

# **SOAP MAKING WITH BEESWAX**

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Eclectic Bee Farm

## WHAT IS SOAP?

- a substance used with water for washing and cleaning, made of a compound of natural oils or fats with sodium hydroxide or another strong alkali, and typically having perfume and coloring added:

# SAFETY WITH SOAP

NaOH-Lye

- Caustic
- Eyes
- Clothing
- Hands
- Feet



## Sodium hydroxide, solid



### DANGER

Causes severe skin burns and eye damage.

### PREVENTION

Do not breathe dust. Wash skin and eyes thoroughly after handling. Wear protective gloves and clothing, and eye and face protection.

### RESPONSE

**If swallowed:** Rinse mouth. Do NOT induce vomiting. **If in eyes:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. **If on skin (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower. Wash contaminated clothing before reuse. **If inhaled:** Remove person to fresh air and keep comfortable for breathing.

**Immediately call a doctor or other medical personnel.**

# BASIC PROCESS OF SOAP MAKING

Measure Ingredients

Melt Oils

Mix Lye and Water

Check Temperatures of Lye/ Water Mix and Oil Mix

Combine Lye/ Water Mix to Oil Mix

# SOAPING

Combine the two mixtures until trace



Add "Extras"



Pour into Mold



Unmold and Cut Soap

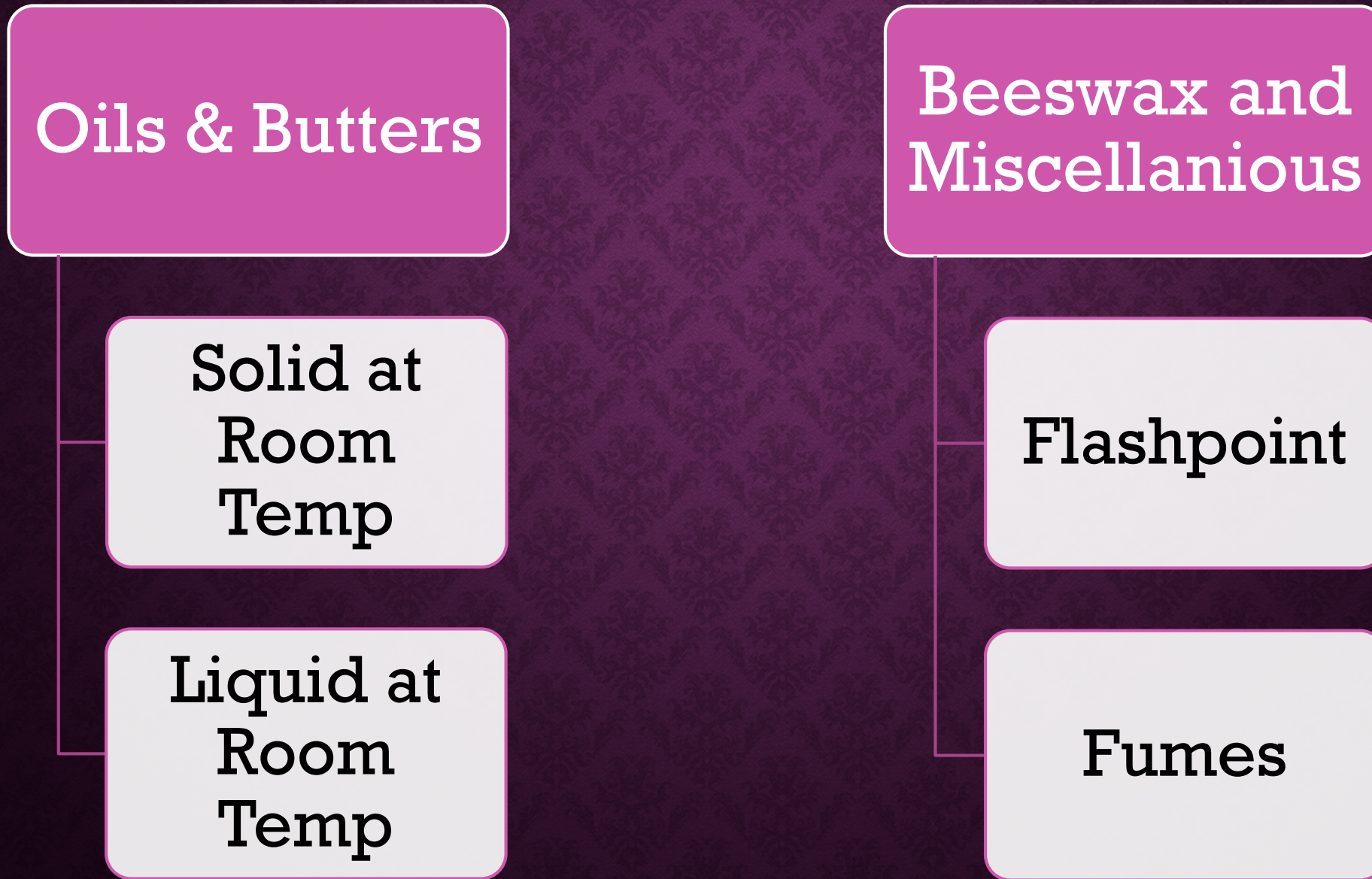


Let "Rest" until PH is acceptable

# Measure Ingredients

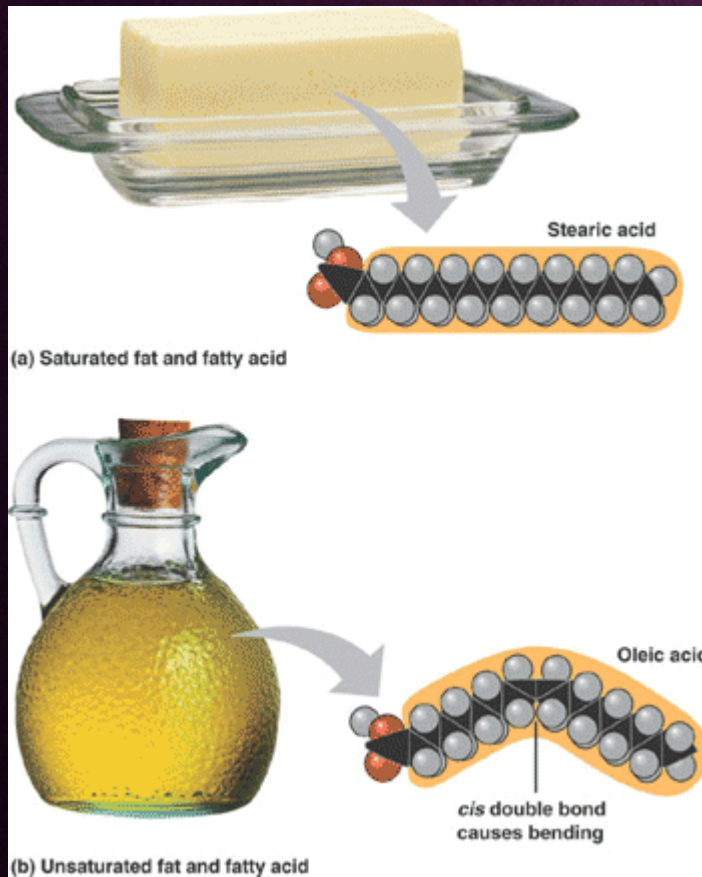
- This must be exact. The chemical reaction depends on exactness.
- Have a good scale.
- Check SAP values and Double check your math Before you make soap.
- Avoid Cross Contamination.
- Soapcalc.net or Summerbeemeadow.com have lye calculators

# Melt Oils and Other Ingredients



# Oils/ Butters

<http://summerbeemeadow.com/content/properties-soapmaking-oils>



**Lauric Acid:**

Hard bar, excellent cleansing, lots of fluffy lather, can be drying to skin

**Linoleic Acid:**

Conditioning, silky feel

**Myristic Acid:**

Hard bar, cleansing, fluffy lather

**Oleic Acid:**

Conditioning, slippery feel, stingy lather, kind to skin

**Palmitic Acid:**

Hard bar, cleansing, stable lather

**Ricinoleic Acid:**

Softer bar, conditioning, moisturizing, lots of fluffy, stable lather, kind to skin

**Stearic Acid:**

Hard, long lasting bar, stable lather



## Beeswax (contains some saponifiables)

Beeswax can help make a somewhat harder bar of soap. Used at 1% to 3% of total oils, acts as an emulsifier while stirring/blending to trace and may help prevent "soap ash" while curing. Inhibits lather at higher amounts. Natural, unrefined beeswax has the smell of honey which persists through saponification better than if honey itself is used. Beeswax contains a high percentage of unsaponifiables. Also used in creams, lotions, lip balms, candle making, polishes, inks, cosmetics, and ointments. In cosmetics, it is used as a thickener, emulsifier and stiffening agent in creams, lotions, lipsticks, etc. Beeswax has emollient, soothing and softening properties and helps the skin retain moisture.

## Castor Oil

Ricinoleic 90%  
Linoleic 3-4%  
Oleic 3-4%

Contributes to: fluffy lather, stable lather, conditioning, moisturizing, quicker trace, softer soap. Often used to superfat soaps. Castor oil is unique in being almost entirely composed of ricinoleic fatty acid, found in no other oils and possessing a high affinity for water molecules. This makes it an excellent humectant, attracting and holding moisture to the skin. Castor oil should be used at low percentages to avoid overly soft soaps. Also often used in balms, shampoos, hair oils, and other thick emulsions for the skin and hair.

# Recipe 1

SoapCalc ©


Recipe Name:

New

INCI Names

[Print Recipe](#)

Total oil weight	16.46 oz	Sat : Unsat Ratio	45 : 55
<b>Water as percent of oil weight</b>	<b>38.00 %</b>	Iodine	54
Super Fat/Discount	0 %	INS	158
Lye Concentration	28.115 %	Fragrance Ratio	0.34
Water : Lye Ratio	2.5568:1	Fragrance Weight	0.35 oz

	Pounds	Ounces	Grams
Water	0.391	6.25	177.32
Lye - <b>NaOH</b>	0.153	2.45	69.35
Oils	1.029	16.46	466.63
Fragrance	0.022	0.35	9.92
Soap weight before CP cure or HP cook 	1.594	25.51	723.23

#	✓	Oil/Fat	%	Pounds	Ounces	Grams
1	<input type="checkbox"/>	Olive Oil	43.56	0.448	7.17	203.27
2	<input type="checkbox"/>	Coconut Oil, 76 deg	27.34	0.281	4.50	127.57
3	<input type="checkbox"/>	Palm Oil	15.74	0.162	2.59	73.43
4	<input type="checkbox"/>	Castor Oil	6.08	0.063	1.00	28.35
5	<input type="checkbox"/>	Beeswax	1.22	0.013	0.20	5.67
6	<input type="checkbox"/>	Stearic Acid	6.08	0.063	1.00	28.35
Totals			100.00	1.029	16.46	466.63

Soap Bar Quality	Range	Your Recipe	Lauric	13
Hardness	29 - 54	44	Myristic	5
Cleansing	12 - 22	18	Palmitic	15
Conditioning	44 - 69	53	Stearic	9
Bubbly	14 - 46	24	Ricinoleic	5
Creamy	16 - 48	30	Oleic	39
Iodine	41 - 70	54	Linoleic	8
INS	136 - 165	158	Linolenic	0

Additives	Notes
<input type="text"/>	<input type="text"/>

# Recipe 2

SoapCalc ©


Recipe Name:

New

INCI Names

[Print Recipe](#)

Total oil weight	13.87 oz	Sat : Unsat Ratio	44 : 56
Water as percent of oil weight	59.95 %	Iodine	54
Super Fat/Discount	0 %	INS	160
Lye Concentration	20.000 %	Fragrance Ratio	0.34
<b>Water : Lye Ratio</b>	<b>4.0000:1</b>	Fragrance Weight	0.30 oz


	Pounds	Ounces	Grams
Water	0.520	8.32	235.74
Lye - NaOH	0.130	2.08	58.93
Oils	0.867	13.87	393.21
Fragrance	0.018	0.30	8.36
Soap weight before CP cure or HP cook 	1.535	24.56	696.24

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Iodine	41 - 70	54	Linoleic	7
INS	136 - 165	160	Linolenic	1

Additives	Notes

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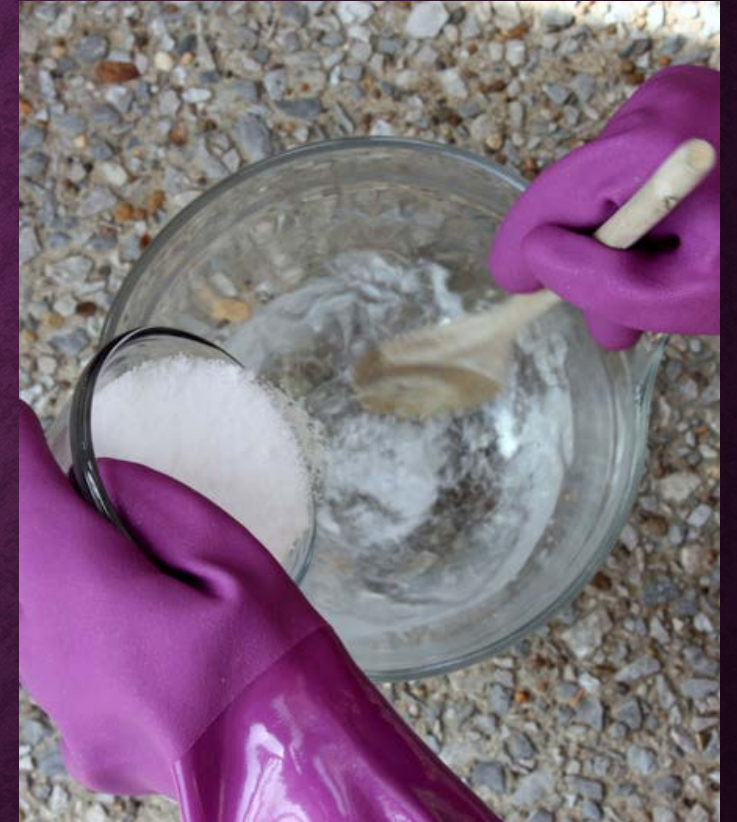
Additives	Notes
<input type="text"/>	<input type="text"/>

	Hardness	Cleansing	Bubbly Lather	Creamy Lather	Conditioning
Lauric	Yes	Yes	Yes		
Myristic	Yes	Yes	Yes		
Palmitic	Yes			Yes	
Stearic	Yes			Yes	
Ricinoleic			Yes	Yes	Yes
Oleic					Yes
Linoleic					Yes
Linolenic					Yes

Summary of values:	
Hardness	29 to 54
Cleansing	12 to 22
Condition	44 to 69
Bubbly lather	14 to 46
Creamy lather	16 to 48
Iodine	41 to 70 (lower = harder bar)
INS	136 to 170 (higher = harder bar)

# Lye and Water

- Always add Lye to the Water. You will have a dangerous reaction if you do it the other way.
- Once again Measurements must be exact.
- Check the Temperature of the Lye Water before you add it to the oils. If it is too hot, this will also cause the mixture to “boil” out of its container.
- Beware of the fumes.
- Use Distilled Water.



# Time to Make Soap

## Check Temperatures

- Double check the temperature of the oil mixture and lye water mixture.

## Pour the Lye Water into the Oil Mixture

- Pour slowly and stir constantly.

## Stir the Mixture until you reach Trace

- A stick blender helps make this part easier, but a whisk works really well. Be careful of using beeswax with a stick blender. It traces really fast.

## Add Extras

- Add your oils to Superfat
- Add your Sugars for Bubbles
- Botanicals
- Fragrance
- Color



# Finishing Touches

- Pour into a mold
- Let sit until hardened
- Remove from Mold
- Cut Soap
- Allow to dry until PH is acceptable

# Contact Us



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**We are on Facebook: Eclectic Bee Farm 16**

# Procedure

1. Measure Ingredients
2. Melt Oils
3. Mix Lye and Water
4. Combine Lye Water with the Oil Mix
5. Bring to Trace
6. Add Extras
7. Pour into Mold
8. Allow to Harden
9. Unmold
10. Cut
11. Allow to “rest” for 3 to 4 weeks.