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MAKE YOUR OWN SOAP

AN AID TO EXTENSION AND VILLAGE WORKERS IN MANY COUNTRIES

Federal Extension Service, U.S. Department of Agriculture, in cooperation with Agency for International Development, U.S. Department of State

MAKE YOUR OWN SOAP

This is for

YOU

The Home Economics Extension Worker

or

The Village Worker

The information in this booklet is based on experiences of extension workers and health workers in many countries. All recipes have been tested in a home kitchen with many types of fat. A good method any homemaker can follow has been developed. You'll find ideas to help you teach families how to make soap at home.

Use this material in any way best suited to your needs.

Issued November 1965

Appreciation is expressed for assistance from: health, sanitation, home economics and information personnel of the Agency for International Development; specialists in the Federal Extension Service; and staff members of other agencies.

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WHY MAKE SOAP AT HOME?

We need soap to keep our bodies, clothing, and surroundings clean. Water alone does very little cleaning.

Soap is made of fats and lye. When soap is mixed with water it froths to form a lather. This lather washes out dirt.

You can make soap at home. Usually just enough is made for the family to use. Sometimes homemakers make soap and sell it.

Making soap at home is a good way to use fats and oils you otherwise might waste. These are fats and oils that have been used in cooking or are too strong or sour for table use.

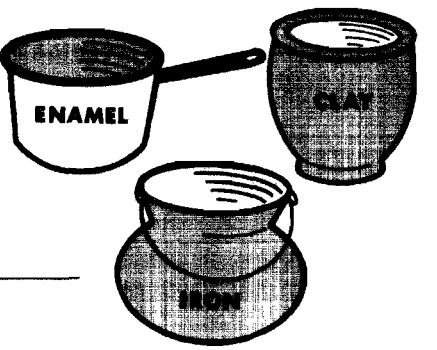
If you plan to make soap at home consider the following:

- Is good soap sold in the markets?
- What is the price?
- Is it cheaper to buy soap than to make it at home?

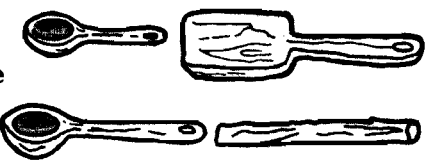
Soap is not hard to make. You will get satisfaction from turning waste oils and fats into pure, clean soap. You can make toilet soap as well as laundry soap.

For good results, follow the directions in this booklet carefully.

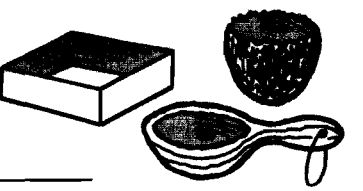
EQUIPMENT NEEDED



1. **Bowls, buckets or tubs should be made of enamel, iron or clay. Never use aluminum. Lye destroys aluminum.** _____



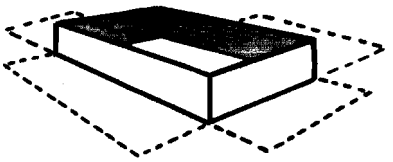
2. **Spoons, paddles or smooth sticks for stirring should be made of wood or enamel.** _____



3. **Containers for molding soap can be made of wood, enamel, or cardboard. They can be any size, but 2 or 3 inches deep is best. Gourds or coconut shells make good molds.** _____

4. **Measuring cups work best if they are made of glass or enamel. Never use aluminum.**

5. **Material for lining the molds can be two strips of cotton cloth or waxed paper. One piece should be a little wider than your mold is. The other should be a little wider than your mold is long. Make them long enough to go inside the mold and extend over the edges for several inches. This lining will help you remove the soap from the mold.**



TO MAKE SOAP, YOU NEED . . .

1. **Oils**—You can use olive, palm, coconut, cottonseed, maize, soybean, groundnut, safflower, or other vegetable oils. Mineral oil will not make soap.

2. **Fats**—Use only fats that you cannot use in cooking. Surplus mutton, beef, and pork fats are the chief ones used. These are known as hard fats.

   Soap can be made of either fat or oil alone, but the best soap is made from a mixture of oil and hard fat. Oil alone does not harden easily, and hard fat alone is likely to make soap grainy. Chicken fat is like oil and should be mixed with a hard fat for better results.

3. **Lye (caustic soda)**—Lye is sold in the markets of most countries and is cheap. You need pure lye to succeed in making soap. Get the best quality you can buy.

Lye Is Poison - It Burns

Keep vinegar near. If lye spatters on someone's skin, wash with water at once and then wash with vinegar. If someone swallows lye, give him as much lemon juice, orange, rhubarb, grapefruit, or vinegar as he will take. Call a doctor. *Keep lye away from children.*

4. **Soft water**—You can collect rainwater, store it in a jar, and use it when you need it. If local water is hard, you can make it soft by adding 1 tablespoon of lye to 1 gallon of water and stirring. Let it stand several days. Pour off water from the top and use it for making soap. But throw away the water and particles that collect in the bottom of the jar.

5. **Borax**—Borax is not necessary, but it is sometimes used to improve the appearance of soap. It also helps make more suds when you use the soap.

6. **Perfume**—Perfume is not necessary either, but you may want to use it for toilet soap. For 9 pounds of soap, add any one of the following:
   - 4 teaspoons oil of sassafras
   - 2 teaspoons oil of wintergreen
   - 2 teaspoons oil of citronella
   - 2 teaspoons oil of lavender
   - 1 teaspoon oil of cloves
   - 1 teaspoon oil of lemon

   Add the perfume just before your soap is ready to pour into molds. If you make only one bar of soap, a few drops of perfume is enough.

SOAP RECIPE

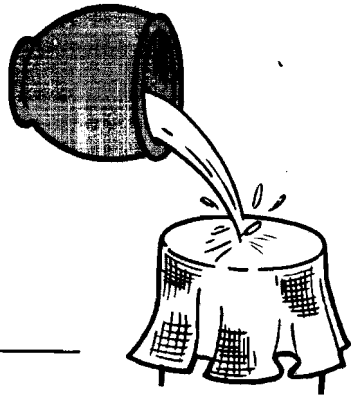
To make about 9 pounds of soap:

- 13 cups of clean, hard fat or oil (may be a mixture of the two).
- ¼ cup borax (optional)
- 1 can of lye (13 oz. or 2⅔ cups).
- 5 cups soft water.

To make one bar of soap:

- 1 cup clean fat
- 1 teaspoon borax (optional)
- 5 teaspoons lye
- ½ cup soft water

MAKING SOAP



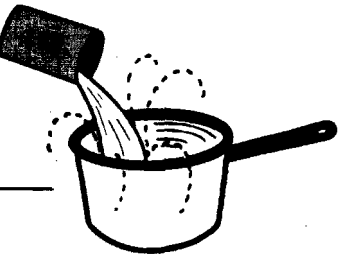
1. Clean your used fat. If it has food crumbs or small particles in it, strain them out. Place the fat or oil in a kettle, then add an equal amount of water. Boil this mixture. Remove the kettle from the fire, strain the mixture, and stir. Add 1 quart of cold water for each gallon of hot liquid. Do not stir. Let it stand until it is cold. Remove the cold fat from the top. If the fat is sour, add 1 quart of vinegar to the water for the large recipe and ½ cup of vinegar for the one-bar recipe. _____

2. Melt the fat and measure it carefully.

3. Measure the soft water.

4. Measure the lye. Do not let it touch your hands or clothes. It burns. _____

5. **Add the lye to the water.** Always do it this way. When you do this the mixture bubbles and spatters. It becomes very hot. Be careful not to let it get on your skin.



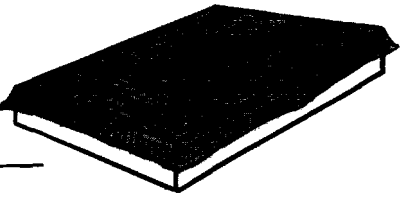
6. Cool the lye mixture. When you are ready to use it, test its temperature by putting your hand under the container. It should be the same temperature as your body. Never put your finger in the lye mixture.

7. Heat the fat or oil until it melts. Cool it to body temperature. If you use borax, add it now.

8. Mix the lye and water into the fat or oil. This is the most important part of making soap. The lye mixture should be dropped or poured in a thin stream, very slowly into the fat. Stir slowly, steadily, and in one direction.

9. Continue stirring until your spoon or paddle makes a track in the mixture. This usually takes about 30 minutes, but if you use only oil it may take several hours. After stirring for 30 minutes, you can put the mixture aside and stir it only every 15 or 20 minutes until it does thicken.

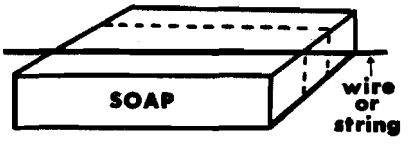
10. Line your molds while the soap is cooling. Put the lengthwise strips in, then lay the crosswise strips in the opposite direction.



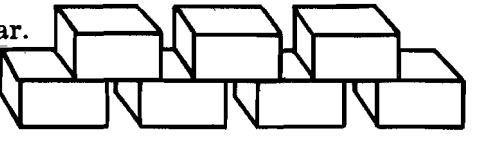
11. Pour the soap mixture into the lined molds. Do this gently. Let it stand in the mold for 48 hours. Keep it at room temperature in a dry place.

12. Remove the soap from the molds in 48 hours if it is firm. Turn the mold upside down to get it out. If it is not firm, let it stand until it is.

13. Cut the soap into bars the size you want. You can do this with a thin wire, a string or a knife.



14. Pile the soap bars so air can circulate around each bar. Let them stand in a dry, warm (not hot) place for 2 to 4 weeks.

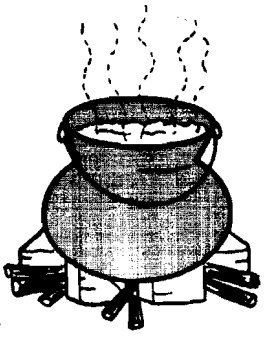


15. Good soap should have no grease showing on the bottom or top of the mold. Test your soap by touching it lightly with your tongue. If it has too much lye it will sting. Soap should also look nice and have a clean, fresh odor. It should curl when shaved, wash clean, and make suds.

If you want a fine, smooth soap, or if you are making toilet soap, follow these extra directions:

Make regular soap. Let it cure 48 hours. Then cut or shave it into fine pieces.

Add 1 cup of water for every 2 cups of oil or fat you used. Boil the mixture about 10 minutes or until it falls off of the spoon in a sheet. Stir as it cooks. Add perfume now if you want it. Pour the soap mixture into lined molds again and let it cool. After 48 hours, cut it into bars and store it in a dry, warm place for 4 weeks.



IF YOU HAVE "BAD LUCK"

There is no such thing as a failure in making soap because anything that goes wrong can be corrected. However, two things can make your soap unsatisfactory:

1. A curdled soap may result if you use rancid or salty fat.
2. It may separate if you use too cold or too hot a temperature, stir the soap too vigorously, or do not mix it thoroughly.

To correct:

1. Cut or shave the soap into a kettle. Add the lye that separated out.
2. Add 5 pints of water to the large recipe. Add ½ cup to the one-bar recipe.
3. Melt the soap with gentle heat. Stir it occasionally.
4. Raise the heat and boil the soap gently until it becomes thick and syrupy and drops in sheets from the spoon.
5. Pour it into a mold and cover it.
6. Let it stand 24 to 48 hours, then cut and store it. (Do not be afraid of adding too much water. You can boil it out.)

DEMONSTRATIONS

Show how to:

- Clarify fat
- Make soap
- Reclaim soap
- Store soap
- Test soap
- Refine soap

Suggestions to help you give a good demonstration:

Prepare yourself carefully.

Practice how to make soap ahead of time.

Teach how to make one bar of soap first.

Know more about the subject than you plan to teach.

Outline your demonstration step by step and write down exactly what you will say at each step.

Practice your demonstration until you can do every step without hesitation.

Use only equipment and materials available to the families you are teaching.

Arrive at your meeting place ahead of the women and arrange all materials for your demonstration neatly and in the order you will use them.

Plan for your audience to be seated so that everyone can see and hear.

Ask one of the women to help you. This helps to develop leadership.

Evaluate your own demonstration

1. Did the women learn how to do what you demonstrated?
2. What evidence was given that the women plan to carry out this practice in their homes?
3. How could this demonstration be improved?

"SECRETS" IN SOAP MAKING

1. Measure carefully.
2. Have lye and water mixture only lukewarm or at body temperature. The fat can be slightly warmer than the lye mixture.
3. Add lye and water mixture to fat very slowly.
4. Stir slowly and always in the same direction.
5. Do not give up if your soap is grainy or separates. You can easily fix it up.