

# Formulation And Evaluation Of Aloe Vera Herbal Soap

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**Abstract—** Aloe vera is a natural product which are used in prevention and treatment . of various skin problems. Aloe vera is derived from Arabic words Aloe means Shinning bitter substance and Vera means True. It is belongs to the family of Alliaceae . Aloe vera is also known as Ghrith kumari and many peoples which is used for wellness of health and medicinal purpose. Its involves the health benefits of wound healing, treating burns, minimizing front bite damage , protect skin damage from X- rays, Lung cancer, Reduce blood sugar in diabetes and improve immune system. Aloe vera soap as contains various medicinal properties like, anti-septic, anti-microbial , anti-viral , anti-oxidant, anti-fungals .

Aloe vera plant is triangular, fleshy leaves with serrated edges, yellow tubular flowers and fruits that contains numerous seeds. Each leaf composed of three layer: The first is inner clear gel that contains 99% water and rest is made of glucomannans, amino acids , lipids, sterols, vitamins. The middle layer of latex which is the bitter yellow sap . The outer thick layer of 15 -20 cells called as rind . It is use for several skin disease like acan.

## Introduction:

Aloe vera soap is made with natural ingredients and is gentle on the skin. Aloe vera herbal bar soap can be used to cleanse the face, remove makeup, and moisturize the epidermis. It can also be used to treat acne, eczema, and other skin conditions. The botanical name of Aloe vera is Aloe barbadensis miller. It belongs to Asphodelaceae (Liliaceae) family, and is a shrubby or arborescent, perennial, xerophytic, succulent, pea- green color plant. It grows mainly in the dry regions of Africa, Asia, Europe and America. The plant has triangular, fleshy leaves with serrated edges,

yellow tubular flowers and fruits that contain numerous seeds. Each leaf is composed of three layers: 1) An inner clear gel that contains 99% water and rest is made of glucomannans, amino acids, lipids, sterols and vitamins. vitamin Aloe vera has been traditionally used to treat skin injuries (burns, cuts, insect bites, and eczemas) and digestive problems because its anti-inflammatory, antimicrobial, and wound healing properties

## Collection of Herbal plant Materials:

The herbal aloe vera soap are prepared by various plants like Aloe vera gel, Olive oil, Coconut oil, sunflower oil, Castor oil etc.

## Aloe vera gel:



**Biological source:** It is collected from dried latex of leaf.

**Family:** Liliaceae

**Morphology of Aloe vera:**

**Height** - 60 to 100 cm **Leaves** - Thick and fleshy

**Colour** - Green to grey green

**Width** --- 10 cm

**Uses :**

- It is used to cure skin wounds.
- Its boiled juice to treat hair falls.

- Aloe vera gel is used to protect radiation burn in skin.

#### Benefits of aloe vera gel :-

It also covers some of the risks associated with use. It contains healthful plant compounds. ...

It has antioxidant and antibacterial properties. ...

It accelerates wound healing. ...

It reduces dental plaque. ...

It helps treat canker sores. ...

It reduces constipation. ...

It may improve skin and prevent wrinkles. ...

It lowers blood sugar levels

#### Olive oil:



**Biological source:** It is liquid fat which is obtained for Olives.

**Family:** Oleaceae

#### Uses:

Olive oil is used to prevent skin ageing.

It is used as a moisturizer.

It is used as a make up removal.

a) It is used to cure skin wounds.

b) Its boiled juice to treat hair falls.

c) Aloe vera gel is used to protect radiation burn in skin.

#### Benefits olive oil :-

Olive Oil Is Rich in Healthy Monounsaturated Fats. ...

Olive Oil Contains Large Amounts of Antioxidants. ...

Olive Oil Has Strong Anti-Inflammatory Properties. ...

Olive Oil May Help Prevent Strokes. ...

Olive Oil Is Protective Against Heart Disease. ...

Olive Oil Is Not Associated With Weight Gain and Obesity.

#### Coconut oil:



**Biological source:** It is obtained for a matured coconut from *Cocos Nucifera* L.

**Family:** Palmae

#### Morphology of coconut oil:

**Temperature** — Below 23°C **Melting point** — 23°C — 26°C

**Soluble at 60°C** - Alcohol and highly soluble in chloroform

#### Uses:

- Coconut oil is used as a moisturizer.
- It is used as a Body scrub.

#### Benefits of coconut oil :-

May work as a quick source of energy.

May have antimicrobial effects.

May help reduce hunger.

May help reduce seizures.

May boost skin health.

May protect your hair. ...

May improve oral health

#### Sunflower Oil:



Fig. Sunflower Oil

**Biological source :** It is collected from the seed of sunflower.

**Family:** Asteraceae

#### Uses:

- Sunflower oil is mainly used for cooking oil.

#### Benefits of Sunflower:

The vitamin E in sunflower oil has antioxidants that help with premature aging and wrinkles, keeping your skin looking young and fresh.

Sunflower oil also contains linoleic acid, which helps your skin retain moisture so it . becomes less dry.

### Castor Oil:



**Biological source:** It is obtaining from the pressing of seeds of castor oil plant (*Ricinus Communis* L.).

**Family:** Euphorbiaceae

**Morphology of Castor oil:**

**Color** — Colorless **Odour** — Faint

**Soluble** — Alcohol and highly soluble in chloroform  
**Uses:**

- . It is used to promote to the skin health
- . castor oil is used to reduced puffiness.

### Benifits of castor Oil:

Preventing wrinkles. Castor oil contains antioxidants that fight free radicals . in your body.

Fighting acne. Castor oil has antibacterial properties. ...

Reducing puffiness.

Moisturizing.

Soothing sunburn.

Fighting dry lips.

Promoting overall skin health.

### Ingredient used in the formulation of aloe vera soap:

- 1 Distill Water 35.5gm
- 2 NaOH 27.5gm
- 3 fresh aloe gel 28.5gm
- 4 olive oil 85gm
- 5 coconut oil 42.5gm

6 sunflower oil 28.5gm

7 Tallow 28.5gm

8 castor oil 14gm

Physico-chemical parameters of formulation :Chemical parameter standard values

1. pH 6.5- 7.5

2 . % free alkaline 0.25

3 .foam height(cm) 2.5- 3.0

4.foam retention (min.) 0.5- 2.5

5.alcohol insoluble matter 18.0

6.high temperature stability 45 C

### Aloe vera facial soap

This soap was designed to be extra gentle and is suitable for use as both a facial and body soap.

Its a small batch size that exactly fills 5 of the 6 cavities in the oval silicone mold by Bramble Berry. (You could also double the recipe to fit in a loaf mold like THIS Crafters Choice one.)

If you don't have fresh aloe, look for bottled aloe vera liquid which you can use in place of water in any soap recipe.

### Equipment

Safety goggles

Rubber gloves

Wooden or plastic soap mold

Cucumber peeler

Large stainless steel or enamel pot

Weighing scales

Hand stick blender

Two 3 qt size plastic pitchers

Two wooden spoons

Measuring cup, 2 or 3-cup size

### Directions to make aloe vera soap

1. Put on goggles and gloves.

### EXTRACT FRESH ALOE for soapmaking



2. Weigh the water into a stainless steel or heavy duty plastic container.

3. Weigh the lye into a small cup.

4. Sprinkle the lye into the water and stir well.

5 If using, stir in the green clay and chlorella powder.

6. Cool the lye solution in a safe spot for 30 — 40 minutes, or until about 100 to 115 degrees F.

7. Stir in the sodium lactate, if using.

Melt the tallow (or butter) and coconut oil, then combine with the remaining oils.

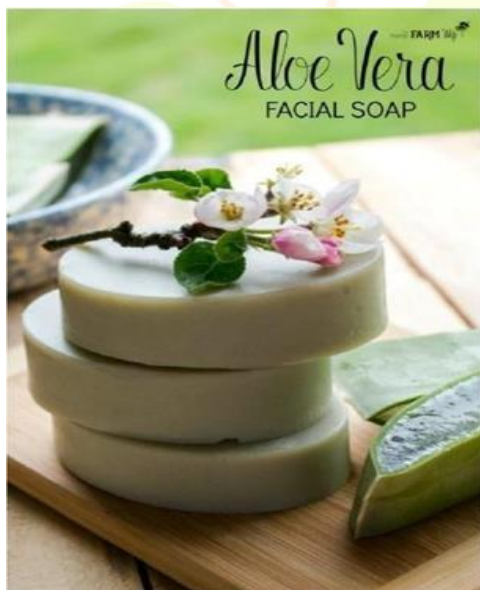
8. Add the rosemary oleoresin extract (ROE) to the oils, if using.



9. Use an immersion blender to thoroughly blend the fresh aloe gel into the oils.
10. Pour the cooled lye solution into the warm oils/aloe mixture.
11. Use a combination of hand stirring and brief short bursts of the immersion blender to mix until soap reaches trace.
12. Pour soap into molds.
13. Cover lightly with a sheet of wax paper, then a towel or blanket to insulate.
14. Keep the soap in the mold for 1 to 2 days or until easy to remove.
15. Cure the soap on sheets of wax paper in the open air for 4+ weeks before using.

### Uses of aloe vera Soap

Aloe Vera Soap For Acne & Pimples. Aloe Vera has antibacterial qualities that can . . . help to reduce and manage microorganisms that cause acne. You'll increase your . . . . . chances of having clear, acne-free skin by using aloe vera soap. This soap will remove . . . . . acne and cleanse clogged pores.



### Result :-

Aloe vera soap has many benefits for the skin. It is gentle, soothing, and can help to reduce . . . inflammation. It can also help to kill bacteria, making it a good choice for those with acne-prone . . . . . skin. Additionally, aloe vera soap can help to lighten the epidermis and fade scars and other . . . . . blemishes. works well for dry skin and gives you smooth and supple skin. Aloe vera is antimicrobial . . . Aloe vera contains saponins, which have a natural cleansing and antiseptic effect. This means that . . . aloe vera in soap is great for killing bacteria that cause breakouts. These antibacterial properties also . . . make

aloe vera a great choice to prevent infection of irritated skin.

### Conclusion:

This study confirmed that in addition to the traditional pastoral livelihood diversification strategy which is based on livestock and livestock products, the sample households were hunting alternative livelihood strategies including Aloe soap making. Households differed on the actual livelihood strategies adopted depending on the sex, age and family member participating in the Aloe soap making business. The sample households faced challenges due to recurrent drought, unusual settlements, expansion of farmlands, clan conflict, human capital (illiteracy & lack of appropriate skills). At the same time, Aloe soap production is restricted externally by the presence of input supply, fixed costs, lack of credit markets and the lack of infrastructures. As the Aloe soap value chain initiative was implemented to supplement the pastoral and agro-pastoral livelihood diversification strategies, the sample households had diversified their livelihood strategies to ensure survival and meet desired livelihood outcomes. The pursuit of Aloe based alternative livelihood

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