

Cold Process Soap Making By Dee Bellini

Cold process soap is soap made using no external heat source to speed up the saponification process. It isn't cooked in anyway, and, in my humble opinion, has the nicest texture and lather of any soap made. Yes, it is "lye soap." No lye, no soap. All soap has to have some kind of alkali base, and it usually is sodium hydroxide.

Look at the ingredients on a bar of Dial. The top ingredient is sodium tallowate, which is beef fat that's been turned into soap with sodium hydroxide.

Natural soap is made by combining an alkali with a fatty acid. The result is soap and glycerin. Industrial made soap is further processed, and the glycerin is extracted. This leaves a very hard but drying bar of soap. Also, many soaps you get at the grocery store aren't soap at all, but detergent. Oh, and those 'glycerin' bars you get at the mall? All those are is soap that has been cooked down with alcohol and sugar to make them clear. And you pay \$5 a bar.

I could go on and on about the benefits of natural soap -- how it doesn't strip your skin of its natural oils to the fact that it is biodegradable -- but I won't.

Here's what you will need to make your own:

Supplies:

- 1. A good, heavy duty pot, stainless or enamel.** Under no circumstances use Teflon or aluminum pots!!!! Also, tall and narrow is better than low and wide. Stock pots work GREAT!!!!
- 2. A decent scale that rounds to the 10th ounce.** A food scale is good enough to start, but if you plan on making soap for any length of time, I suggest getting a decent postal scale.
- 3. Heavy duty plastic or silicone spoon.** Stainless can also be used. Shy away from wood, they tend to splinter from the lye after a couple uses. I've discovered that the silicone spoons, while a little more expensive up front, are much more versatile and last forever!!!
- 4. Heat resistant glass or plastic pitcher to mix lye water in.** I use a 2-quart Pyrex measuring cup, but I have also used a plastic pitcher.
- 5. Safety equipment.** Minimum rubber gloves and safety glasses, and having vinegar close by in case of spills is a good idea.
- 6. Stick blender.** While not a necessity, it really speeds up the process. What used to take hours of hand stirring now can be done in less than 10 minutes with a stick blender,

and you will have less chance of separation. The texture of stick-blended soaps are also much finer than hand stirred soaps.

7. Some sort of mold. Almost anything can be used as a mold, from a shoebox to a plastic Rubbermaid container. Be sure to line your mold.

I use freezer paper, but you can use trash bags or plastic wrap. For your first batch use a shoebox and a trash bag. Just stick the shoebox in the trash bag, pat down, and viola!!!

Ingredients:

Lye. Make sure you look at the label and it is 100% sodium hydroxide. Lowe's carries Roebic brand, and can be found with the plumbing fixtures. It runs about \$8 for 2 lbs. You can get lye cheaper online (websites to follow), but for beginners, this works well. Other plumbing supply places also carry lye. Don't be surprised if they look at you funny if you want a large amount. Lye is used in the production of methamphetamine and that's why it's a little harder to come by than it used to be.

Now, don't be afraid of lye, but do respect it. This is the one ingredient you need to not get nonchalant about.

Some sort of fat/oil. Any fat or oil can be used to make soap. I even found a website where a bunch of college guys did an experiment to find out if they could bathe with bacon fat. Sure enough, they made soap with bacon drippings. Not so far off, considering that's what the pioneers used to make their soap.

Some suggestions: Olive oil (use the cheapest you can find. This is the one time that extra virgin olive oil is NOT the best), Crisco, vegetable oil, canola, safflower, lard, coconut oil. Different oils lend different properties to your soap, depending on the kind of fatty acids that they have. The recipe I am posting is basic, but if you dive into soapmaking, you would want to do some research on your own on what oils will make good soap. My one suggestion? Always use coconut oil. Coconut oil has the highest concentration of lauric acid, which is responsible for fluffy lather.

Distilled water. I used distilled because it minimized minerals in the soap. It's a personal preference, really.

Optional, some sort of fragrance. Here's the thing with fragrances. There are two basic kinds, essential oils and fragrance oils.

Essential oils are oils that are distilled directly from the plant. The positive of EO's is that it is 100% natural, if that's what you are going for. The negatives are they are very expensive (some, like sandalwood, can go for \$60 per ounce) and there is a limit to the number of fragrances you can get. Now, fragrance oils are man-

made oils, similar to perfumes. The positives for FO's are they are usually pretty inexpensive (comparatively), and the possibilities for variety are endless. The negative is that they are not natural. I use both kinds in my soaps.

Optional, some sort of colorant. Nothing wrong with a good white bar of soap, but if you want some variety, here are some natural ideas:

Brown: Cocoa or cinnamon

Yellow: Tumeric

Peachy/Yellow: Curry Powder

Peach: Paprika

Another option: You can also use oxides, most of which are available online. I've also heard of people using crayons, but I've never done this.

Instructions:

Okay, here we go. I've located a pretty easy recipe using only three kinds of oils. This is a great recipe to get your feet wet. As you get more experienced, you can start developing your own style of soap. This recipe will make approximately 3 lbs. of soap.

Coconut oil: 12 oz

Canola oil: 18.5 oz

Olive oil: 13 oz

Lye: 6.1 oz

Water: 12 oz

1. Measure out your water and lye (in separate containers), then pour the lye into COLD water. NEVER EVER EVER pour water into lye, and NEVER use hot water. Stir until clear. Now, there will be fumes coming off the liquid and these fumes you don't want to inhale. They only last for 30 seconds or so, but can be nasty. I usually stir at arm's length, or you can use your stove's exhaust fan.

Believe me, your lungs will let you know right away if you've inhaled anything.

You will also notice that the liquid has gotten quite hot. This is normal. Set aside to cool. I usually let it cool until the side of the glass is just warm to touch, usually about an hour.

2. Measure out your coconut oil into your pot, then put on the stove to melt. While those are melting, measure your liquid oils then pour into the melted coconut after removing from heat. The liquid oils should cool the coconut oil enough so that the oils are cool enough to be combined. You don't want it to be too hot or too cool. I use 'warm to the touch' as a good measurement. Other soapmakers use precise temperatures, and so did I to start, but I discovered that it was easier just to go by touch.

3. Now, carefully, pour your lye water into your melted oils, stirring constantly. I use my stick blender to stir, then turn it on to pulse. Make sure you don't get air incorporated into your soap, best to keep the stick blender deep in the pot while on, then turn it on and use it as a spoon. This is where tall and skinny pots are better than low and wide. Also, tall, skinny pots don't dissipate heat as quickly.

Just keep mixing until you get to 'trace'. Trace is a term soapmakers use to describe the point at which the soap is done enough to pour. Remember, making soap is a chemical reaction, and the catalysts for this reaction are heat and agitation. Not enough agitation and you WILL get separation, and separation is an ugly thing. So, don't pour too soon.

Trace simply means that the soap leaves 'tracings' or trailings on the top if you drip some soap onto itself, and has the texture of thick gravy or thin pudding. You also want to beware of 'false trace'. This can occur because of the stick blender incorporating air or loss of heat. If you think you are getting close to trace, turn off the stick blender and mix for a few seconds to see if it thins down. If it doesn't you have trace.

4. Now is the time to incorporate your fragrance and colors. Make sure you mix your fragrance in well, you don't want pockets of oil in your soap. In general, you should use about .5 oz per pound of soap. This batch is 3 lbs, so you would use app 1.5 oz of fragrance. This is not set in stone, it is just rough to give you an idea. You will have to experiment and research on your own when it comes to fragrance.

5. Next, pour into your prepared mold. Don't worry about getting fancy on your first batch. I've seen so many newbies get all gung-ho for making soap, gone out and purchased hundreds of dollars in molds, oils, and such, then ended up not liking it. Go as cheap as possible. You aren't going to be wanting to sell your first batch (or even your 20th), so just go for the experience, pretty can come later.

6. Now, for the waiting. Cover your mold with something, then wrap it in old towels or an old blanket and CAREFULLY set it somewhere warm and where it won't be hit. This is the final stage, where it goes from being a oily caustic mess to becoming wonderful, gentle soap.

Don't freak out if you peek in an hour and the your soap looks like it's turned into Jello or something that looks like a monster from a 50's B horror film. That's normal. It's called 'Gel' phase.

What's happening is when you pour your soap, it is only about 75% saponified (that's the fancy word for 'turning into soap'). The other 25% happens magically overnight. The chemical reaction continues, heat is generated, and your soap turns into almost a gel. Don't worry, it will cool off and get hard. Let sit in the mold for 18 – 24 hours.

7. Unmold and cut into bars. Generally, soap can be used right out of the mold. It is, however, very soft because it still has a high amount of water in it. To get

it hard, you need to cure it, meaning, put it on a shelf in a cool, dry place and forget about it for anywhere from 2 to 6 weeks.

Here are some helpful tips:

* I always set my soap pot and utensils aside and let them sit for a day. It's a lot easier to clean soft soap out of them the next day than the oily caustic mess they are now.

* Don't bother segregating your soapmaking stuff from the rest of your utensils. I've heard of people that have their soap spoons and then the rest of their spoons, their soap making pot, and the rest of their pots. It's just soap, for goodness sake!!!! As long as you wash it well, it's not going to hurt you.

Keep it simple to start. Don't bother with fancy oils or ingredients, most of their properties get eaten away by the lye, anyway, so why spend the money?

Use care when using this soap on babies. While CP soap is gentle on the skin, it can be hard on the eyes.

If you decide soapmaking is for you, there are a lot of resources out there to help you expand on what I've told you.

Online:

www.millersoap.com This website is the most comprehensive on the net for recipes, how-tos, wherefores, and art thous. Kathy Miller is known as the Fairy Godmother of soapmakers for a good reason. This is the first place I recommend newbies go to get info.

www.futureventuresonline.com/soapsheet.html#top Where to download the soap recipe Excel template. This is a great tool for figuring out how much lye and water to use, and has tabs that let you scale your recipe (halve it or double it), or a tab that will allow you to enter your mold size and it will automatically calculate how much of everything you need. I save all my recipes on my computer this way.

www.soapcalc.com An online soap calculator, if you don't want to download the one above.

www.wholesalesuppliesplus.com One stop shopping for soap and candle makers. Has everything from base oils to jars, to product bases you can just add fragrance to. They are out of Cleveland, and their customer service is the best.

www.the-sage.com Another online supplier, out of Utah. They also have recipes on this site, and a soap calculator.

www.saveonscents.com Where I get most of my fragrances. Great prices and I have never been disappointed on the quality of their oils. They are based in Brooklyn, but you would never know it from their wonderful customer service.

www.soaperschoice.com Great prices on bulk oils. Out of Chicago.

Numerous Yahoo groups. I am a member of several, and this is a great place to have your questions answered. Here are a couple:

groups.yahoo.com/group/internationalsoapchandlers/
groups.yahoo.com/group/soap_makers/

www.barsbybellini.com Okay, can't forget mine. If you decide you love handmade products, but don't really want to bother with making them yourself, you are always welcome to buy some of mine.

blacktable.com/bacon030515.htm How a college guy makes soap from bacon drippings. Warning: Funny, but kind of crude, adult language used here.

Books: Generally, I don't bother with books, because there's so much information online I figure why bother to pay for what I can get for free. However, there is one book that I do recommend. The Soapmaker's Companion by Susan Miller Cavitch. It is a wealth of information on all kinds of soapmaking, from fancy face soap to laundry soap. Also has a lot of info about different oils and their properties, and different soapmaking techniques.

There is obviously a lot more to soapmaking than the basics I've spelled out here. I didn't even touch on things like superfatting or water discounts, not to mention adding things like goat's milk or honey, swirling, layering and other advanced techniques. That will come in time, Grasshopper. You must walk before you can run.