



# PRACTICAL GUIDE FOR SOAP MAKING



NATURAL SOAPS



# INDEX

1 - SOAP MAKING.....	3
2 - SOAP OF CASTILLA.....	4
3 - CALENDULA SOAP FOR SENSITIVE SKIN.....	6
4 - ROSEHIP SOAP.....	8

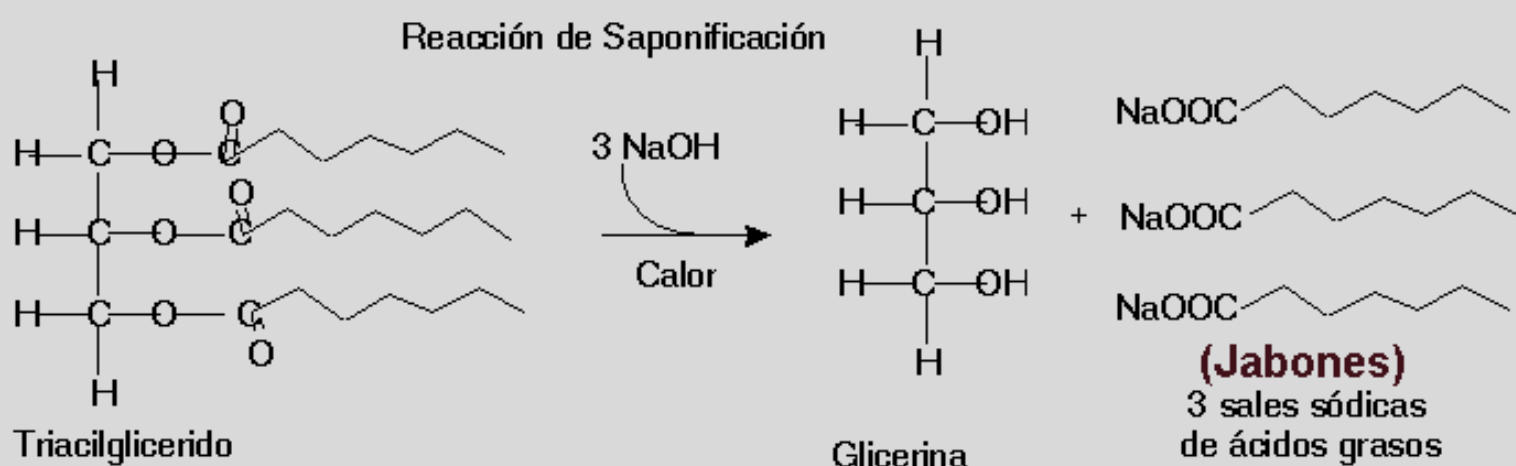




## SOAP MAKING:

### THEORETICAL FOUNDATION:

The soap is a natural chemical reaction between an alkali and a fatty acid. On mixing an alkali, as it may be caustic soda, with fat or oil, reacts according to the **SAPONIFICATION** reaction and soap plus glycerin is formed.



One of the great advantages of the artisanal soap making is that we leave the glycerin incorporated in it and this adds hydration to the soap.

Most industrially made soaps separate the soap from the glycerin to obtain a double benefit. Those soaps will dry out the skin much more than those made by us if they incorporate glycerin.

Soaps made from oil, with an appropriate “standing” time, are suitable for any use. The fragrance added to them is at the same time giving them a very pleasant aroma from natural essential oils.



# SOAP OF CASTILLA

## OBJECTIVE:

To make handmade soap in the simplest manner using used olive oil. It is a soap suitable for washing of clothes.

## INTRODUCTION:

Used vegetable oil (UVO) is often poured into the drain. If it reaches the ocean, it creates a layer that remains above the sea water. This does not allow the correct oxygenation of the marine flora and fauna..

Thus, for every liter of oil, 1000 liters of water are contaminated. In addition, it clogs the drains and it makes water treatment more expensive.

## MATERIAL AND REACTIONS:

REACTIVOS	MATERIAIS
<i>Aceite de oliva usado</i>	<i>Vaso de precipitados 2 L</i>
<i>Sosa cáustica ó 99 %</i>	<i>Varilla de vidro</i>
<i>Auga destilada</i>	<i>Batedora ou vara de madeira</i>
	<i>Molde silicona ou plástico</i>



## **PRECAUTIONS:**

**Do not forget to wear gloves, masks and glasses, especially during the mixing of caustic soda and water as well as oil.**

**It is advisable to use the extractor hood.**

**If you use a blender , it is important to add vinegar to neutralise after use and then wash with water and soap.vinagre para neutralizar y luego lavar con agua y jabón.**

## **EXPERIMENTAL PROCEDURE: (3 soaps)**

- 1. Pour 80 ml of distilled water in the beaker.**
- 2. Add, VERY CAREFULLY, 33g of caustic soda to the water, stirring continuously until completely dissolved stirring ( clear clear mixture ). Stir slowly and carefully with the chosen utensil. This will generate an exothermic reaction that will release heat and raise the temperature of the mixture. At this point, maximum care must be taken.**
- 3. After 5 minutes, the water and caustic soda mixture cooled. This is when 260 mL of used oil and an essential oil are added if an unpleasant odour is observed. Without stopping stirring in the same direction and trying not to cause splashes. NOTE: It is important to filter the recycled oil previously with a strainer.**
- 4. Mix for one hour until the mixture becomes the consistency of mashed potatoes. Although it seems that there are lumps left when it dries, they will disappear and the soap will be uniform.**
- 5. Finally, pour the content of the beaker into a mold or a tray.. At this point, we have to wait a few days ( 5 days ) to unmold. Then, we have to let it dry for 30 days before beginning to use it so that the curing process is satisfactory. You have to let it mature in a dry and ventilated place. (Until the pH is less than 10.)**



## **SOAP OF CALENDULA FOR SENSITIVE SKIN**

### **OBJECTIVE:**

To make a handmade soap for sensitive skin.

### **INTRODUCTION:**

The combination of natural ingredients in this soap adds anti-inflammatory, antiseptic, antioxidant and soothing properties, that are very useful for sensitive skin and also after sun exposure.

In addition, it is very hydrating, disinfecting and astringent and it helps to balance the pH of normal skin.

### **MATERIAL AND REACTIONS:**

<b>REACTIVOS</b>	<b>MATERIAIS</b>
Aceite de oliva	Vaso de precipitados 2 L
Sosa cáustica ó 99 %	Varilla de vidro
Auga destilada	Batedora ou vara de madeira
Aceite de caléndula	Molde silicona ou plástico
Aceite de coco	
Aceite de améndoas	



## **PRECAUTIONS:**

**Do not forget to wear gloves, masks and glasses, especially during the mixing of caustic soda and water as well as oil. It is advisable to use the microbiology cabinet. If you use a blender, it is important to add vinegar to neutralise after use and then wash with water and soap,**

## **EXPERIMENTAL PROCEDURE: (4 soaps)**

- 1. Pour 91,3 mL of distilled water in the beaker. Then, add VERY CAREFULLY, 35,7g of caustic soda to the water stirring continuously until completely dissolved ( clear mixture ). Stir slowly and carefully with the chosen utensil. At this point, maximum care must be taken.**
- 2. After 5 minutes, the water and caustic soda mixture cooled. This is when the 200ml of olive oil, 10ml of calendula oil, 41,3g of coconut oil and 18,3 ml of almond oil. de aceite de almendras. Without stopping stirring in the same direction and trying not to cause splashes.**
- 3. Mix for one hour until the mixture becomes the consistency of mashed potatoes.**
- 4. Finally, pour the content of the beaker into a mold or a tray.. At this point, we have to wait a few days ( 5 days ) to unmold. Then, we have to let it dry for 30 days before beginning to use it so that the curing process is satisfactory. You have to let it mature in a dry and ventilated place. (Until the pH is less than 10.)**



## **ROSEHIP SOAP**

### **OBJECTIVE:**

To make an artisanal rosehip soap for a cosmetic use using olive oil.

### **INTRODUCTION:**

The handmade soaps made of rosehip oil contain the vitamins A, B, and D, and it is very hydrating. Vitamin A helps to soften the effects of skin aging. It is a very effective natural antioxidant and contains many properties to prevent the visible signs of age. In addition, it is highly advisable to treat scars, stretch marks and other skin imperfections.

### **MATERIAL AND REACTIONS:**

<b>REACTIVOS</b>	<b>MATERIAIS</b>
Aceite de oliva	Vaso de precipitados 2 L
Sosa cáustica ó 99 %	Varilla de vidro
Auga destilada	Batedora ou vara de madeira
Aceite de coco	
Aceite de rosa mosqueta	Molde silicona ou plástico



## **PRECAUTIONS:**

**Do not forget to wear gloves, masks and glasses, especially during the mixing of caustic soda and water as well as oil. It is advisable to use the microbiology cabinet. If you use a blender, it is important to add vinegar to neutralise after use and then wash with water and soap.**

## **EXPERIMENTALPROCEDURE: (4 soaps)**

- 1. Pour 128 mL of distilled water in the beaker.**
- 2. Then, add VERY CAREFULLY, 52g of caustic soda to the water stirring continuously until completely dissolved (clear mixture). Stir slowly and carefully with the chosen utensil. At this point, maximum care must be taken.**
- 3. After 5 minutes, the water and caustic soda mixture cooled. This is when the 300ml of olive oil, 70 g of coconut oil and 20 ml of rosehip oil. Without stopping stirring in the same direction and trying not to cause splashes.**
- 4. Mix for one hour until the mixture becomes the consistency of mashed potatoes.**
- 5. Finally, pour the content of the beaker into a mold or a tray. At this point, we have to wait a few days (5 days) to unmold. Then, we have to let it dry for 30 days before beginning to use it so that the curing process is satisfactory. You have to let it mature in a dry and ventilated place. (Until the pH is less than 10.)**





*This guide is made by the students of the C.M of the laboratory operations ( Year 2023-2024) for the department of Chemistry of the CIFP Politécnico de Santiago.*

Acknowledgment to all the people involved / for the interest.



**FRAGRANT SOAPS**