



# BASIC COLD PROCESS SOAP MAKING GUIDE



BY AMANDA AARON

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I started making soap in 2008. I was a craft junky. Knitting, jewelry making, paper crafting and painting...I tried them all. One day while browsing in the local craft store I noticed the soapmaking and candle aisle. I bought all the supplies needed to make melt and pour soap, went home, made soap and was hooked! I soon started researching different soapmaking methods and ingredients and decided that cold process soap was what I wanted to try next. I realized the skin benefits of using a more natural soap and my house soon filled with lavender soap, oatmeal soap, pumpkin soap and one of my favorites to make...coffee scrub soap. Then I got more into the design and aesthetics of soapmaking - creating fabulous swirls and pieces of art using brightly colored micas and techniques modified from paper marbling and painting. Soap was my art medium.

No matter your reason for jumping into the craft of soapmaking, one thing is for certain...your skin will thank you. What we put ONTO our bodies is just as important as what we put INTO our bodies. When you make your own soap you are able to control what you put onto your body by choosing skin loving oils and butters such as olive oil and shea butter,

beneficial additives such as herbs and clays and natural essential oils such as lavender and tea tree that you can mix and combine to create powerful aromas.

Many people with skin conditions, such as eczema, or other sensitivities do well when using gently formulated handmade soap. Many soap makers begin their soapmaking journey to help relieve their skin condition or a family member's skin condition.

Soapmaking is a bit like baking. Just as every baker has their own recipe, technique and design for making a chocolate cake, every soap maker has their own way of whipping up a batch of soap. Although this book provides you with my technique and process, I encourage you to read other books and learn other techniques and methods. You'll soon find your own rhythm and create a process all your own.

Always remember to make safety a top priority no matter what method you use. Before you make your first batch of soap, I recommend that you read this book from front to back to get an overall view of the process. I hope that this book serves you as a guide as you begin your journey into soapmaking.

# Happy Soaping!

*Amanda*

Along with beer making and prostitution, soapmaking is one of the oldest industries in the world. And because of this, the beginnings are a bit speculated. There have been ancient recipes and descriptions of soapmaking found throughout early civilizations.

The earliest evidence of soapmaking dates back to 2200 B.C. A Mesopotamian clay tablet from that time was found and had a primitive soap recipe and directions inscribed on it. The formula consisted of cassia oil, potash (lye from hard wood ash) and water.

There are records of Babylonians making soap for a living. Wealthy Babylonians would have servants who rubbed their body with soap made of animal fats, water and ashes. The servants would then pour water from jars to rinse them off.

The more common (and fictional) legend of soapmaking's beginnings is from around 1000 B.C. in Rome. There are many variations. Animal sacrifices were made on Mount Sapo (a fictional hill). Fats from the burnt animals would mix with ash and somehow made it down into the Tiber River clay (with the help of rain, perhaps) where clothes were being washed. It was quickly realized that clothes washed at this spot were getting cleaner and the connection was made between the fat, ashes and water.

Prior to the modern soapmaking of today, soapmaking in the 1800's and early 1900's was a utilitarian household chore. It was standard for families to make soap to both bathe with and to use for household cleaning. Soap was traditionally made by boiling together lard, rendered and cleaned from butchered animals or from grease drippings collected throughout the year, and homemade lye (liquid potash) which was made from pouring water over ashes and collecting the brown liquid that was leached out.

This didn't make a hard soap like we have today; it made a soft or gel-like soap. The soft soap was stored in a barrel or other container and scooped out for use. The soft soap was made into a hard soap by adding salt and boiling it down.

**"Lye soap! That'll scrub your hide clean off!"**

It was difficult to determine the strength of the homemade lye and soap would sometimes come out "lye heavy". Often described as harsh or biting, many people remember this type of soap when they think of homemade lye soap. Nowadays we are able to accurately calculate the amount of lye needed to saponify an oil or mix of oils. We make soap that is superfated which means there is a bit of oil left unsaponified to give our soap conditioning properties.

## WHAT IS SOAP?

Soap is an emulsifier and surfactant. You've probably heard of the term emulsifier. An emulsifier is a substance that creates an environment in which water and oil can mix.

Soap cleans your skin by emulsifying oil and water together. This emulsion suspends and lifts dirt and grime. The emulsified mixture is then rinsed off, leaving behind squeaky-clean skin.

In soapmaking, a combination of base oils, such as coconut oil, olive oil and avocado oil, is mixed with a lye solution. The chemical reaction, which then takes place, is called saponification. After saponification, we are left with completely new substance, soap!

Soap is made up of the salts of fatty acids, natural glycerin and, because we superfat our soap, a bit of unsaponified oils which give our soap emollient and conditioning properties. There is no lye left in the finished soap.

If you want to delve more into the chemistry of soapmaking, I highly recommend reading Kevin Dunn's book, *Scientific Soapmaking*.



# EQUIPMENT & TOOLS

You don't need a bunch of specialty equipment when just starting out. You might even have some of these items available in your home. Some of the items can even be picked up at garage sales or thrift stores if you want to save a few bucks.

Keep your utensils and containers that are used for soapmaking separate from those that you use to cook with. Most people believe this is because of the sodium hydroxide; it has actually more to do with fragrance and essential oils that you use. You don't want your mac and cheese tasting like patchouli and orange essential oil.



**Digital Scale** – Most ingredients for making soap, especially the oils and lye, need to be weighed using a scale. I recommend getting a digital scale that plugs into the wall. One run with batteries only can be unreliable once the batteries start running low. You want a scale that has options for both grams and ounces. Make sure it has a tare button to zero out the weight of the measuring containers.



**Mixing Utensils** – Stick to spoons and spatulas made out of silicone, hard plastic or stainless steel. Although mixing soap with a big wooden spoon is a romantic notion, avoid wood as it can splinter over time when exposed to lye. You don't want splinters in your soap!



**Soap Mold** – Soap is fluid when poured. You will need something to hold it as it hardens overnight. There are many types of molds you can use for soaping ranging from more expensive wooden loaf and slab molds to inexpensive “found” molds including Pringles cans, yogurt cups and shoeboxes. My favorite mold is a 10” silicone loaf molds from Bramble Berry. But if you are just starting, you can line any type of box with freezer paper.



**Containers for Making Your Lye Solution** - I recommend using only stainless steel or heavy duty plastic. Paint mixing plastic containers from the hardware store work great.

**WARNING:** Do not mix your lye solution in a glass container. Even though Pyrex is known for never shattering, I've heard stories of soapers who have had containers shatter over the years, due to lye etching the glass and causing weak spots. I would stay away from Pyrex or any glass for making your lye solution.



**Containers for Weighing out Oils and Mixing Soap** - I recommend using a stainless steel pot, a large glass measuring bowl, a bucket or heavy duty paint mixing containers.

**WARNING:** Do not use aluminum containers or utensils. Sodium hydroxide reacts with aluminum, creating hydrogen gas, so make sure that the only metal you use is stainless steel.

# BASE OILS & BUTTERS

Different oils give soap different properties once saponified. Some oils create soft soap; some create hard soap. Some create a soap that is mild and conditioning and some create a soap that can be drying (stripping too much natural oil from the skin). It is important to use a mixture of oils to balance out the properties of your finished soap.

Base oils and butters can be found locally but I recommend purchasing from soap suppliers to save money. Refer to the supplier list for supplier suggestions.

Soapmaking oils and butters are comprised of a blend of fatty acids. These different fatty acids create soap with unique characteristics and varying degrees of lather, hardness, shelf-life...etc. Here are some common fatty acids and the oils in-which they are found in high percentages.

You don't need to memorize all of this or even really understand it at the moment! As you make more soap and start formulating your own recipes, that's when you'll need to fully understand fatty acid profiles. If you'd like to get a jump start on creating your own recipe, I highly recommend my [Formulating eCourse!](#)

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## Lauric Acid & Myristic Acid

Oils high in lauric & myristic acid create a soap with a long shelf-life and abundant (but fleeting) lather. These soaps tend to strip oil from the skin, and when used in high amounts, create a soap that leaves your skin feeling tight and dry.

Oils include: Coconut Oil, Palm Kernel Oil and Babassu Oil

## Palmitic Acid

Oils high in palmitic acid create a soap with a long shelf-life and a stabilizing-creamy lather. These soaps tend to be medium cleansing, neither stripping the skin or leaving it too oily after use. Palmitic soaps are hard and full-bodied soaps that last a long time in the shower.

-Primary oils include Palm Oil.

-Secondary oils where palmitic acid makes up the second highest percentage in the oil's fatty acid profile include Tallow, Lard, Avocado Oil, Emu Oil, Neem Oil and Rice Bran Oil.

### Stearic Acid

Oils high in stearic acid create a soap with a stable shelf-life and low-creamy lather. Stearic soaps are mildly cleansing and gentle on the skin. They create hard and full-bodied soaps that last a long time in the shower.

-Primary oils include Sal Butter and Cocoa Butter. -Secondary oils where stearic acid makes up the second highest percentage in the oil's fatty acid profile include Shea Butter, Cocoa Butter and Mango Butter.

### Ricinoleic Acid

Ricinoleic acid is unique in that only one oil contains a high percentage. Castor oil contains 90% ricinoleic acid and on its own creates a soap with almost no lather. Castor oil has solvent properties and when mixed with other oils, creates a soap that more easily dissolves, which increases the lathering ability of the soap.

-The only oil containing ricinoleic acid is castor oil

### Oleic Acid

Oleic acid creates soaps with a medium to long shelf-life and low to medium lather. The lather created is conditioning and moisturizing. Most the oils available to soapmakers are high in oleic acid or at least contain some oleic acid.

-Primary oils containing oleic acid include Shea Butter, Cocoa Butter, Mango Butter, Lard, Tallow, Avocado Oil, Emu Oil, Rice Bran Oil, Canola Oil, Sweet Almond Oil, Apricot Kernel Oil, Olive Oil, High Oleic Sunflower Oil, High Oleic Safflower Oil, Jojoba Oil and Macadamia Nut Oil.

### Linoleic Acid & Linolenic Acid

Oils high in linoleic acid and linolenic acid have a short shelf life and should be used in small percentages in your recipe or your soap could develop rancidity. These oils contribute to a conditioning lather and a silky feeling in soap.

-Primary oils include Soybean Oil, Cotton Seed Oil, Grapeseed Oil, Sunflower Oil, Safflower Oil, Canola Oil and Hemp Seed Oil.

# SODIUM HYDROXIDE (LYE)



It wouldn't be a "lye" if I told you that ALL soap is made with sodium hydroxide. You can occasionally find this at your local hardware store. Just make sure you are getting 100% sodium hydroxide. But to be extra careful and save money, I recommend purchasing it from a supplier. Sodium hydroxide is a highly corrosive substance and safety precaution must be followed when using it. We'll go over safety in just a bit.

## Where does sodium hydroxide come from?

Sodium hydroxide (along with chlorine stemmed from the same process) is the result of a salt solution (sodium chloride in water) processed by electrolysis. Salt deposits are found all over the world, some of the most pure deposits are found underground. The salt is mixed with water and pumped from the earth as salt brine. It is then put through the process of electrolysis to make sodium hydroxide and chlorine. Electrolysis is basically a method of passing an electric current through a liquid or solution.



# LYE SAFETY!



Sodium hydroxide is a highly caustic chemical. Contact with skin and eyes can cause severe irritation, burns and blindness.

When handling lye, you must wear safety goggles to protect your eyes and gloves to protect your hands. One splash of lye solution into your eye can permanently damage your eyesight.

Always make sure your environment is free from distractions including pets, children and other family members.



When making your lye solution, always add your lye to the water- NEVER add your water to the lye or a volcanic eruption can occur. One way to remember this is to say to yourself, 'snow falls on the lake, lye falls on the water'. Make sure you mix your lye in a well-ventilated area as it does let off fumes when first mixed with water.

**An Important Note on Vinegar** - If you've done some research on soapmaking you have heard or come across that vinegar is often used to neutralize lye. Though this is true, you never want to use vinegar on your body to neutralize lye solution you might have splashed on yourself. This is because vinegar neutralizes lye by "flashing it out" and can cause an even greater burn by doing so on your skin. If lye has gotten onto your skin, simply rinse off with cold water. If lye has gotten into your eye, rinse with water and contact poison control or go ahead and get to the emergency room. Lye can permanently damage your eye causing blindness. No matter how comfortable you become with soaping, always wear proper eye protection. It only takes one splash to damage your eyesight forever. If you spill lye on the counter or floor you can spray with a vinegar solution to neutralize and wipe up with a paper towel.



**Bottom line:** If you get lye on your skin, flush with water. If you get lye on a surface, neutralize with vinegar and rinse/wipe up with water.

Keep a copy of an MSDS for sodium hydroxide (your supplier can provide one) nearby and the number to poison control written on it. An accident probably won't happen...but if it does...you'll be ready. Make sure all of your family members (adults and kids) understand the danger of sodium hydroxide and what it can do. Clearly mark all containers that will hold your lye solution so no one wondering through the kitchen on soaping day confuses it for a beverage. Again...not likely...but anything is possible

# SCENTING YOUR SOAP: ESSENTIAL OILS AND FRAGRANCE OILS!

Working with scents and aromas is a powerful thing. Scents can evoke memories and emotions in a person and that is truly part of the magic of soapmaking. As soapmakers, the scents we choose for our soap reflect emotions, memories, places and so many other things. We're inspired to make soap scented with a mix of essential oils that makes us think of a perfume our grandmother used to wear, a garden we used to play in as a child or maybe a mix of spicy oils that remind us of our mother's kitchen around the holidays. And when someone else, even a complete stranger, holds that bar of soap to their nose and takes in the aroma they will have their own reflection, journey back in time or memory conjured up. And that is a powerful thing.

Both fragrance oils and essential oils are used to scent soap.

## Fragrance Oils

Fragrance oils are synthetic aromatic oils that are produced in a lab. They are usually made up completely from synthetic components or a mix of synthetic components and natural essential oils. Fragrance oil producers and perfumers are unlimited as to what aromas they can mimic and you'll find aromas that reflect those naturally found such as lavender, peppermint, orange and more unique ones such as hot fudge sundae, leather, cherry and even puppy's breath!

### Usage in soap:

Fragrance oils can typically be added to soap at .5 - 1 ounce per pound of oils. Refer to the supplier's guideline and recommended usage rates. If the supplier doesn't have one, then I would start at .75 ounce per pound of oils and go up or down from there. Most reputable suppliers will be able to recommend usage rates and also will be able to tell you how the fragrance oil reacts in the high pH environment of soap.

**There are some considerations when working with fragrance oils.**

**Discoloration:** Some fragrance oils can discolor soap. Vanilla or anything with vanilla can turn your soap various shades of tan and brown. If you choose any bakery type of scent that might contain vanilla, be sure you keep that in mind when choosing your colorants. A green colored soap scented with vanilla turns out to be an ugly murky green tinted tan. There are vanilla color stabilizers on the market but most are not stable past a certain number of months and the soap will turn anyways.

**Acceleration:** Some fragrances can cause your soap to move fast, get thick quickly or even seize (totally harden up in the pot). Floral and spice fragrances are notorious for acceleration. Adding these types of fragrances to the oils before adding your lye solution can sometimes help with this issue and give you more time to work with fast moving fragrances.

**Overheating:** Some fragrance oils can cause your soap to heat up and sometimes overheat causing your soap to crack or even mushroom out of the mold. Just like acceleration, these are typically your floral and spice fragrances but can also be random fragrances that come out of nowhere. If you are working with a fragrance oil that makes your soap hot, be sure you soap at cooler temps, don't insulate your mold and you can even put your soap in front of a fan or in the fridge or freezer to keep the temps down.

It's best to purchase fragrance oils from a supplier that tests their fragrance oils to ensure they work with cold process soap. Not all fragrance oils are created equal. You also want to make sure the fragrance oils you purchase are *cosmetic grade and body safe*. You will run across fragrance oils that are created for use in candles or even some that are mixed with DPG (Dipropylene Glycol) for use in oil burners. Don't use these in soap.

## Essential Oils

Essential oils are oils extracted from part or the whole of a plant by distillation or expression. Some common essential oils available to soapmakers are peppermint, lavender, tea tree, orange, patchouli, basil, lemongrass, litsea, anise, plus many more. Essential oils also have therapeutic qualities and just like perfumers, soapmakers mix them together to create synergistic blends especially good for aromatherapy. Essential oils are considered a more natural way to fragrance soap.

The topic of essential oils is too great and important of a topic for me to discuss in a basic soapmaking book. If you'd like to use them, I really encourage some further reading on the topic to learn their properties, uses and contraindications. There are several wonderful essential oil books out there. I highly recommend books by Robert Tisserand ([www.roberttisserand.com](http://www.roberttisserand.com)) or Kayla Fioravanti ([www.kaylafioravanti.com](http://www.kaylafioravanti.com)).

**Usage in soap:** Single essential oils or essential oils blends can typically be added to soap at .5-.75 ounces per pound of base oils. However, there are some exceptions. Oils that can be skin sensitizers, such as cinnamon, clove, nutmeg and other spices, should be used in tiny amounts, if at all.

I recommend using the Essential Oil Calculator, [eocalc.com](http://eocalc.com), to determine safe usage amounts in your soap.

If you are new to soapmaking, here are some suggestions for essential oils to start with and blends to use in your soap.

**Lavender** – I love lavender in soap. Lavender is balancing, relaxing and if you sell soap, your customers will be asking for it. It blends with so many other essential oils and sticks well even on its own.

**Peppermint** – Peppermint is another oil that is great on its own or blends well with other oils. Peppermint is great for all year round but is especially popular during the holidays. I also like an essential oil called cornmint (wild mint). It is similar to peppermint but is sweeter to my nose. I always have either peppermint or cornmint in my arsenal of EO's.

**Folded Orange Essential Oil** – Who doesn't like the smell of fresh squeezed oranges? Folded citrus oils seem to have more lasting power in soap.

**Litsea Cubeba** – Litsea (also known as May Chang) is my personal favorite essential oil. It is lemon smelling, bright and uplifting. It gives my soap that citrus smell without disappearing as quickly as some other citrus oils. It comes from an evergreen tree.

**Tea Tree** – Tea tree is one of the most useful essential oils out there. I use it on scrapes and bites and other skin issues. Tea tree is anti-bacterial and makes for a great acne soap. It blends well with many other essential oils.

**Lemongrass** – Lemongrass is bright, refreshing, stimulating and great as a natural insect repellent. I love 100% lemongrass soap but it blends nicely with other oils.

**Patchouli** – I know, I know. Patchouli is one of those oils that you either LOVE or HATE. With a passion. It is earthy and heavy, rich and dark. If you get patchouli, get aged patchouli. Patchouli is one of those oils that gets better with time. Put 4 oz. into a dark amber jar and hide it somewhere in your house. Find it in a few years. Even if you don't like patchouli on its own, it is a must have for blending. It anchors and creates depth and drama.

If you'd like more essential oil blend ideas for your cold process soap, check out our eBook *Essential Oil Blends for Handcrafted Soap!*

# COLORING YOUR SOAP: A RAINBOW OF CHOICES!

You don't have to add color to your soap; and if you're completely new, I recommend you make your first batch without color. But when you're ready...there are many types of soap colorants you can use to color your cold process soap. Here are some of the more widely used types.



**Mineral Pigments (Oxides and Ultramarines)** - Once commonly mined from the earth, mineral pigments are now usually lab created to insure stability in production and purity. Mined material would sometimes contain lead, mercury or other harmful components. These lab created materials are considered “nature identical” which means that their chemical makeup is the same as how they occur in nature.

Pigments color soap by suspension of their tiny particles throughout the soap mixture. Pigments are stable in high pH mixtures and tend to stay true to their color in CP or HP soap. Start with a quarter of a teaspoon per pound of oil and go up from there to get the desired color you are looking for. Mixing can sometimes be tricky; I recommend mixing the dry pigment with a teaspoon or more of oil or liquid glycerin. If it is clumpy, simply break up the clumps with a pop sickle stick or spoon. Use your stick blender to mix into your soap. Mixing by hand doesn't work well with mineral pigments.



**Mica** - Mica is what gives cosmetics, paint and other products sparkle. Mica comes in tiny flakes – the bigger the flakes the more surface area for light to reflect, the mores sparkly it will be. Mica (which is naturally gray/cream) is colored using mineral pigment or dye coatings. Micas can be hit or miss in the high pH of soap so make sure the micas that you buy are cold process soap stable. Micas colored using dyes can bleed or migrate in your soap. I recommend using 1 teaspoon per pound of oil and go up from there depending on how brightly colored you want your soap. Mica mixes in easily by hand.



**Cosmetic Pigments (Neons & Brights)** - Cosmetic pigments are a category of colorants that are blends of FD&C/D&C dyes, sometimes, mineral pigments, and plastic coatings (copolymer). These are typically neons and ultra-bright colorants.

The plastic coating does three things:

- It makes the colorant solvent resistant. This means that it can be used in nail polish, which is quite popular these days.
- It makes it heat resistant. So, if your soap goes through gel phase, it won't affect the colorant.
- It makes it non-bleeding and non-morphing. Dyes are notorious for bleeding and for morphing in the high pH environment of cold process soap. By coating the dyes with copolymer, they do not bleed or morph.



I recommend using 1 teaspoon per pound of oil and go up from there depending on how brightly colored you want your soap. Cosmetic pigments do not mix into soap easily by hand so mix with oil first, and then mix into your soap using a stick blender.

**Dye & Lakes** - Dyes (FD&C or D&C) and lakes (dye + metallic salt) can be used to color soap. These are personally my least favorite type of colorant to use because they tend to bleed and morph in cold process soap. You don't want to make a beautiful purple soap and then wake up to a green soap. If you do go with dyes or lakes, be sure the supplier states that they are okay to use in the high pH of cold process soap. Follow their usage rates as various products contain different dye loads.



**Natural Colors** - Herbs, spices, charcoal and cosmetic clay make wonderful natural soap colorants. Not only do you get color, but also many have wonderful properties that they lend your soap. Here are some color ideas:

*Purple/Pink/Red/Mauve* - Alkanet Root, Madder Root, Yellow Dock Root, Rattanjot, Rose Clay

*Purple/Blue* - Indigo, Woad, Alkanet

*Yellow/Orange/Peach* - Turmeric, Annatto Seed, Paprika, Orange Peel Powder, Yarrow Powder, Ginger Powder, Orange Clay

*Brown/Tan* - Cocoa, Rosehip Powder, Black Walnut Powder, Cinnamon, Chamomile Powder, Stevia Leaf Powder, Witch Hazel Powder, Kelp Powder

*Green* - Nettle, Spirulina, Parsley, Comfrey Root, Spinach Powder, Rosemary, French Green Clay

*Black/Gray* - Charcoal

# THE BASIC PROCESS: COLD PROCESS SOAP

**USING A SCALE:** Accurate weighing of lye, oils and water is necessary for consistent and successful soapmaking. If you've never used a scale before, practice weighing ingredients using the directions that came with your scale. Place a container on the scale. Hit tare. By hitting tare, you are zeroing out the weight of the container. You want to weigh only what you place into the container, not the container itself.

**CHOOSE ANY RECIPE FROM THE BASIC COLD PROCESS SOAP RECIPES!** I'm going to use My Favorite Soap Recipe in this example.



**Step 1: Weigh the water into a container.** Gear up in your goggles and gloves before you handle the lye. Do not attempt these steps until you have read the section on lye safety.

Place an empty water container on the scale and press tare. This will subtract the weight of the container and the scale should read zero. Weigh the water into your container. Remove from the scale and set aside.



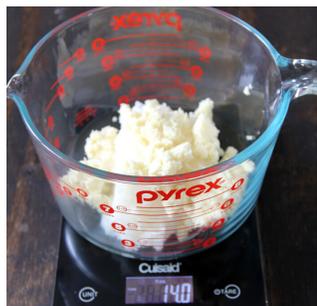
**Step 2: Weigh the lye into a container.** Place an empty container on the scale and press the tare button. Weigh the lye into your container.

You should have two containers; one with water and one with lye.

**Step 3: Mix the lye solution.** Pour the lye into the water while stirring. It is very important that you pour the lye into the water and not the water into the lye. If you were to pour the water onto the lye...a crust would form trapping vapors underneath and the mixture would explode out of your container. Remember snow falls on the lake...lye falls on the water.



Never use a glass container to mix the lye solution in, as it heats up quickly and can cause a glass container to shatter. Use either a stainless steel spoon or a silicone utensil to stir. Stir it...let it sit until it becomes clear (5-10 minutes) then stir again to make sure all of the lye is dissolved. It will fume...so stand back while stirring and stir in a well ventilated area



Now, we'll prepare our base oils.

**Step 4: Weigh the hard oils & butters and melt.** Hard oils are any oils that are solid at room temperature, such as coconut oil, palm oil, cocoa butter and shea butter. When doing small batches I like to measure out my hard oils into the container that I will be mixing in.

Set your container on the scale and press tare so that the scale reads zero. Weigh out your first solid oil. Press tare so that the scale says zero and measure out the next solid oil into the same container. Repeat for each solid oil.



Next we'll need to melt them. You can either use the microwave to melt the oils or if you're doing a big batch – melt the oils in a stainless steel pot on the stove. Use low-med heat. Melt the oils just until melted and not longer.

**Step 5 - Weigh the liquid oils.** You can either weigh out the liquid oils directly into the melted oils or you can measure them out into a separate container and then add to the melted oils. If you are new, I recommend measuring the liquid oils out into a separate container. Here, I'm simply going to measure the liquid oils into the melted oils.



Place your container of melted solid oils onto the scale and press tare so it reads zero. Weigh out the liquid oils pressing tare between each one.

**Step 6 - Add the essential oil to the melted oils.** You can either weigh the essential oil into a separate container or you can place the container of oils on the scale, tare the scale and add the correct amount of essential oil. Never measure essential or fragrance oils into plastic or Styrofoam as it can eat through the container.



**Step 7 - Add any colors and additives.** If you are making a single colored soap, you can add your color at this point. If you have additives to add, you can add here as well.



**Step 8 - Time to stickblend!** Gear up in your goggles and gloves if you took them off to prepare the oils.

Touch the outside of both the oil container and the lye container. They should feel warm but not hot. If they feel hot, then let them sit for a bit longer. I typically don't take temps but you certainly can and it's probably a good idea when just starting out. Aim for a temperature of 90-110°F for the oils and lye. If the lye is a bit cooler you shouldn't have any problems...you just don't want it too hot. They don't have to be the exact same temperature. As long as each is in range, you're good to go!

Pour the lye solution into the melted oils. Stir as you pour (you can use your stick blender turned off).

Submerge your stick blender into the soap mixture and pulse for about 5 seconds.

Turn off the stick blender and mix manually for about 5-10 seconds. Make sure you move your stick blender around and are pulling the mixture from the bottom of the container to the top. Repeat until you reach trace.

How do you know if you've reached trace? Let me show you on the next page!

# A VISUAL GUIDE TO TRACE

Trace is when your soap has emulsified and is thick enough to leave a mark on the soap surface when you drizzle raw soap from a spatula or stick blender while mixing. Getting your soap mixed to trace will ensure that it doesn't separate in the mold and that it becomes...soap!



The lye solution is added and stickblender turned on.



The soap is starting to emulsify. You can tell by the color starting to change. We know its not done yet because you can clearly see oil separated either floating on top or as streaks throughout the mixture. Keep mixing.



The soap is nice and emulsified. It is similar in color and there is no oil floating on top. You could probably pour this into the mold, but to be certain, mix until a clear trace has shown.



The soap has traced. You can visually see soap sit on the surface of the mixture when drizzled off a spatula or stick blender.



**Step 9 - Pour the soap into your mold.**

**Step 10 - Cleanup.** When you pour your soap into the mold make sure you use a silicone spatula to get out every bit of soap that you can from the container. If you have a bit left over, keep a small container like a yogurt cup or single cavity mold available for overflow. Never pour raw soap down the drain. Wipe all of the raw soap from containers and utensils then wash everything as usual with an oil cutting cleaner.



I know some people that use cloth towels to wipe everything down, leave them to sit until the next day and launder as usual once it's turned into soap. I've run into issues with this, as soap has oils left unsaponified. You don't want that oil buildup in your washer.

**Step 11 - Unmold your soap.** Most soap can be unmolded 24 hours after being poured. Soap that is high in soft oils might need an extra 24 hours to harden up enough to unmold and cut. Soap that is high in hard or brittle oils might be ready a bit sooner. If your soap went through gel phase then it might be ready to unmold sooner than soap that did not going through gel phase.

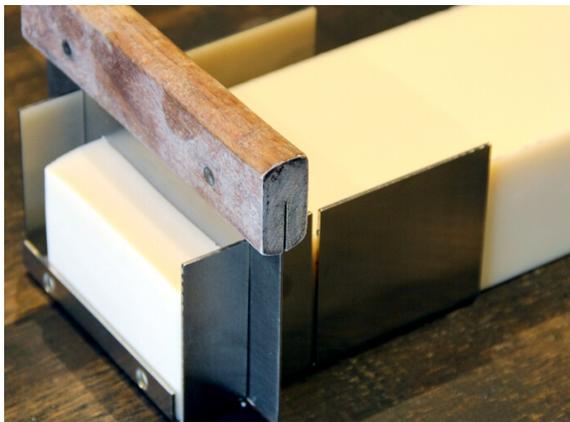


If you're using a silicone mold, gently pull the sides of the mold away from your soap and see if it is clean. If any soap is sticking, let it sit longer. You can also press on the soap a bit. It should be firm, like a firm cheddar cheese. If it is soft like butter, let it sit longer.

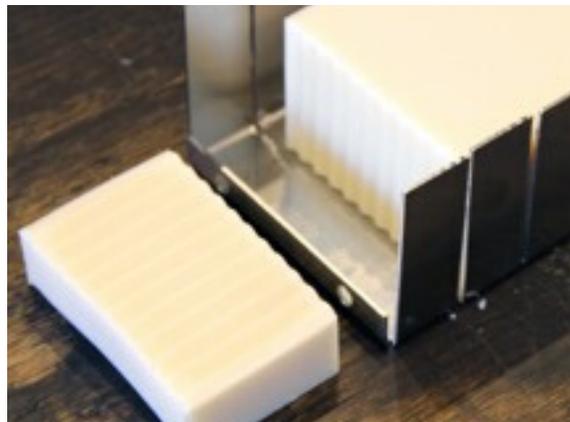
# CUTTING YOUR SOAP

Once unmolded, your soap can be cut. There is no right way or wrong way to cut soap. It is simply a matter of preference. You can cut it into chunks or bars. Try a couple of different shapes and widths and see what feels best in your hand. To cut soap you can use a stainless steel knife or my favorite tool, a pastry cutter.

There are also many cutters on the market that help with consistency and cutting even bars. Here are some examples of soap cutting tools.



A simple miter box with a straight pastry cutter can be used to make clean and smooth cuts.



A miter box with a vegetable crinkle/wavy cutter can be used for unique wavy cuts.



This is a multi-bar cutter that uses guitar strings to cut a whole loaf of soap with one swoop. These are bit more expensive but are great for getting consistent and perfect cuts of soap.



The cut soap!

# CURING AND STORING YOUR SOAP

Cold process soap needs to cure 4-6 weeks. During the cure time, water evaporates making your soap harder and longer lasting in the shower. Also during this time, the last bit of saponification takes place making your soap less harsh and much nicer to use.

Soap is best cured in a cool dry area with plenty of air circulation. Line up the soap in rows making sure that the bars are not touching. If your curing rack is metal, make sure it is stainless steel and not aluminum as there can be a tiny amount of active lye upon cutting.



## CONGRATULATIONS! YOU'VE MADE SOAP! WHAT'S NEXT?

# BASIC COLD PROCESS SOAP VIDEO SERIES!

Now that you've *read* about the process, it can be really helpful to *watch* a video of the process! You can even soap along with me...pausing and playing the videos as you go! I'm a visual person and video really helps me learn!

**Grab Basic Soapmaking Mini Course  
for only \$7! (Regular price is \$49)**



**SIGN UP!**

**This offer is only available for a limited time!**

# BASIC COLD PROCESS SOAP RECIPES!

These are some of my favorite recipes to get you started!

## Basic Body Bar

This soap recipe is a great recipe for beginners. It has a wonderful mix of oils that create a bar that is hard, bubbly and emollient. This is pretty much my go-to recipe when making soap for family, friends and myself. It is also the recipe I use in most of my soapmaking classes.

### **Base Oils & Scent**

- Coconut Oil - 306 grams (34%)
- Olive Oil - 306 grams (34%)
- Avocado Oil - 72 grams (8%)
- Rice Bran Oil - 126 grams (14%)
- Shea Butter - 90 grams (10%)
- Fragrance - 30 grams

### **Lye Solution**

- Lye - 127 grams
- Water - 254 grams

## Basic Body Bar - More

### Bubbles

This bar contains a higher amount of coconut oil, which will produce more bubbles than the basic body bar.

### **Base Oils & Scent**

- Coconut Oil - 342 grams (38%)
- Olive Oil - 270 grams (30%)
- Avocado Oil - 72 grams (8%)
- Rice Bran Oil - 126 grams (14%)
- Shea Butter - 90 grams (10%)

### **Lye Solution**

- Lye - 129 grams
- Water - 258 grams

# BASIC COLD PROCESS SOAP RECIPES!

## Basic Body Bar - More

### Moisture

This bar contains a higher amount of olive oil, which makes the bar less stripping of your skin's natural oils. It will not have as much lather as the previous two bars but will be gentler.

### **Base Oils & Scent**

- Coconut Oil - 270 grams (30%)
- Olive Oil - 342 grams (38%)
- Avocado Oil - 72 grams (8%)
- Rice Bran Oil - 126 grams (14%)
- Shea Butter - 90 grams (10%)

### **Lye Solution**

- Lye - 126 grams
- Water - 252 grams

## Basic Body Bar - Trifecta

This is a classic formula for creating a wonderful bar of soap. I'll provide it for both lard/tallow and palm oil.

### Lard or Tallow Soap

#### **Base Oils & Scent**

- Coconut Oil - 297 grams (33%)
- Olive Oil - 306 grams (34%)
- Lard or Tallow - 297 grams (33%)

#### **Lye Solution**

- Lye - 130 grams
- Water - 260 grams

### Palm Oil Soap

#### **Base Oils & Scent**

- Coconut Oil - 297 grams (33%)
- Olive Oil - 306 grams (34%)
- Palm Oil - 297 grams (33%)

#### **Lye Solution**

- Lye - 131grams
- Water - 262 grams