

Cosmetics and Beauty products

The high oil content of the avocado fruit (*Persea Americana* Mill.) has been known since Mesoamerican culture that flourished in central Mexico in the post classic period of 1300 to 1521, where the avocado fruit is known as "vegetable butter" or "butter pear." The plant origin is in Central America, and its cultivation has spread to warm subtropical and temperate climates worldwide. Avocado fruit contain up to 30% oil compared to its fresh fruit weight, with very little oil in the seed < 2% and the skin with <7%. Avocado oil is extracted for cosmetic use because of its very high skin penetration and rapid absorption. Flesh avocado contain 65% water. Avocado oil for cosmetics and edible are traditionally extracted differently, with cosmetic oil use solvents at elevated temperatures. After extraction, the oil for application in skin care products is usually refined, bleached, and deodorized, resulting in an odorless yellow oil.

Avocados are primarily grown for the fresh fruit market, either domestic or export. There are 12 major cultivars of avocado, but the main cultivars grown globally are 'Hass' and 'Fuerte.' The 'Hass' cultivar constitutes more than 90% of the avocado crop in the countries where it is grown for export, as this cultivar has excellent yield potential and also suffers less postharvest and handling disorders owing to their thicker skins. Like extra virgin olive oil, cold-pressed avocado oil is unrefined and so retains the flavor and color characteristics of the fruit flesh.

Production per year depend on the season (some trees bear fruit biennially), weather (wind and storms can damage fruit, which are then not suitable for fresh fruit export). Extra virgin avocado oil is also being produced in Chile, South Africa, and Kenya. Extra virgin avocado oil is exported to Australia, Japan, Southeast Asia, Europe, and North America. Approximately 3% of the avocado crop is processed for the oil. Windfall fruit not suitable for the local market can sometimes be bought for oil processors. Fruits that are rotten or exhibit postharvest disorders and are unsuitable for consumption are not used for oil production.

The process for extraction of avocado oil is based on the mechanical extraction method used for olive oil. It is important to understand the pre- and postharvest physiology of avocados, particularly how their maturity and degree of ripeness impact the optimum time for oil extraction.

Cultivation of avocado

Avocados are grown in frost-free subtropical regions. Once the fruit has formed on the tree, it slowly matures (10 months), increasing in size and oil content. Most avocado-exporting countries have guidelines for when to harvest the fruit such that they are considered to be at optimum maturity to ensure they ripen and develop the desirable flavor and texture profile. The maturity of avocados is easily determined by measuring the dry matter content of the fruit e.g. the minimum dry matter for export is 24% by fresh weight; for the United States, it is 20.8% The dry matter content is highly correlated with the total oil content in the fruit, hence harvesting at less than the minimum recommended dry matter content level will result in fruit with less than optimal oil content. The correlation between dry matter and oil content has been found to be valid across a number of countries (NZ, Australia, and United States), with different regions and orchards.

Avocado fruit do not ripen while they remain on the tree even once they have reached maximum maturity. If the fruits are not harvested, they can remain on the tree even when the next year's fruit is developing, and can remain on the tree for more than 18 months from flowering. Once harvested, the avocado will begin to ripen. This process involves the softening of the flesh due to endogenous pectolytic enzyme activity and, for some varieties, the coloring of the skin from green to purple-black. The degree of ripeness of the avocado is primarily determined by measuring the firmness of the fruit. Hence to ensure the oil content in the avocados is at the maximum for processing, the fruit should ideally be mature at harvest. This is not the case with immature fruit blown off the tree in a storm (windfall fruit); this fruit is still ripened but the oil content in the fruit is less than optimum. Ripening leads to tissue softening, which aids with the extraction of the oil due to the release of the oil from the parenchyma cells. Ripening can be promoted by treating the fruit with ethylene (a gaseous plant hormone that synchronizes ripening) in controlled-temperature rooms.

To have optimal oil quality, avocado fruit should not be overripe and also should have minimal rots or other postharvest disorders (such as flesh greying due to long storage). The amount of oil extracted from mature and ripe avocados earlier in the season has been found to be only approximately 75% of the maximum available oil in the flesh (15% oil by fresh weight) compared to later in the season when it is possible to extract more than 90% of the available oil, this being the maximum oil yield ($\approx 25\%$ oil by fresh weight).

EXTRACTION OF AVOCADO OIL

The process for recovering oil from ripe avocados is a mechanical extraction, similar to olive oil extraction, with the additional step of removing the skin and stone (seed). After this, the flesh is ground to a paste and then malaxed for 40-60 minutes at 45-50°C. This is a higher

malaxing temperature than used for olive oil extraction, but it is still considered to be cold-pressed extraction for avocado oil. The slightly higher temperature aids the extraction of the oil from the oil-containing cells and does not affect the quality of the oil. The oil and water phases are separated from the pulp using a high-speed decanting centrifuge, and then the oil is separated from the water in final polishing centrifuges. The pulp from the decanting centrifuge and waste skin/seeds are returned to orchards for soil conditioning and mulch, or used as animal feed.

Avocado oil, if extracted from sound fruit (no rots, physiological disorders, or damage), will result in oil with a very low percentage of free fatty acids (%FFA) (<0.5% as oleic acid). Also, the peroxide values (PV) can be very low (<2 meq/kg). Recommended standards for extra virgin avocado oil have proposed a maximum PV of 4 meq/kg (Table 1).

In sound, ripened fruit, the level of lipolysis that occurs is low, resulting in low %FFA. The fruit does not need to be processed immediately after ripening, but long delays should be avoided. Generally a higher %FFA is due to poor-quality fruit, delays in processing ripened fruit, or poor manufacturing practices.

PROPERTIES OF AVOCADO OIL

Extra virgin avocado oil from the 'Hass' cultivar has a characteristic flavor, is high in monounsaturated fatty acids, and has a high smoke point ($\geq 250^{\circ}\text{C}$), making it a good oil for frying. 'Hass' cold-pressed avocado oil is a brilliant emerald green when extracted; the color is attributed to high levels of chlorophylls and carotenoids extracted into the oil.

Cold-pressed 'Hass' avocado oil has been described as having an avocado flavor, with grassy and butter/mushroom-like flavors. Other varieties may produce oils of slightly different flavor profile as has been seen with 'Fuerte,' which has been described as having more mushroom and less avocado flavor.

The fatty acid profile is very similar to olive oil, in that it is very high in oleic acid. A typical avocado oil has 76% monounsaturated (oleic and palmitoleic acids), 12% polyunsaturated (linoleic and linolenic acids), and 12% saturates (palmitic and stearic acids); these values are given as percentage of fatty acid/total fatty acids. The main antioxidant in the oil is α -tocopherol, which is present at levels of 70-190 mg/kg oil. β -, γ -, and δ -tocopherols are only present in minor amounts (<10 mg/kg oil). Other nonlipid components present in the oil include chlorophylls (11-19 mg/kg oil) and carotenoids (1.0-3.5 mg/kg oil).

The chlorophylls from the flesh and the skin contribute to the characteristic emerald green color of the oil. Depending on the location in the mesocarp, the chlorophyll content varies, but the majority of chlorophyll and carotenoids are present in the greener layers of flesh next to the skin. If avocado skin is included in the pulp during malaxing, then the likelihood of extracting more pigments is greater. Chlorophyll does not contribute to oil stability but can

be a problem, as chlorophyll can act as a sensitizer for photo-oxidation to occur. Therefore, it is important to store the oil away from light.

Carotenoids in avocado fruit have long attracted attention for their potential anti-carcinogenic effect; these same carotenoids are subsequently extracted into the oil. The most significant carotenoid present in the oil is lutein (0.5-3.3 mg/kg oil). Lutein is beneficial for eye health by reducing the progression of age-related macular degeneration. The cold-pressed avocado oil also contains high levels of phytosterols (β-sitosterol being the main sterol present), at 2.23-4.48 mg/g oil. Based on its fatty acid makeup and the presence of these phytochemicals, extra virgin cold-pressed avocado oil is considered to be a healthful oil.

STANDARDS FOR AVOCADO OIL

The impacts of postharvest procedures, preprocessing treatments, extraction, and storage on the composition, quality, and sensory characteristics of avocado oil have been investigated over the last 10 years by Californian research groups. Standards have been proposed for avocado oil, including extra virgin, virgin, and pure grades of oil these standards have been recommended to ensure that avocado oil sold is of good quality in terms of standard quality indices, composition, and sensory properties. The standards are unique to avocado oil, where cold-pressed avocado oil is recovered by mechanical extraction at temperatures less than 50°C, without solvents; water and enzymes can be used. These standards are important, as the production and culinary consumption of cold-pressed avocado oil, with its light, distinctive flavor, is increasing worldwide.

Shea Butter Hair Conditioner

This is amazingly c-i-t-r-u-s-y shea butter hair conditioner scented with sweet orange essential oil. Orange essential oil is a natural astringent which controls excess sebum on the hair. Argan oil is known to be one of the best natural hair conditioners, while coconut oil is a wonderful hair moisturizer and also adds a natural shine to your curls. I'm adding raw honey for that extra nourishment your hair needs as honey is super rich in anti-oxidants that fight off free radicals that cause premature greying of hair.

Ingredients

- 3 tbsp raw shea butter
- 1 tbsp argan oil avocado oil

- 1 tsp coconut oil
- 1 tsp raw honey
- 7 drops of sweet orange essential oil
- Hand mixer
- Storage container

Directions

- 1 Melt the shea butter and coconut oil using a double boiler or even a microwave until it has liquefied. Set aside for it to cool down for about 3 minutes.
- 2 Add in the argan oil, raw honey, essential oil and mix well.
- 3 Whip the mixture till you get a white and creamy natural hair conditioner.
- 4 Apply it on your hair after a wash for softer curls and easier detangling. Rinse thoroughly after 10 minutes and your hair will smell so heavenly & citrusy, trust me! PS: You can also use this recipe for a co-wash as well!

4. Non-greasy Shea Butter Hair Lotion

A smooth shea butter hair lotion recipe that can be used as a hair moisturizer, frizz-fighter, pre-styler, de-tangler etc.

Sometimes, shea butter hair lotions leave your hair with an oily residue and greasy roots, hair products that make

Scalp and hair look greasy like it's not been washed our product using this type of shea butter hair lotion is non-greasy and does not coat your hair with gallons of oil.

Ingredients

- 4 tbsp of raw shea butter
- 1/4 cup of orange blossom water
- 3 drops of tea tree essential oil
- 3 drops of peppermint essential oil
- 3 drops of bergamot essential oil
- High speed blender or Immersion blender)
- Mason jar for storage

Directions

- 1 Use a high speed blender or immersion blender for this shea butter hair lotion recipe.
- 2 Start by melting the raw shea butter using a double boiler then transfer it to a blender and blend on high. Or, pour it into the jar with the orange blossom water then blend till creamy with an immersion blender.
- 3 When it gets creamy, slowly pour in the orange blossom water little by little, while the blender is blending the shea until fully incorporated. It will take about 3-5 minutes to turn into a white semi-thick liquid.
- 4 Transfer the mixture into a glass jar. Stir in the essential oils and voila!
- 5 To apply, just get a dime sized amount, rub it between your palms and sooth over your hair strands to keep them moisturized and glossy.

5. Therapeutic Shea Butter Scalp Treatment

Use shea butter to make an invigorating and therapeutic scalp massage oil which will also stimulate the hair follicles

The essential oils used in this shea butter scalp oil not only calm and soothe your scalp but also fight dandruff, strengthen the follicles and promote hair growth!

Coconut oil acts as the second base in this shea butter scalp treatment but it also has lots of [beauty benefits for the scalp](#). I've talked about how great eucalyptus essential oil is for hair loss

Ingredients

- 1 tbsp raw shea butter
- 1 tbsp of pure coconut oil
- 1 tsp of jojoba oil
- 3 drops of thyme essential oil
- 3 drops of eucalyptus essential oil
- 2 drops of cedar wood essential oil
- 3 drops of vitamin E oil
- Double boiler

Directions

- 1 As usual, start by melting your shea butter and coconut oil in a double boiler.
- 2 When it's melted and cooled, start adding all the carrier and essential oils. Add the vitamin E oil as well. If using vitamin E capsules, simply puncture them and squeeze the oil to the mixture and stir well using a spatula. Your treatment is ready!
- 3 To use, gently massage the shea butter scalp oil onto your scalp using your fingertips. Make sure not to apply the shea butter oil mixture on your hair strands.
- 4 Cover your hair with a shower cap or plastic bag to trap heat so the treatment can penetrate deeper. Leave the hair treatment on for at least 40 minutes. Wash off really well with your favorite shampoo to get rid of all the oils.

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- 4 Cover your hair with a shower cap or plastic bag to trap heat so the treatment can penetrate deeper. Leave the hair treatment on for at least 40 minutes. Wash off really well with your favorite shampoo to get rid of all the oils.

- **The wax**
 - We will need wax. Beeswax should be used to make our body lotion, it can also make the recipe come out with different outcome, some harder, some softer.
 - This is due to the fact that beeswax can vary by time of the year and different flowers the bees are working with, so you'll need to be aware of that too.
- **The water**
 - use about any type of water, rain water is the best or distilled water , though well water would work too, including infused water, like a tea, or get the compounds out of a plant
 -
- **Emulsifier**
 - The last ingredient you'll need is borax, which is a type of salt. It acts as an emulsifier and natural preservative.
- **Additional Ingredients**

- Items that you can add in small amounts are shea butter or cocoa butter. For this recipe add no more than a teaspoon and melt it with your oils. Essential oils are used for adding scent and healing properties. Use any powdered pigment as a coloring agent, but it would have to be very small amounts, like 1/16th of a teaspoon and it needs to be mixed in oil to get all the lumps out. This is for the purpose of testing your body lotion before you produce in larger amount. Make a note on the quantity used and record the measurements.

- Remember, you may need to adjust this recipe a bit depending on your oil and wax.
 - • 1 cup oil (shea butter)
 - • enough wax in the oil to bring it to 1¼ cups (bees wax)
 - • ½ cup water
 - • ⅓ teaspoon borax cosmetic grade Sodium Borate that does not contain surfactants and detergents, which are commonly found in commercial borax products. • any additional ingredients and essential oils
- **The Process**
 - 1 Place your oils and wax in a heat proof container. Use a glass measuring cup that can handle high heat. Microwave on high for a minute, then check. You'll probably need 3 minutes. Alternatively, you can place a stainless steel bowl over a pot of boiling water for a makeshift double boiler, melting your oils and waxes in it. Either way, the mixture needs to get very hot, almost to boiling. If any wax remains unmelted, you can stir it and it will melt. Add shea butter, to the hot oil and continue to melt.
 - 2 In another container, heat the water to boiling. Add the borax and stir. This mixture needs to be kept very hot as well. Use a towel or oven mitt when handling.
 - 3 When you have both mixtures hot and melted, slowly pour a small amount of the water into the oil. Be careful as this can bubble and come to the top. Keep stirring in the water until it's all incorporated. It should turn to a creamy consistency. If it doesn't, or if it separates, don't panic. It just means that one or the other wasn't hot enough. Keep stirring for a few minutes and then use an immersion blender. It's the only way to get it creamy if it separates or is too cool. Blend for about 5 minutes, possibly less. You'll notice it begin to thicken up and turn creamy. If you don't have an immersion blender, you can use a whisk or a hand blender, but be aware that they could add extra air.
 - 4 When it's blended and creamy, add a few drops of essential oil. Stir and sniff. Add more if desired. Use about 10 drops for this size batch. When the desired consistency and scent is achieved, transfer to clean containers. Using small repurposed jars. They are a nice size to dip your fingers into and the tops can be painted so they look nice. You can also find small glass containers perfect for creams

Goat milk soap is well known for its creamy lather and skin-loving properties. Goat milk is particularly nourishing because of capric-caprylic triglyceride, which helps form a barrier on the skin to help inhibit the loss of moisture. Goat milk also contains vitamins A, D and B6, as well lactic acid which is thought to contribute to skin smoothness. It's no wonder why goat milk soap is loved by so many!

This goat milk soap recipe contains goat milk from a local farm. Using fresh goat milk is a fantastic way to highlight local products and the unique, handmade properties of your goat milk soap. If you can't get your hands on fresh goat milk in your area, **powdered goat milk** is a great alternative. You may also find goat milk at your local grocery store, co-op or farmer's market.



Creating goat milk soap does take some extra prep work. If you've never tried making milk soap before, you may want to get a simpler cold process soap recipe under your belt first ([this one is great!](#)). Adding lye to milk can scorch the milk without proper preparation. Freezing the milk first keeps temperatures cool and prevents scorching. [Learn how to prep milk for milk soap](#), and watch this [Goat Milk Soap video](#) to see the process in action.

If you're ready to dive into goat milk soap for the first time, this recipe is perfect. It's simple with one color and a thick texture, so no need to worry stick blending too much. It's scented with [Oatmeal Milk and Honey](#), one of our all-time most popular fragrance oils. It does discolor in cold process soap, so [titanium dioxide](#) is added to keep the bars light and creamy looking. There is something so appealing about a simple bar of creamy milk soap!



What You'll Need:

9 Bar Birchwood Mold
Silicone Liner for 9 bar Mold

5.3 Apricot Kernel Oil (15%)
8.8 oz. Coconut Oil (25%)
11.5 oz. Olive Oil Pomace (33%)
2.5 oz. Cocoa Butter Cubes (7%)
7 oz. Palm Oil (20%)
4.9 oz. Sodium Hydroxide Lye
11.6 oz. Goat Milk
2 oz. Oatmeal Milk and Honey Fragrance Oil

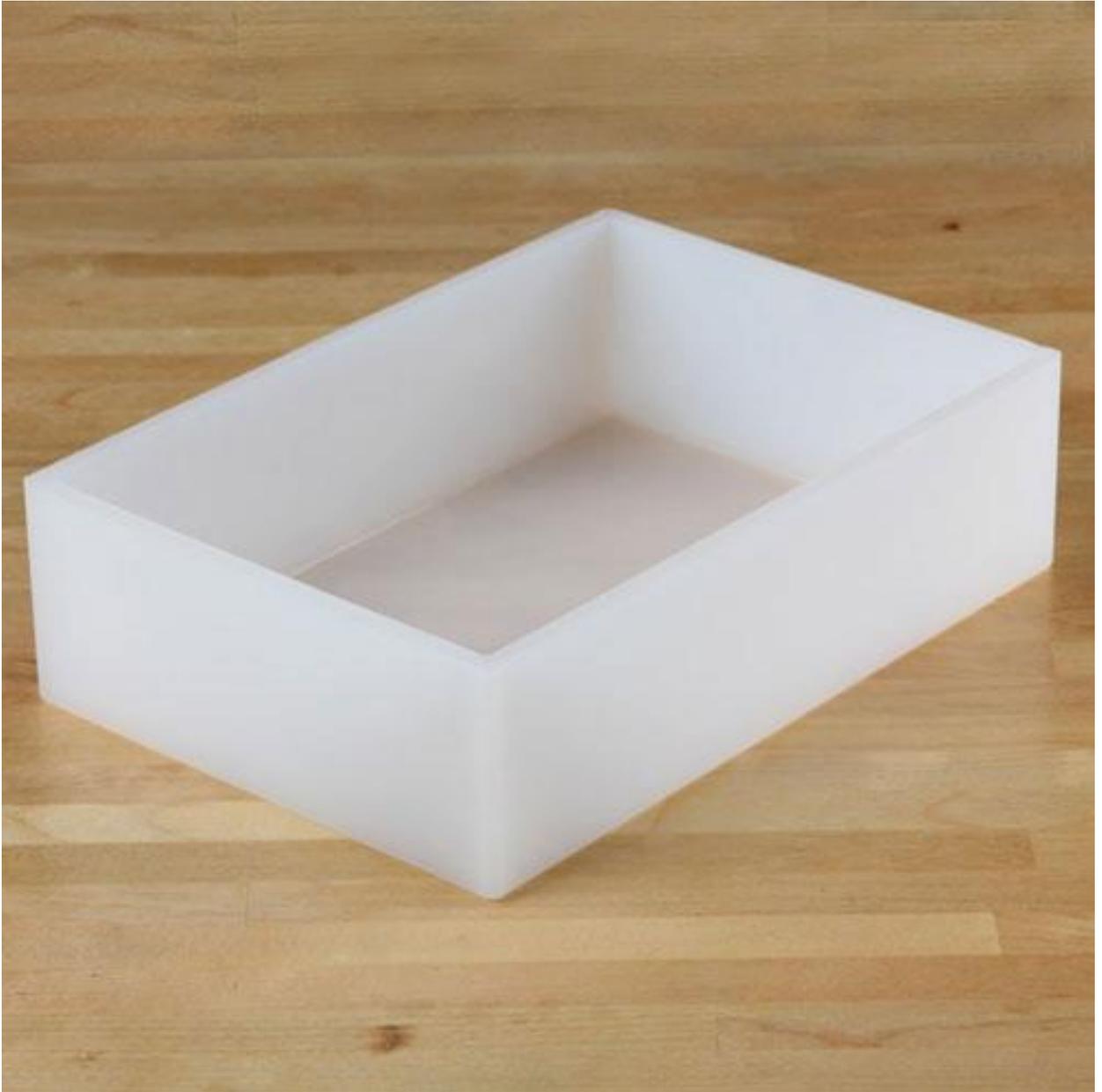
Titanium Dioxide

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9 Bar Birchwood Mold



Silicone Liner for 9 Bar Mold



Apricot Kernel Oil



Cocoa Butter Cubes



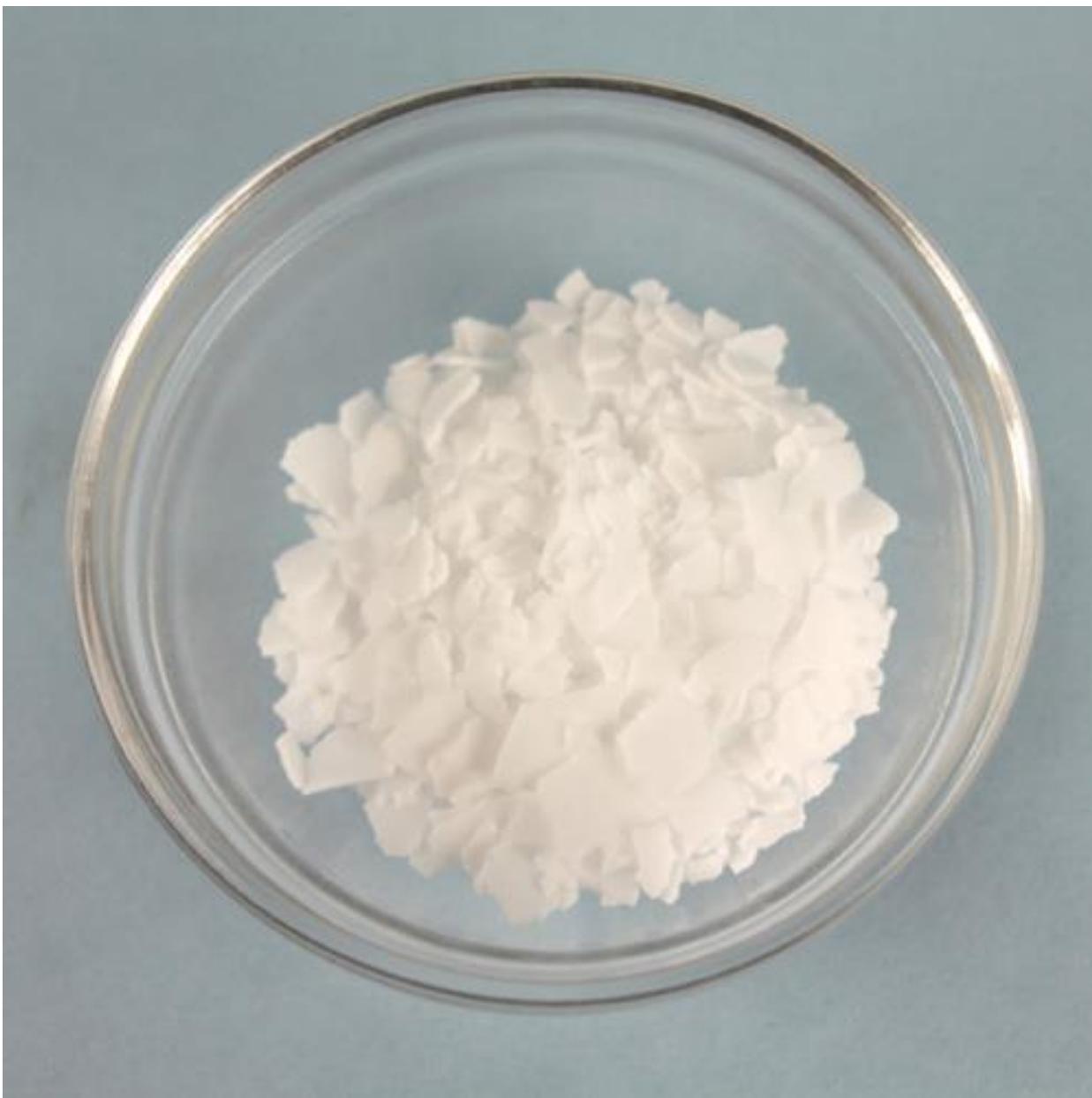
Palm Oil



Olive Oil Pomace



Coconut Oil



Sodium Hydroxide Lye



Oatmeal Milk and Honey Fragrance Oil



Oatmeal Milk and Honey Fragrance Oil

MILK PREP: When lye is added to milk, it causes the milk to reach temperatures up to 200 ° F. This scorches the milk, causing it to smell bad and develop a dark yellow color. A technique to prevent the milk from scorching is to keep temperatures as cool as possible. Our preferred technique is to freeze the goat milk, and add the sodium hydroxide lye flakes directly to the frozen milk. To keep the milk extra, extra cold, you can place the container of frozen milk into a larger container with ice. In this project we skipped this step, but it's a personal preference. First, measure out 11.6 ounces of goat milk. Then, pour the milk into ice cube trays (in this case we used **Medium 9 Ball Silicone Molds**). Allow the milk to fully freeze. Once frozen, empty the milk ice cubes into a container appropriate for mixing lye. When adding the milk ice cubes to the container, place the container on a scale to make sure you have the correct amount of milk. Although it was measured previously, some milk might be lost in the freezing/transferring process. If you're missing some milk, pour cold goat milk into the container to supplement what you have. Adding distilled water to supplement would also be okay.



SAFETY FIRST: Suit up for safe handling practices! That means goggles, gloves and long sleeves. Make sure kids, pets, and other distractions and tripping hazards are out of the house or don't have access to your soaping space. Always soap in a well-ventilated area.

LYE PREP: With safety gear on, slowly add about 1/4 of the lye flakes directly to the frozen goat milk. Use a non-reactive spoon to stir the lye flakes and goat milk together. Slowly, the flakes will begin to melt the goat milk cubes. After a few minutes of stirring, add another 1/4 of the flakes and continue stirring for several minutes.



Continue this process until all the lye flakes have been added to the goat milk. Continue stirring and stirring...and stirring! The goat milk will continue to melt as more lye is added and stirred. Once the milk has fully melted, continue to stir to make sure all the lye flakes have completely dissolved. Because the temperatures are low, the lye flakes do not dissolve as quickly. Listen and look for lye flakes on the bottom of your container; lye flakes can take a lot longer to dissolve in cooler temperature liquids. Patience is key! Any undissolved lye in your soap could cause skin irritation, or even lye burns, so take extra time to make sure all the lye is dissolved.



Once all the lye has been added, the milk may become yellow. Below, our milk reached about 90 ° F and developed a very slight yellow color. This color of milk is suitable for this recipe. But, if you'd like to make sure your soap batter is as light as possible for your color palette, placing the container of frozen milk into an ice bath container helps keep temperatures cooler, [as shown in this post](#). If you'd like a harder bar of soap that releases faster from the mold, you can add sodium lactate to the milk solution. Use 1 teaspoon of sodium lactate per pound of oils in the recipe. For this recipe, you'd add 2 teaspoons sodium lactate. Now that the lye and milk solution is prepped, it's time to prep the other ingredients.



Pyrex

4 cups
3 1/2
3 cups
2 1/2
2 cups

1 litre
900 ml
700 ml
500 ml
300 ml

Pyrex

soapQueen

COLOR PREP: To ensure that the titanium dioxide blends smoothly into the soap batter, we recommend micronizing it before dispersing it in oil. Please note this is an optional tip but it does help with the titanium dioxide clumping in the soap. =) To micronize colorant, simply use a coffee grinder to blend the colorant to break up any clumps of color and prevent streaks of white from showing in the final soap. We like to use a coffee grinder that has a removable, stainless steel mixing area for easy cleaning. Disperse 3 teaspoons of titanium dioxide into 2 tablespoons of lightweight liquid oil, like sweet almond oil or sunflower oil. In this recipe, we used a slightly more concentrated colorant-oil ratio to avoid adding too much extra oil.

FRAGRANCE PREP: Measure 2 ounces of Oatmeal Milk and Honey Fragrance Oil into a glass, fragrance oil safe container. Set aside.

ONE: Fully melt and combine the coconut oil, palm oil, olive oil pomace, cocoa butter, apricot kernel oil (remember to fully melt then mix your entire container of palm oil before portioning). Once the oils have cooled to 130 degrees or below (the milk lye solution will be on the cooler side, that's okay), add the Oatmeal Milk and Honey Fragrance Oil directly to the oils. Usually fragrance oils are added at trace, but because we know this fragrance behaves so well and thin trace is not a concern, it can be added first.



TWO: Add the milk and lye solution slowly to the oils. As you add the milk, begin pulsing your stick blender. Because the milk and lye solution is on the cooler side and the recipe contains hard oils that solidify at cooler temperature, adding the lye and milk solution gradually can help prevent false trace.



THREE: Once all the lye solution has been added, continue to blend until thin to medium trace.



FOUR: Add all the dispersed titanium dioxide, and use the stick blender to stir and blend the colorant into the batter using short bursts.



FIVE: Once the colorant is completely incorporated, pour the soap into the mold. Tap it firmly on the counter to eliminate air bubbles, and use a spoon or spatula to spread the soap evenly into the mold.



SIX: Using a small stainless steel spoon, create texture on the top of the soap. There is no right or wrong way to do this, so have fun with it!



SEVEN: Once you're happy with the top, insert the dividers into the mold. Push the dividers all the way to the bottom of the mold. Spray the top of the soap with 99% isopropyl alcohol to help avoid soda ash. Milk soap has a tendency to heat up due to the sugar in the milk. To keep it cool, place the soap in the fridge or freezer for at least 3 hours, up to overnight. Then, allow it to sit in the mold for about 3-4 days. Soap that is placed in the fridge or freezer for the first few hours of saponification can take a little longer to unmold. If you find the silicone liner is not pulling away from the sides of the mold easily, give it another day to unmold. Remove the soap from the dividers ([see the unmolding process in this video here](#)) and allow the bars to cure for 4-6 weeks. Enjoy your goat milk soap!





5.0 From 7 reviews

Creamy Goat Milk Soap Recipe



This soap is made with goat milk for an extra creamy feeling on the skin.

Author: Soap Queen

Serves: About 3 pounds of soap

Ingredients

- 9 bar Birchwood Mold
- Silicone Liner for 9 bar Mold
- 5.3 Apricot Kernel Oil (15%)
- 8.8 oz. Coconut Oil (25%)
- 11.5 oz. Olive Oil Pomace (33%)
- 2.5 oz. Cocoa Butter Cubes (7%)
- 7 oz Palm Oil (20%)
- 4.9 oz. Sodium Hydroxide Lye
- 11.6 oz. Goat Milk
- 2 oz. Oatmeal Milk and Honey Fragrance Oil
- Titanium Dioxide

Instructions

MILK PREP: When lye is added to milk, it heats up to around 200 ° F. This scorches the milk, causing discoloration and an unpleasant odor. To prevent scorching, it's important keep temperatures as cool as possible. Our preferred technique is to freeze the goat milk and add the sodium hydroxide lye flakes directly to the frozen milk. To keep the milk extra, extra cold, you can place the container into a larger container with ice. In this project we skipped this step, but it's a personal preference. Measure out 11.6 ounces of goat milk and pour it into ice cube trays (in this case we used Medium 9 Ball Silicone Molds). Allow the milk to fully freeze. Then, place a container appropriate for mixing lye on a scale and weigh out the frozen cubes. Although it was measured previously, some milk might be lost in the freezing/transferring process. If you're missing any, pour cold goat milk into the container until you have 11.6 ounces. You can also use cold distilled water.

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SAFETY FIRST: Suit up for safe handling practices! That means goggles, gloves and long sleeves. Make sure kids, pets, and other distractions and tripping hazards are out of the house or don't have access to your soaping space. Always soap in a well-ventilated area.

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LYE PREP: With safety gear on, slowly add about ¼ of the lye flakes directly to the frozen goat milk. Use a stainless steel spoon to stir the lye flakes and goat milk together. Slowly, the flakes will begin to melt the goat milk cubes. After a few minutes of stirring, add another ¼ of the flakes and continue stirring for several minutes. Continue this process until all the lye flakes have been added to the goat milk. Continue stirring and stirring...and stirring! The goat milk will continue to melt as more lye is added. Once the milk has fully melted, continue to stir to make sure all the lye flakes have completely dissolved. Because the temperatures are low, the lye flakes do not dissolve as quickly. Listen and look for lye flakes on the bottom of your container; lye flakes can take a lot longer to dissolve in cooler temperature liquids. Patience is key! Any undissolved lye in your soap could cause skin irritation or even lye burns, so take extra time to make sure all the lye is dissolved. Once all the lye has been added, the milk may become yellow. Below, our milk reached about 90 ° F and developed a very slight yellow color. This color of milk is suitable for this recipe. But, if you'd like to make sure your soap batter is as light as possible for your color palette, placing the container of frozen milk into an ice bath helps keep temperatures cooler, as shown in this post. If you'd like a harder bar of soap that releases faster from the mold, you can add sodium lactate to the milk solution. Use 1 teaspoon of sodium lactate per pound of oils in the recipe. For this recipe, you'd add 2 teaspoons sodium lactate. Now that the lye and milk solution is ready, it's time to prep the other ingredients.

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COLOR PREP: To ensure that the titanium dioxide blends smoothly into the soap batter, we recommend micronizing it before dispersing it in oil. Please note this is an optional tip but it does help with the titanium dioxide clumping in the soap. =) To micronize colorant, simply use a coffee grinder to blend the colorant to break up any clumps of color and prevent streaks of white from showing in the final soap. We like to use a coffee grinder that has a removable, stainless steel mixing area for easy cleaning. Disperse 3 teaspoons of titanium dioxide into 2 tablespoons of lightweight liquid oil, like sweet almond oil or sunflower oil. In this recipe, we used a slightly more concentrated colorant-oil ratio to avoid adding too much extra oil.

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FRAGRANCE PREP: Measure 2 ounces of Oatmeal Milk and Honey Fragrance Oil into a glass, fragrance oil safe container. Set aside.

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Fully melt and combine the coconut oil, olive oil pomace, cocoa butter, apricot kernel oil, and palm oil (remember to fully melt then mix your entire container of palm oil before portioning). Once the oils have cooled to 130 degrees or below (the milk lye solution will be on the cooler side, that's okay), add the

Oatmeal Milk and Honey Fragrance Oil directly to the oils. Usually fragrance oils are added at trace, we know this fragrance behaves so well and thin trace is not a concern, it can be added first.

- 2 Add the milk and lye solution slowly to the oils. As you add the milk, begin pulsing your stick blender. Because the milk and lye solution is on the cooler side and the recipe contains hard oils that solidify at cooler temperatures, adding the lye and milk solution gradually can help prevent false trace.
- 3 Once all the lye solution has been added, continue to stick blend until you reach thin to medium trace.
- 4 Add all the dispersed titanium dioxide, and use the stick blender to stir and blend the colorant into the batter using short bursts.
- 5 Once the colorant is completely incorporated, pour the soap into the mold. Tap it firmly on the counter to eliminate air bubbles, and use a spoon or spatula to spread the soap evenly into the mold.
- 6 Using a small stainless steel spoon, create texture on the top of the soap. There is no right or wrong way to do this, so have fun with it!
- 7 Once you're happy with the top, insert the dividers into the mold. Push the dividers all the way to the bottom of the mold. Spray the top of the soap with 99% isopropyl alcohol to help avoid soda ash. Milk soap has a tendency to heat up due to the sugar in the milk. To keep it cool, place the soap in the fridge or freezer for at least 3 hours, up to overnight. Then, allow it to sit in the mold for about 3-4 days. Soap that is placed in the fridge or freezer for the first few hours of saponification can take a little longer to unmold. If you find the silicone liner is not pulling away from the sides of the mold easily, give it another day to unmold. Remove the soap from the dividers (see the unmolding process in this video here) and allow the bars to cure for 4-6 weeks. Enjoy!