



# Formulation and Evaluation of Antifungal Herbal Soap Using *Acalypha Indica*

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## Abstract

Herbal cosmetics are very significance because of their good activity and without side effect. *Acalypha indica* (Kuppaimeni Afsar & Khanam (2016). It is an antifungal plant which plays an important role in treating skin problems caused by fungi like, *staphylococcus aureus* and *streptococcus* species. And also treat infections like Psoriasis, and Eczema. It helps in skin polishing, replenishing and rejuvenation, skin brightening, softening and smoothing, anti-acne and pimples. The method used for the selection of herbs is Randomized approach. In which the study was done for the Formulation and Evaluation of Antifungal Herbal soap using *Acalypha indica* Esimone (2008). The method used for Formulation of Antifungal herbal soap involves Melt and pour method. Different evaluation methods were used to examine the quality of created product.

**Keywords:** Antifungal herbal soap, *Acalypha indica*.

## INTRODUCTION

### *Acalypha indica*

*Acalypha indica* (Euphorbiaceae family) is one of the most frequently used herbs in the world with a long history of safe usage medicinal preparation. This plant is known for having several antifungal property that are highly effective and less toxic than the synthetic one. This property makes it great interest in the cosmeceutical industry.

**Parts used:** Leaves

**Uses:** Antifungal, Anti-acne, psoriasis and eczema

## METHODOLOGY

### Chemicals used

- Glycerine soap base, Lavender essential oil, Rose water.

- Collection and extraction:
- The leaves of the kuppaimeni is collected from the fresh plant and washed properly and dried.
- The extraction of the Kuppaimeni leaf mix in the mixture and extract its juice. This Extraction is best for the soap results Joshi (2008).

### Contents of the soap

- Soap base
- Lavender essential oil
- Kuppaimeni Kaur (2014).

### Kuppaimeni

Botanical name: *Acalypha indica*

Part typically used: Leaf

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Colour: Green

Constituents: Acalypha, clitorin, nicotin, biorobin, Tannins-B (Table 1).

Family: Euphorbiaceae.

### Process of Formulation

**Melt and pour process:** one of the easiest way to get into the hobby of soap making is to start with melt and pour process Mukherjee et al., (2018). Using a purchased soap base, you can experiment with mix in items, fragrance, colour and attractive soap moulds. It is suitable for other children with adult supervision.

- Chop up 12g of soap base into chunks and add it to the glass measuring cup, and microwave according to the package instructions. Alternatively you can melt the soap base in the top of a double boiler. Watch the soap carefully to avoid overheating it.
- When the soap is melted, gently stir in a few drops of color and fragrance, and add extract of kuppaimeni of about 15g and mix gently.
- Pour the soap into the molds and place them on a level surface.
- Allow the soap to cool completely, which usually takes at least an hour. When the soap is cool, pop it out of the molds and it is ready to use Reddy (2013).

- Any bars that are not being used immediately should be wrapped tightly in plastic wrap and stored in a cool, dry place Mukhopadhyay (2011) (Tables 2 & 3).

Kuppaimeni : Antifungal properties used to treat psoriasis.

Rose water: Cooling agent emollient.

Lavender oil: Flavouring agent.

## HERBAL SOAP EVALUATION

### Organoleptic Evaluation

Colour: Odour

Appearance: Dark green

Fragrant: Good

### Physical Evaluation

**Physical evaluation:** Physical parameters such as color and appearance were checked [5].

**Measurement of pH:** The pH was determined at room temperature 25°C by using the PH paper. It was found to be basic in nature in nature Ruckmani (2014).

**Foam height:** Dissolve 0.5gm of prepared soap in distilled water then make up the volume up to 50ml with distilled water in 100ml measuring cylinder. Close the opening with hand and shake it for 5 minutes. Measure the foam height, above the aqueous volume Sharma (2015).

**Table 1:** Formulation.

CHEMICALS	SOURCE
Glycerine soap base	Laboratory reagent
Lavender essential oil	Laboratory reagent
Rose water	Laboratory reagent
Kuppaimeni	Leaves

**Table 2:** Process of formulation.

INGREDIENTS	QUANTITY
Kuppaimeni	15g
Lavender essential oil	1ml
Rose water	4ml
Glycerine soap base	12g

**Table 3:** Uses of soap.

USES OF SOAP
Clear pimples, dart and acne.
Has antifungal properties,[6],
Brightens skin and fades scars effectively
Remove black heads and white heads,
Reduces skin darkening,
Treat skin condition such as, eczema and psoriasis,
Minimizes the body odour and keeps you fresh.

**Table 4:** Herbal soap evaluation.

Colour	Dark green
Odour	Fragnent
Appearence	Good
ph	9.11
Foam Height	8cm
Foam retention	7 min
Alcohol insoluble matter	24.6(%)

**Foam retention:** Prepare the 25 ml of 1% soap solution and transferred into the 100ml of measuring cylinder. Then the cylinder was shaken 10 times. The volume of foam was recorded at one minute for 4 to 5 minutes Wijetunge (2015).

**Determination of percentage free alkali:** About 5 g of sample was added to 50 ml of neutralized alcohol and was boiled for 30 min under reflux on a water bath, then cooled and to it 1 ml of phenolphthalein solution was added. It was then titrated immediately with 0.1 N HCl.

**Alcohol-insoluble matter:** In a conical flask, 5 g of sample was taken. To this, 50 ml of warm ethanol was added and it was shaken vigorously, until the sample was dissolved completely. The solution was filtered through a tared filter paper along with 20 ml warm ethanol and dried it at 105°C for 1 h. The weight of dried paper was noted (Table 4).

## CONCLUSION

The prepared formulation when given to test for various tests gave good result. It does not have any irritancy to the skin. It was determined by using these soap hence it is proven that this soap does not have any irritant to the skin Furthermore the prepared soap were standardized by evaluating various physic chemical properties such as PH, appearance, and odour in which it exhibits satisfactory effects.

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