

# How to make solid EM Waste Oil Soap(EM Solid Soap)

## MATERIALS



Waste Cooking Oil  
3.3L



Lye/Caustic Soda  
(Sodium Hydroxide)  
450g



Activated EM-1(or  
EM rice rinsed water)  
1L



**A** Bowl  
(2L or more is  
recommended  
for mixing the lye)



EM Ceramics Powder  
(e.g. EM Super Cera)  
100g



**B** Container  
(10L or more is  
recommended for  
for mixing the lye and  
waste cooking 0:1)



Milk (or Juice) cartons  
5 pieces per 1L



## PROCEDURE

- 1** Pour 450g of lye into a container **A**



\*Always Put on gloves at work.

- 2** Add Activated EM-1 (or EM rice rinsed water) slowly into the container **A** and mix in lye.



\*Be very cautious as lye emits lot of heat and fumes when mixed with water

- 3** Stir the lye mixture with a stick blender and let it cool down to between 35-40 °C.



\*Add EM Ceramics Powder at this point.

- 4** Pour 3.3L of waste cooking oil in the container **B**.



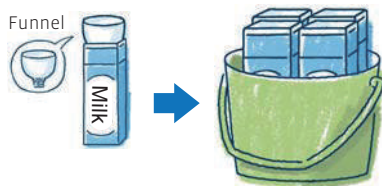
- 5** Slowly pour the solution **3** into the container **B** and mix them (take 5-10 minutes to pour the solution) in the container **B**.



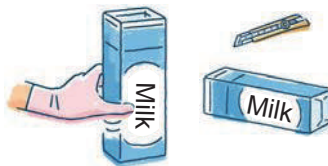
- 6** Stir the mixture with a stick blender until it looks like thick pudding (about 15-30 min).



- 7** Pour the mixture into the plastic or paper molds.



- 8** Let the soap mixture sit at room temperature for 12 hours to 3 days. Remove the soap bar from the molds before the soap becomes completely hard



※They should pop right off, but you may need to twist the tray a little so that they may come off.

- 9** Cut the soap bar into pieces and allow to sit for full 4 to 6 weeks to cure and finish the saponification process.



## NOTE

1. Take a great care of handling lye because the lye is a drastic medicine and can cause burns.
2. Put on the rubber gloves and wear long sleeves. Make sure you are working in a well ventilated area. Avoid the aluminum or copper tools and use stainless steel, enameled or plastic containers instead.
3. Wash your hands immediately with water if touched the mixture by mistake.
4. Making soap in the warm season is ideal.
5. The soap needs to sit in the air for a month in order to neutralize alkaline in the soap (stage **9**)



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