

# 8. Making soap

Soap is important in preventing the spread of disease by helping people keep themselves, their clothes and their surroundings clean. In some places, soap is unavailable or expensive. This Technical Brief gives some practical guidelines on a cheap, easy way to make soap on a small scale, using ingredients which are available locally.

## The principle

Soap is made by combining oils and fats with an alkali. The alkali breaks down the oils and fats into smaller molecules which are soluble in water. The resulting mixture is called soap. The process is called saponification.

## Basic recipe

4 parts oil / 3 parts caustic soda / 2.5 parts water / 13 parts ash  
 30 parts oil / 30 parts caustic soda / 12 parts water / 12 parts ash  
 12 parts oil / 5 parts caustic soda / 5 parts water / 5 parts ash

## Choosing oils and fats

Choose oils and fats which are available locally and are of good quality. Avoid rancid oils and fats. The most common oils and fats used for soap making are palm oil, coconut oil, and tallow.



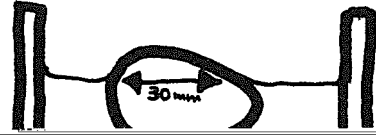
24 parts oil / 3 parts caustic soda / 24 parts water / 12 parts ash  
 32 parts oil / 32 parts caustic soda / 12 parts water / 12 parts ash  
 \* Use 1 part caustic soda for every 10 parts oil.

Category	Composition	Type of Soap	Ratio of caustic soda: oil
3 parts oil / 3 parts caustic soda / 2.5 parts water / 13 parts ash	30 parts oil / 30 parts caustic soda / 12 parts water / 12 parts ash	12 parts oil / 5 parts caustic soda / 5 parts water / 5 parts ash	1
24 parts oil / 3 parts caustic soda / 24 parts water / 12 parts ash	32 parts oil / 32 parts caustic soda / 12 parts water / 12 parts ash		1
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# Making soap

## Alkalis

### To make caustic potash



The lye is the

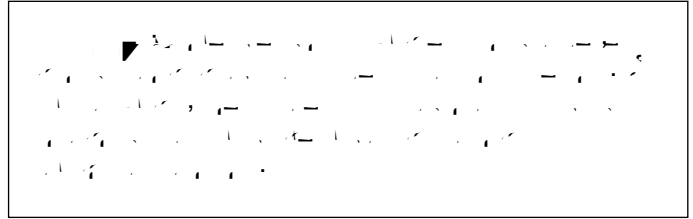
### Strength of alkali

4.53 2.5  
4

Water

1. Measure 150 ml (1/2 cup) of water into a measuring cup.  
2. Pour the water into a large bowl.  
3. Add 150 ml (1/2 cup) of water to the bowl.

4. Stir the mixture with a wooden spoon until the water is completely mixed.

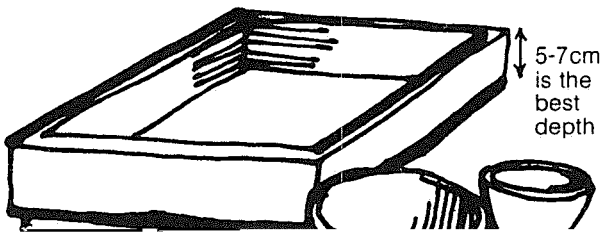


Equipment

1. A large bowl  
2. A measuring cup  
3. A wooden spoon

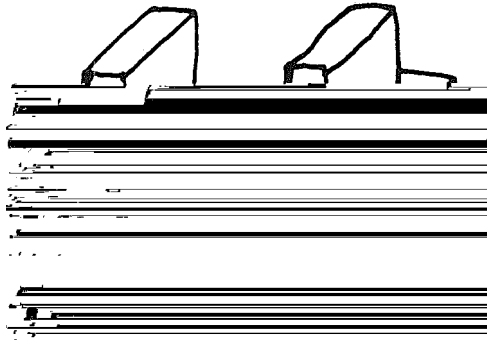
Method

1. Measure 150 ml (1/2 cup) of water into a measuring cup.  
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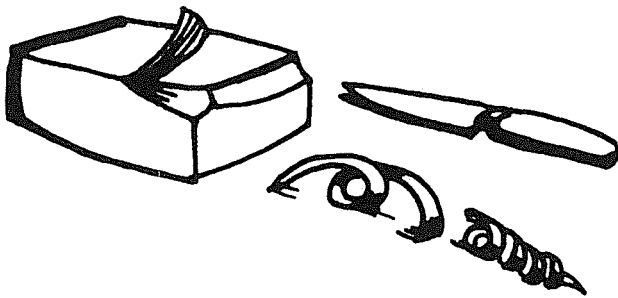


# Making soap

- 1. The soap is made in a mold.
- 2. The soap is cut into bars.



- 3. The soap is packed in a box.
- 4. The soap is ready for sale.



## Perfume

- 1. The soap is made in a mold.
- 2. The soap is cut into bars.
- 3. The soap is packed in a box.
- 4. The soap is ready for sale.
- 5. The soap is ready for sale.
- 6. The soap is ready for sale.
- 7. The soap is ready for sale.
- 8. The soap is ready for sale.
- 9. The soap is ready for sale.
- 10. The soap is ready for sale.



## Problems?

- 1. The soap is made in a mold.
- 2. The soap is cut into bars.
- 3. The soap is packed in a box.
- 4. The soap is ready for sale.
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## Using dirty or rancid fat

- 1. The soap is made in a mold.
- 2. The soap is cut into bars.
- 3. The soap is packed in a box.
- 4. The soap is ready for sale.
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## For more information

1. *Small-scale soap-making: a handbook*, ...
2. *The preparation of soap*, ... 101 ...
3. *Soap manufacture by the cold process*, ...
4. *Make your own soap: an aid to extension and village workers in Ghana*, ... 3 ...
5. *VITA Village Technology Handbook*, 1 15 ... 2220 ...
5. ... 1 3 ...