dry air right down to the core of the laundry load. The more balls you add, the faster the drying time. They also soften your clothes through gentle friction of the felted wool fibers against your clothing fibers and last for years.

To start your ball, wrap the yarn around your fingers about 20 times and then slip it off and wrap the yarn around the middle of that circle you just made about 20 more times. Now pinch the beginnings of your yarn ball together and keep wrapping! Make sure you wrap it nice and tight. Stop when your ball is about 4" in diameter. Make as many as you can from the skein (usually about 4 from a regular sized skein).

Felting the balls: Put the first ball into the toe of the pantyhose or knee-high and secure it with acrylic yarn. Do NOT use wool yarn, you don't want this to felt. Continue with each ball until they are all lightly compressed and contained by nylon.

Toss the pantyhose "snake" into the washer (hotter is better) and then into the dryer (again, hotter is better. Speeds up the felting process.) The fiber will fuse and become smoother and tighter. They will get slightly smaller over time as they continue to felt. At any point, you can add another layer of yarn and felt them again to make them larger.

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If you want, you can even add 1-2 drops of essential oil to the balls before you throw them in the dryer. The scent will distribute amongst the clothes, gently perfuming at least a few loads before needing more.

Sources

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