

Do it yourself!



# Zero-Waste

# Seaweed Coatings for Cosmetics



PART OF THE  
**EU MISSIONS**  
RESTORE OUR OCEAN & WATERS

SHARE THIS  
GUIDELINE!



Co-funded by  
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NATIONAL INSTITUTE  
OF CHEMISTRY

## Equipment and accessories

shampoo balls  
PIGMENTS

approx. 250 balls

⌚ 45 min

1 large metal bowl  
2 small metal bowls  
1 wooden bowl  
1 spoon  
2 small sieves  
1 tray

[Balls making machine](#)

Dehydrator/dryer  
Handheld stick blender

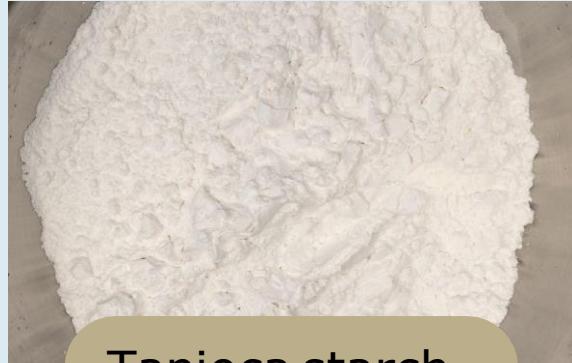


# Ingredients

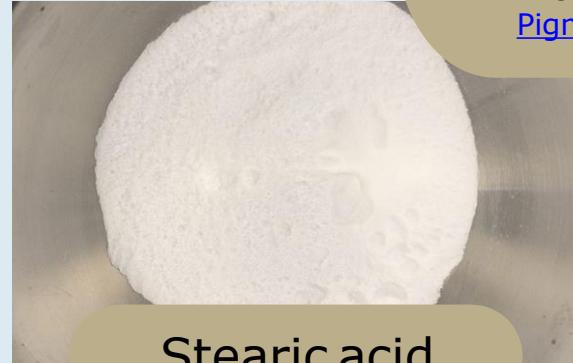
Tapioca starch  
Stearic acid  
Sodium alginate  
Ethanol  
Water (aqua)  
Calcium Chloride  
Menthol  
[Pigments](#)



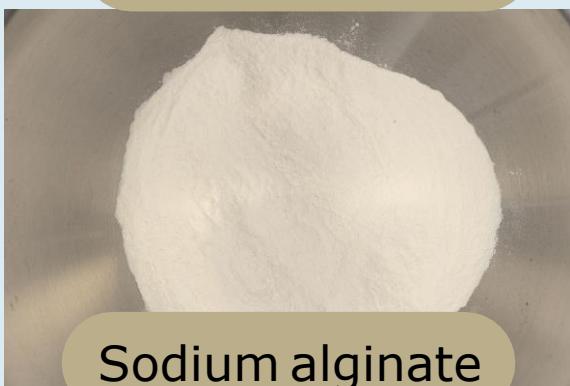
Pigments



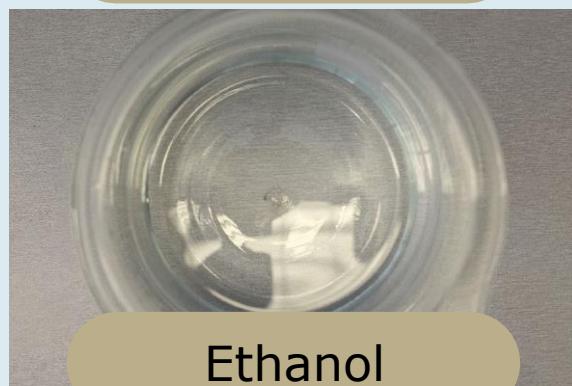
Tapioca starch



Stearic acid



Sodium alginate



Ethanol



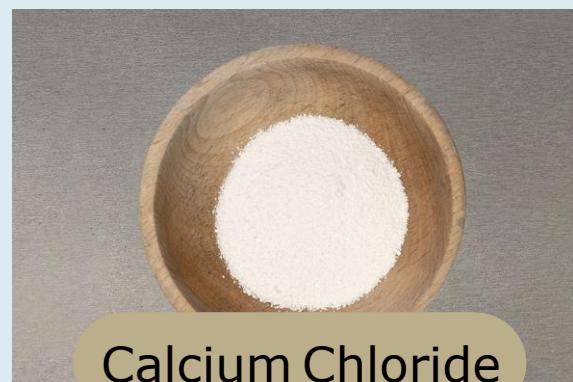
Water



Dehydrated  
liquid shampoo



Menthol

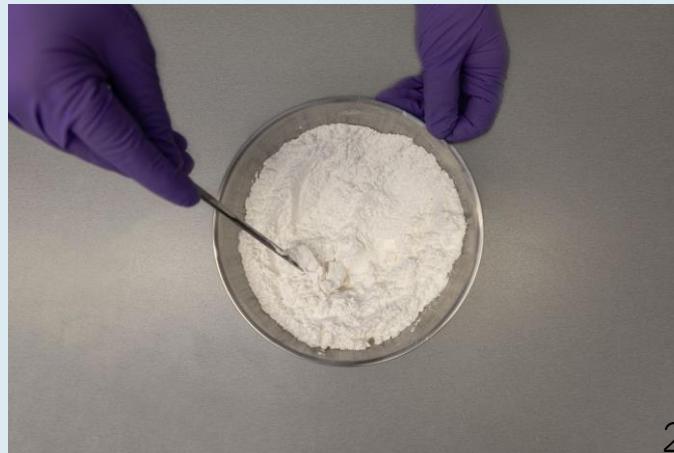


Calcium Chloride

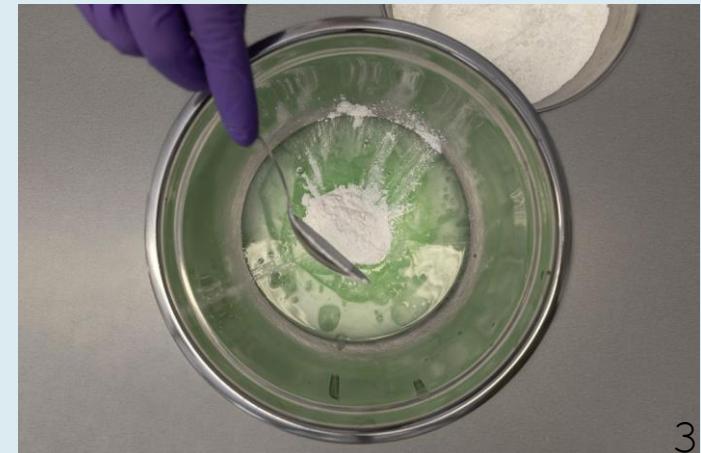
# Mixing of the shampoo dough



1



2



3

1

750 g of dehydrated  
shampoo (water  
content below 40%).

2

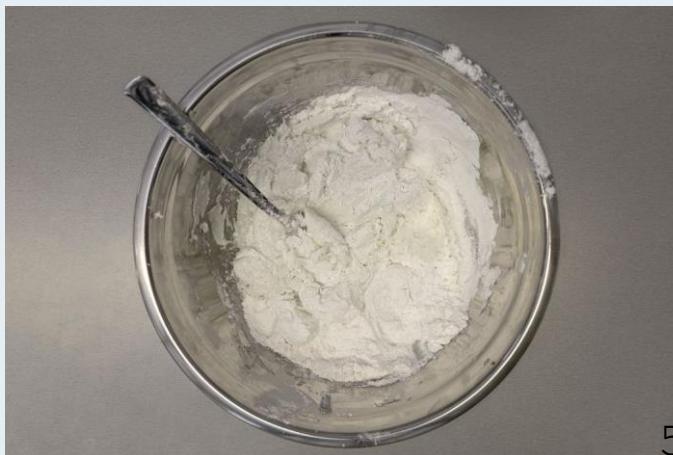
Mix 500 g of  
Tapioca  
starch.

3

Add mixed  
powders to  
shampoo; approx.  
1/3 of at the time.



4



5



6



7

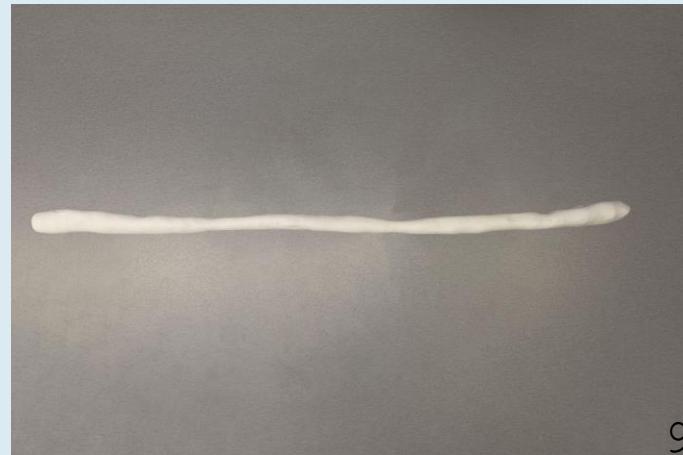
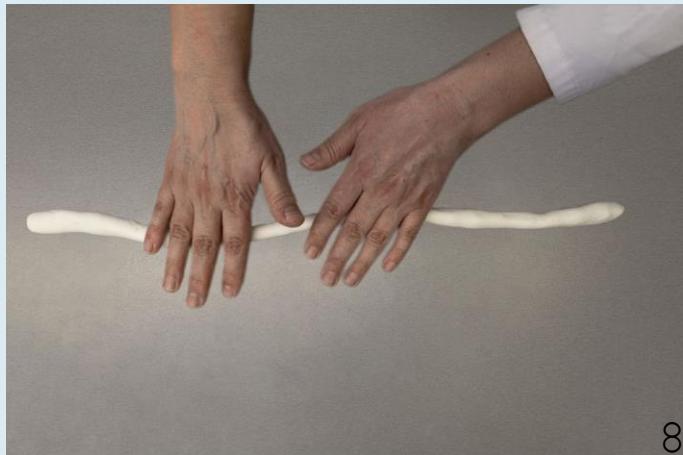
First, mix the ingredients with a spoon, then knead with your hands.

4-6

The shampoo dough is ready when it no longer sticks to your hands or the bowl.

# Making of shampoo balls via balls machine

Machine



8

9

10

8-10

Take approx. 30g of the dough and roll it into a 30cm-long shape with a diameter of about 2 cm.



11



12



13

11-13

Add some tapioca starch to the ball machine, then place the 30 cm shampoo dough inside. Gently press the dough to position it in place.



14



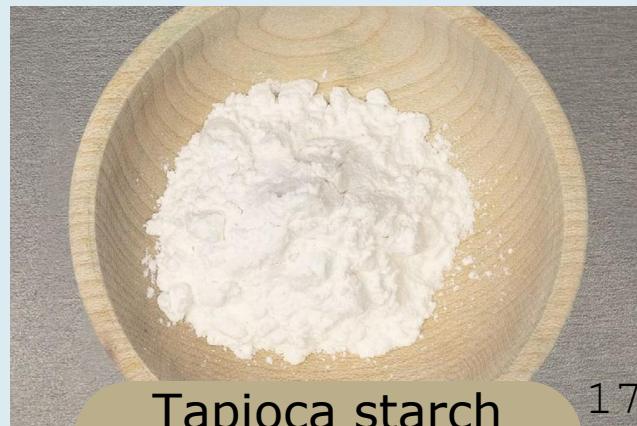
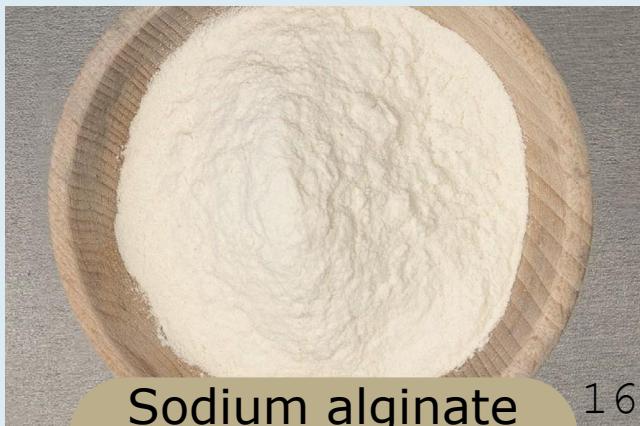
15

14-15

Turn the lever clockwise until all the shampoo balls drop out to the tray below.

# Preparing coating solution 1

Hand Blender

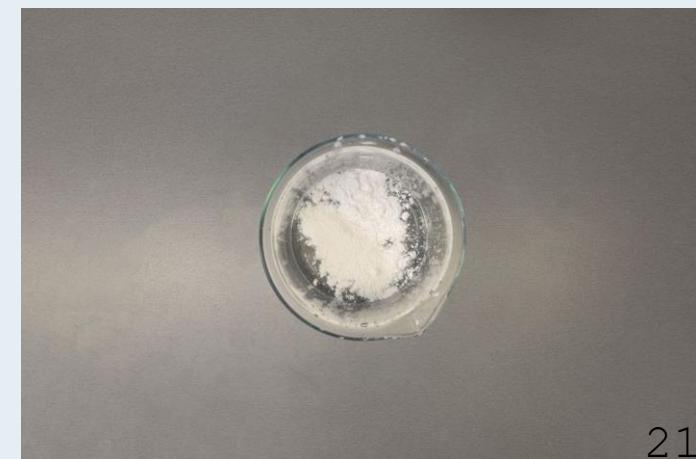




19



20



21

19-21

Add sodium alginate and tapioca starch to the water.



22



23

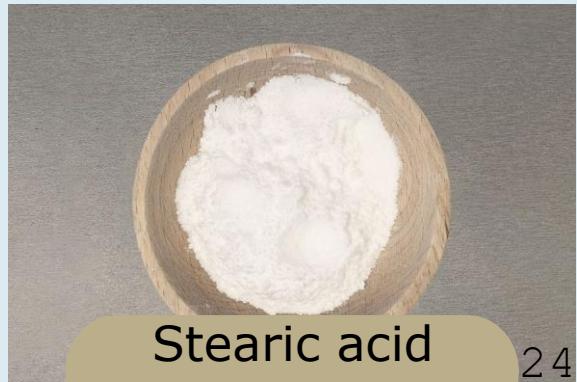
Blend until fully dissolved (approximately 3 minutes).

22

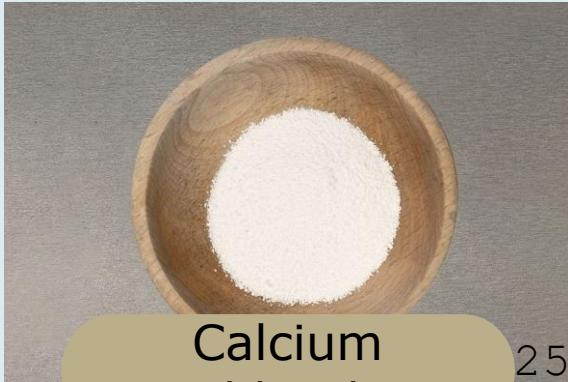
Coating solution 1.

23

# Preparing coating solution 2



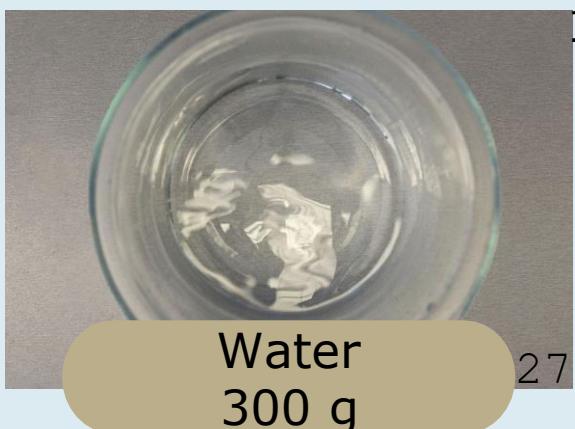
Stearic acid  
40 g



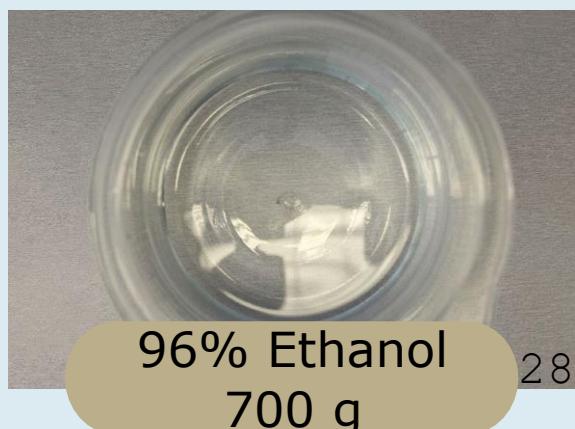
Calcium  
Chloride  
10



Menthol  
1 g



Water  
300 g



96% Ethanol  
700 g

## Preparing coating solution 2



29



30



31

29-31

Add all ingredients into one beaker.



32

32

Blend until  
fully dissolved.



33

33

Coating  
solution 2.

# Coating the shampoo balls with pigments



34

Add 3 tablespoons of Coating Solution 1 to a small wooden bowl.



35-37

Wet the sieve with Coating Solution 1, then add the shampoo balls.



38



39



40

38-40

Place the shampoo ball to the wooden bowl with pigment and start swirling until the pigments covers the surface.



41



42

41-42

You can repeat the steps 38-40 for multiple pigments.



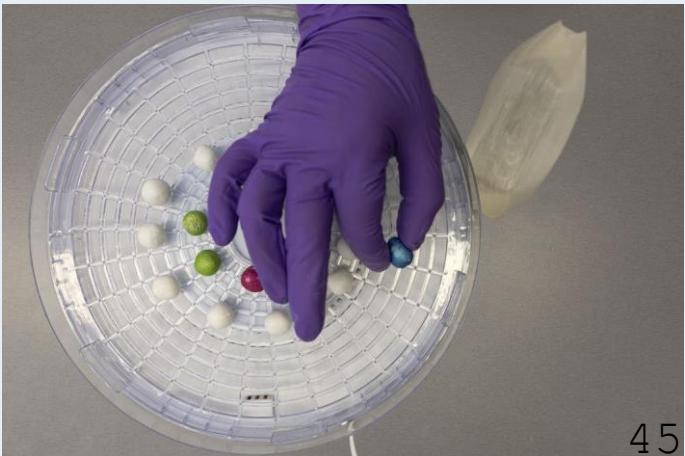
43



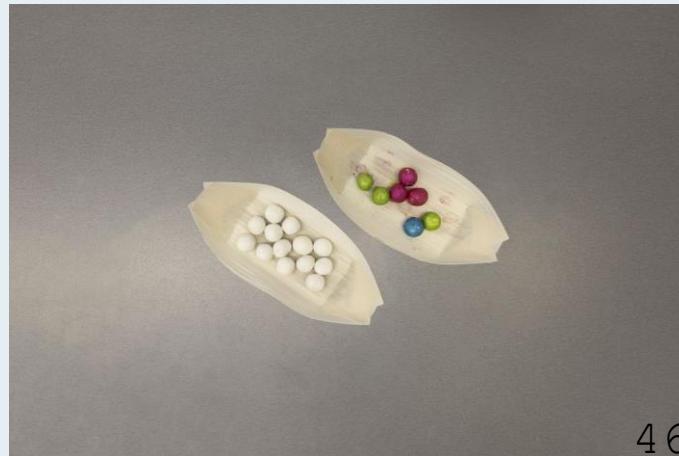
44

43-44

Using wooden spoon gently place ball into coating solution 2. Take it out with sieve after at least 15 seconds.



45

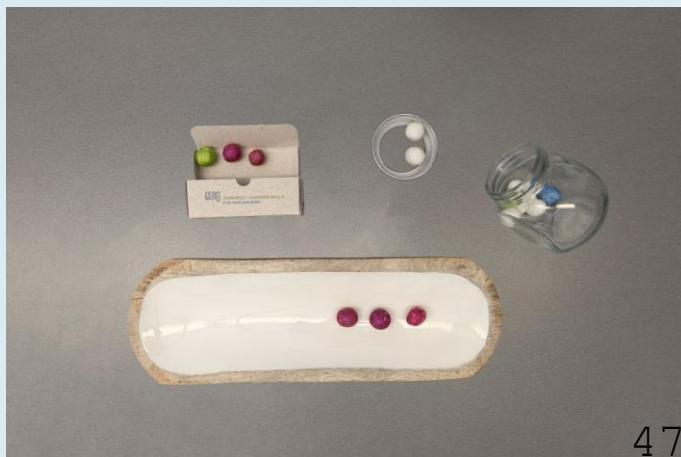


46

45-46

Place the coated shampoo  
balls on a dehydrator/dryer  
and dry them for 30 minutes  
at 35°C.

# Zero-Waste Packaging Options



47



48



49

47      Zero-Waste  
Packaging options.

48      Refillable container  
– for home use.

49      Paper box –  
ideal for travel.



# GIVE US FEEDBACK!



  
Funded by  
the European Union

Gender dimension  
was considered in  
creation of this  
document. The  
colors and fonts  
used are dyslexia-  
and ADHD-friendly.

## MACHINE



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OTHER DIY  
GUIDELINES**

## STANDARD



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