

11. Put 15 glasses of sieved coconut oil in a separate basin.
12. Add 2 ml of perfume and 4 ml of preservative into the coconut oil in a basin. (This is Mixture 2).
13. Pour Mixture 1 into Mixture 2 and continue stirring until the whole mixture thickens and turns shiny brown in colour. This is now a jelly-like soap.
14. Place the plastic moulds on a clean wooden table covered with a clean plastic sheet. The sheet prevents the soap from sticking on the wooden table and eases detachment of soap from the mould.
15. Fill the prepared moulds with the jelly-like soap (Plate 5), and leave to dry for three weeks.



Plate 5. Pouring jelly-like soap into the moulds

16. Package the set Aloe soap (Plate 6) in labelled material.



Plate 6. Set Aloe soap

Caution: Wear protective gear and work outdoors while making soap

This publication was compiled using information collected from 'Kamasaiwa Self-help Soap Production Group' in Koyonin Village, Baringo County.

CADEP-SFM documented this information to enhance knowledge sharing in Africa. CADEP-SFM therefore acknowledges all institutions involved in development and promotion of this good practice.

For more Good Practices and Case Studies visit:
www.kefri.org/cadep

For more information contact the Director:

Kenya Forestry Research Institute
P. O. Box 20412 - 00200 Nairobi, Kenya
Telephone: +254 722 157 414 / 734 251 888
E-mail: director@kefri.org
Website: www.kefri.org



Making soap using *Aloe vera*



CADEP-SFM Good Practice No. 2

January 2021

Introduction

Aloe vera grows well in arid and semi-arid areas and prefers well drained, light sandy to loamy soils. The species is exotic in Kenya and is only found under cultivation.

Aloe vera is mainly propagated from root suckers. To maximize productivity, it is recommended that Aloe plants be grown at a spacing of between 60 cm x 40 cm or 100 cm x 100 cm. Well managed Aloe crop, planted at a spacing of 100 cm x 100 cm can yield mature leaves that weigh up to 800g each, with a length of between 60 cm – 100 cm (Plate 1).

Aloe vera is mainly used for medicinal and cosmetic purposes. The Aloe is therefore one of the ingredients in products such as; beverages, skin lotion, soaps, cosmetics, and ointments for minor burns. The plant can also be grown for land reclamation and landscaping.



Plate 1. *Aloe vera* plantation

Equipment and ingredients for soap production

The equipment used in Aloe soap making include; plastic moulds, basins, gloves, wooden spoon, glass, graduated tube, masks, sieves, protective eye glasses, dust coats, plastic sheet, knife and table. The ingredients required are; *Aloe vera* gel, sodium silicate, caustic soda, coconut oil, perfume, preservatives and clean water.

Steps in Aloe soap making

1. Harvest 4 healthy *Aloe vera* leaves from outer section of the plant, cutting at the base of the leaves.
2. Wash the harvested leaves thoroughly with clean water to remove dust and other impurities.
3. Peel the thorny sides of the leaves using a knife.
4. Put 4 litres of water in a clean basin.
5. Chop the thornless leaves into small pieces into a bucket containing clean water (Plate 2).



Plate 2. Chopping Aloe leaves into small pieces

6. Hand squeeze the chopped leaves to extract the gel (Plate 3).



Plate 3. Extracting gel by squeezing the chopped *Aloe vera* leaves

7. Sieve the extracted gel.
8. Pour 5 glasses of sieved gel into another clean basin.
9. Add 2 glasses of caustic soda to the sieved gel and stir the mixture continuously in one direction, using a wooden spoon (Plate 4). Stir for about 5-10 minutes until the temperature reaches 100°C.



Plate 4. Stiring caustic soda mixed with Aloe gel

10. Add 2 glasses of sodium silicate to the mixture of gel and caustic soda to reduce the heat of the mixture to room temperature. (This is mixture 1).