

Preparedness Soap Making Class

There are many different ways to create soap. There are three basic soap making methods; the hot process, the cold process, and melt and pour.

This Basic Milk Soap is a simple "Cold Process" method of milk soap. If you are using your own recipe and want to test the lye content to make sure that the ratios are correct, run it through this online lye calculator:

<https://www.thesage.com/calcs/LyeCalc.html>

Basic Milk Soap Recipe

Ingredients:

- 10 ounces milk (try 9 oz if you want your soap to set up faster, or if using silicone molds)
- 4.3 ounces lye (sodium hydroxide)
- 22 ounces olive oil
- 8 ounces coconut oil
- 1 ounce castor oil
- For scented, use essential oils and dried plants from my own garden.

You will also need bowls and other tools that you only use for soap making. (Do NOT use your good cooking tools!) We picked up items from both the dollar stores and yard sales)

Directions:

1. Weigh out all of your ingredients in separate containers. (Make sure that you wear gloves and safety goggles when measuring out your lye.)
2. Pour the lye into your milk, just a sprinkle at a time. Add a splash of water to the milk if completely solid to start the reaction of lye and the milk. Add the lye slowly, stirring constantly. It will take several minutes to do this – **don't rush this part. Lye gets very hot during the reaction, so do not be alarmed. Keep stirring until all of the lye is dissolved.** The milk might turn a bright yellow and smell a little weird. If it gets orange, it is scorched and will make the soap smell scorched at the end result. Colors cream, gold and yellow are all perfectly OK. We use a stainless steel cooking pot that we place in a

Five good reasons to start using goat's milk soap

Delays signs of skin aging:

Goat's milk soap delays signs of skin aging due to its high content of alpha-hydroxy acids such as lactic acid. Alpha-hydroxy acids break down dead skin cell bonds, removing dead skin cells from the skin's surface and leaving behind new cells on the surface that appear smoother and more youthful.

Not a chemical counterfeit:

Water-based soaps on mainstream supermarket shelves use harsh chemical acids to break down dead skin cells. The lasting effect of chemical acids on the skin is more similar to a chemical "burn." Alpha hydroxyl acids found in goat's milk, work with skin instead of breaking it down and aging it further.

Anti-inflammatory properties:

Goat's milk reduces skin inflammation due to its fat molecule content. The cream present in goat's milk is a moisturizer, soothing dry and damaged skin, possessing an anti-inflammatory effect.

Loaded with essentials:

Goat's milk is packed full of essential nutrients and vitamins like vitamin D, C, B1, B6, B12, and E, that feed the skin and are absorbed into the body.

Treats acne:

Studies now show that goat's milk is effective for treating acne and skin conditions. This is primarily because goat's milk has anti-bacterial properties that delay the growth of microbial organisms that spur the spread of acne.

http://www.naturalnews.com/040766_goats_milk_soap_personal_care_products.html

plastic wash base with ice to keep the temperature down (and that keeps the color of the soap more of a cream color instead of gold)

3. In a stainless steel, heavy duty plastic, or enamel lined container/pot, combine the olive, coconut, and castor oil. (Remember, all measurements are by weight.) If it's too solid to combine, briefly melt the coconut oil in a small saucepan until softened or liquefied.
4. Add your oils into your lye mixture. Begin stirring the oil and lye solution together. You can do this by hand or use a stick blender. Alternate stirring with the motor on and then off. Don't run the stick blender the entire time or you risk lots of air bubbles and possibly a false trace. It should take maybe four or five minutes until your soap reaches trace. ("Trace" means that soap batter is thick enough to hold an outline, or "tracing" when drizzled across the surface of itself.)
5. Once trace is reached, you can stir in your extras such as your essential oils, colors, botanicals, etc.
6. Working quickly, pour the fresh soap batter into your mold.
7. Place your filled molds in the freezer overnight. (this is optional – however know that if you don't the color of your soap will be darker and closer to brown. It will be lighter and closer to cream if you do. With milk soap, remember: mold at room temperature = browner soap; mold in freezer = whiter soap It does not affect the actual soap usage.
8. Unmold your soap and slice into bars. Allow the bars to cure in the open air, on a sheet of wax or parchment paper, for at least four weeks, rotating occasionally. Because of the higher amount of olive oil in this soap recipe, the longer you let it cure, the harder the final bar will be.

Why do you have to use Lye in soap? Yes –

No lye . . . No soap! All REAL soap is made with lye (sodium hydroxide mixed with liquid). Any skin or hair cleansing product made without sodium hydroxide is not soap, it is detergent.

Once the process of saponification is complete, the lye and oil molecules have combined and chemically changed into soap and glycerin. **There is no lye present in the finished bars of soap or shampoo.** While all real soap must be made with lye, no lye remains in our finished product after saponification (*described below*).

Commercial "soap" bars and handmade soap bars are also made with lye even though the words "sodium hydroxide" or "lye" do not appear on the labels. Does your bar of "soap" contain ingredients such as...

- saponified oils: oils and butters are mixed with sodium hydroxide and a liquid (usually water).
- sodium cocoate: the generic name for the mixture of coconut oil with sodium hydroxide (lye).
- sodium palmate: the generic name for the mixture of palm oil with sodium hydroxide (lye).
- sodium palm kernelate: the generic name for the mixture of palm kernel oil with sodium hydroxide (lye).
- sodium tallowate: the generic name for the mixture of beef fat (tallow) with sodium hydroxide (lye).
- sodium olivate: the generic name for the mixture of olive oil with sodium hydroxide (lye).

Homemade Laundry Soap

From our family site (www.krisandlarry.com) We have been making our own laundry soap for over 5 years now.

December 28, 2010 – Our first batch is just about used up – 11 weeks later for a family of 7 – not too bad – I will NEVER go back to store bought. I love how my clothes feel and smell and the amount money that we saved!!!

Here are the ingredients and step by step.

Ingredients:

- 5 gallon bucket (reusable for additional batches) I picked mine up at the Chino Valley Ace Hardware
- Long handled spoon
- “cheese” grater that you use for only soap.
- 1 whole bar of soap (used Ivory- it was really soft and easy to grate) but you can use goats milk soap (plain), dove, felts naptha, etc.
- 1 cup Washing Soda – NOT BAKING SODA I found this at Chino Valley Ace Hardware (not at Walgreens or Safeway)
- 1/2 cup Borax – Found this at both Safeway and at Ace Hardware
- 3 Gallons (48 cups of water) plus 4 additional cups of water
- 1 tablespoon Essential Oil (OPTIONAL)

Directions:

1. Boil 4 cups of water
2. Grate bar of soap and add to boiling water
3. Stir until dissolved (took about 4 minutes.)
4. Add 3 Gallons of warm / hot water to your 5 gallon bucket. (3 gallons = 48 Cups)
5. Add the dissolved soap to the bucket and stir
6. Add 1 cup of washing soap and stir for 2+ minutes with a long handled spoon until dissolved
7. Add 1/2 cup borax and stir until dissolved (about 3 minutes)
8. OPTIONAL: add 1T of essential oil and stir. (I used lavender for our first batch)
9. Place lid on tight and let it sit overnight. It will be lumpy... Just keep stirring every day!

NOTE: Stir twice a day for the first week after making it and it won't be lumpy and will look like store bought laundry soap!!

How to Make Lye for Natural Soap Making from Wood Ash

Article from

<http://www.countryfarm-lifestyles.com/make-lye.htm>

We show you how to make lye which is perfect for making natural soap including some old, pioneer soap recipes. It isn't difficult, although if you have access to commercial lye, you may prefer to use that instead. This is because commercial lye will give you consistency in your lye soap recipes. However, if you live in an area where it is difficult to source, and you have the right wood available to you, then you can follow these steps to making your own lye.

You can also make your own lye using slaked or unslaked lime. See recipes for these below.

The problem with making lye from wood ash, although it is a simple process, the end result can be that your lye water is either too strong, or too weak. Either way, it could spoil your batch of homemade soap.

Having said that, none of our ancestors had access to commercial lye and they made soap just fine. We will also give you a couple of tests to do that will take a lot of the guess work out of the process, making sure that your lye is of the right strength.

What is Lye?

Lye is a strong alkali that is used in soap making, among other things. It is also known as caustic soda or sodium hydroxide.

Lye Ingredients

The ingredients for making lye are wood ash and water. Preferably rain water, as it is soft, although tap water will work just as well. The ash should come from hardwoods as soft woods are too resinous to mix with fat.

Wood for Making Lye

Only certain woods are good for homemade lye. You will need to any hardwoods, not softwoods such as Fir or Pine. The following common hardwoods can be used, along with all other hardwoods, Hickory, Sugar Maple, Ash, Beech and Buckeye wood give some of the better results.

- Applewood
- Ash
- Aspen
- Australian Red Cedar
- Beech
- Birch
- Buckeye
- Cherry
- Chestnut
- Elm
- Hickory
- Oak
- Olive
- Sugar Maple
- Walnut

Traditional Method of Making Lye using a Wooden Barrel

Take an old wine barrel and make sure that it is clean. Steaming it will give good results. Elevate it so that you can then place a bucket or similar underneath the leaching hole at the bottom of your barrel to collect the lye water when it is ready to emerge.

Place a bung in any existing opening in the wine barrel, and drill a smaller hole into the barrel that is only 1/8th inch wide. What you are aiming for is a hole wide enough for the water to drip through but small enough for the ashes not to fall out. Keep this hole closed up with a small bung until later.

Now pack the bottom of the barrel with clean river stones. Make sure that you get a good mix of both large and small stones as this will work as a filtration system. If you don't have stones, you can also use a thick layer of charcoal instead.

After a good layer of stones you will need to place a generous layer of straw on the top of the

stones. Your straw should take up at least half way up the barrel.

Shovel in your ashes until the barrel is as full as you want it. After that, pour over some hot rain water in small amounts so that the whole contents are wet and soaking but not flooding. Using hot water is important as the

hot water will draw out more potash from the wood ash than cold water, making your lye stronger.

Traditionally, a little lime was mixed with the ashes to 2 - 5% which then guaranteed that you would have good lye for soap making.

On day 2 you can add more ash and water after allowing the ash from the previous day to settle.

On day 3, make sure your receptacle is ready under the opening on the barrel, remove the bung and wait for the lye water to slowly trickle out.

Don't expect to have a bucketful. You will only be getting a small amount as this should give you the right strength needed to make good natural soap.

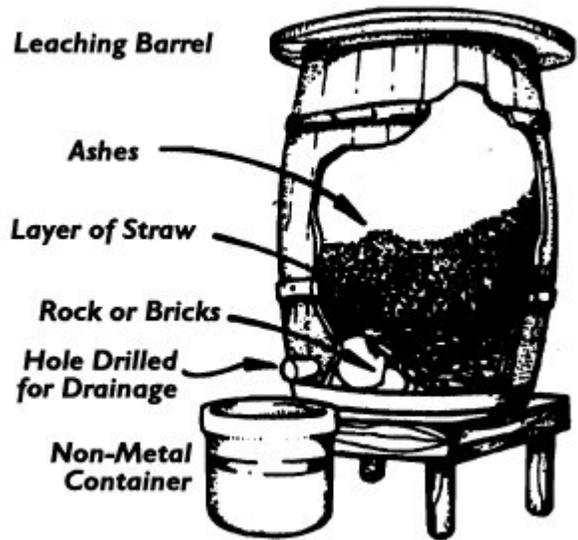
At this stage you need to get it to an even strength to use for your soap making. Boil this liquid again until you are able to do the "float test" and get it to work. See instructions below.

Countryfarm Lifestyles Tips:

If your ashes start floating to the top then you know that you have added too much water.

Also, adding hot water to your ashes makes your lye stronger than adding just cold water.

To make your lye potash more like caustic soda you can sprinkle a little quick lime onto your ashes before pouring on the hot water. (Not easy to get in small quantities these days, and treat with caution as it needs to be handled with extreme caution.)



Traditional Equipment used in Making Lye

Picture courtesy of Carla Emery from the Encyclopedia of Country Living

How to Test the Strength of your Lye

To make lye and be successful at soap making your lye has to be at the right strength. Now there are 2 ways in which this can be done, both of which indirectly involve chickens. If you live on a farm and keep chickens, then this test is fine for you. If not, then you can use the second test.

Test 1

This is a simple test. Take a chicken feather and place it in the lye. If the feather dissolves, the lye is strong enough and you can use it for your soap. If not, you will have to re-boil the lye water when it emerges and repeat the process until your chicken feathers dissolve.

Test 2

This test involves using a fresh, whole egg or a potato works just as well. Take the egg or potato of similar size and place it in the cold lye water. If it sinks, your lye is not strong enough and you will have to repeat the process until it does.

If the potato floats with just a little of the lye water above it; about an inch showing above the water,

or the head of the egg sinks to just half-way down, then the strength is just right. If the potato or egg floats too high, almost on top of the lye water, then the strength is too strong. You can compensate by adding a little bit of fresh water to the lye water and try again.

With the first test, I would still back this up with the "egg floating" test, just to make sure that my lye water was not too strong.

Modern Method of Making Lye using A Plastic Bucket

Traditionally, as you have just read, people used wooden buckets or casks lined with straw and small rocks to make lye. Now, not everyone has access to these things, so I am going to show you how you can make lye just as easily in an old nappy bucket or something similar.

Take your old plastic nappy bucket and drill a neat round hole, about an inch off the bottom on one side of the bucket. It shouldn't be very big, about the diameter of a small iron nail - about 1/8th of an inch. Make sure that the size of the hole is the same size of the nail that you will use to stop up the hole when needed.

Using cold wood ash, take a spade and carefully place the ash into the stopped-up bucket. Make sure that what you are placing in the bucket is the fine, white ash, as opposed to any charcoal bits. This you don't need. Make sure that the ash is well compacted in the bucket.

Boil water half of the capacity of the bucket and pour gently over the ashes. As soon as the water makes contact with the ash it will start hissing and bubbling. This is perfectly normal.

You may find at this stage that the water is just sitting on top of the ash, without it appearing to do anything. Just leave it, without disturbing it, and come back later to see when you can add the rest of the water.

Once you have used all the water elevate the bucket so that you are able to place a glass or plastic container under the hole that you previously drilled and stopped up with a nail. Place your receiving container under the hole and

remove the nail. Do not expect lye water to come out of here. This could take hours, if not days.

Once you have enough lye water use the nail to stop up the hole. Take the lye water to the kitchen and boil carefully.

Take care at this stage as the lye is caustic and if it splashes onto your skin and into your eyes it will burn. You will need to wear gloves and safety glasses at this point.

Once you have heated up your lye water take it back to your bucket and carefully pour it back over the ashes in the bucket. This helps strengthen the lye.

Wait for the lye to emerge once again.

Drying Lye to Form Crystals

When you buy commercial lye it is in the form of crystals. When you make lye at home you will want your lye to be in crystals too. This is very easy to do. Take your lye water and place it in the sun until the water has evaporated. What you are left with are your lye crystals that you can use quite happily in your soap making recipes.

How to Make Lye using Unslaked Lime (Calcium Oxide)

Unslaked lime is a chemical compound known as calcium oxide and also known as lime or quicklime.

Recipe 1:

Put a half pound of unslaked lime into 2 gallons of water. Add 6 pounds of washing soda and boil gently for 1 hour or so. When cold, pour off the liquid part which is your lye.

Recipe 2:

Take 10 quarts water, 6 pounds quicklime, (shell lime if possible), and 6 pounds of washing soda. Boil for 1 hour or so. When cold, pour off the liquid which again is your lye.

How to make Lye using Quick Lime (Calcium Hydroxide)

Calcium hydroxide is a chemical compound known more commonly as slaked lime. It is formed when calcium oxide is mixed with water.

Put 3 pounds of washing soda, 3 pounds of slaked lime, and 12 quarts of water into a large pot. Boil for 20 minutes. Wait for the contents to cook, and when cold, pour off the liquid part which is your lye.

How to Use Homemade Lye in Soap Recipes

In the end your homemade lye is softer on the skin. It is potassium hydroxide as opposed to sodium hydroxide. When following soap recipes make sure that you use the right type of hydroxide, as although both are lye, they cannot usually be used in place of the other in certain recipes.

The potassium hydroxide molecules are larger than the sodium hydroxide molecules. It is this size difference that enables the potassium hydroxide to maintain a liquid state.

Potassium hydroxide is normally used to make **liquid soaps**. And when our ancestors made soap using homemade lye, most of the time they ended up with liquid soap because the lye they were using wasn't strong enough.

However, you can make a **hard soap** by adding common salt at the end of the boiling process. If you want to add salt to harden your bars of soap, weigh out the water you are going to mix your lye with.

Before you add the lye, add ½ tsp. of salt per pound of oil/rendered fat in your recipe. Stir well to make sure that all of the salt is dissolved. Add your lye to the salted water, making your lye solution, and resume your normal soap making procedure. Both types of hydroxide, however, are extremely corrosive and must be handled and stored with care.

The traditional ratio is 2 pounds fat or grease (such as bacon fat) to 1 gallon homemade lye.

Natural Soap Recipe using Homemade Lye

Here is an original pioneer soap recipe using your homemade lye water.

Ingredients:

2 pounds fat
1 gallon homemade lye water
2 tablespoons white vinegar
1/2 cup hot water

Method:

Place the fat and lye water in a large pot suitable for soap making (not aluminum) Add the vinegar mixed in with the water. Keep on a rolling boil until thick and slimy. This can take several hours.

If at this stage you want to use it as soft soap it is ready after straining through several layers of cheesecloth before placing in storage containers. 1 cup of homemade liquid soap per load is all that is needed.

If you want hard soap you will need to add 1 teaspoon salt dissolved in a little water to the mixture at this stage and boil for longer. Skim the foam off the top and place the liquid into molds and allow to set.

Another Pioneer Soap Recipe using Homemade Lye

Fill a pot 2/3rds full of homemade lye. Place on the stove over a medium heat and ladle in ladlefuls of melted lard and stir until your mixture is creamy. Now add handfuls of salt to the mixture and stir until a ring of soapy mixture is left behind and very evident on the stirring spoon.

Remove from the heat and allow the soap to harden. After it has hardened you will need to drain the remaining lye water off the soap.

You can make soft soap in the same manner if you don't add the salt at the end of the process.