

## Formulation and Evaluation of Anti- Fungal Polyherbal Soap

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### ABSTRACT

Now a days, a fungal infection is the most prevalent tissue. The emphasis of the current bid is the development of herbal antifungal soap because commercially available soaphas minimum adverse goods on sensitive skin and is more expensive.

There are several herbal shops that grow naturally and have a variety of chemical factors employed in cosmetic medications. Herbal cosmetics are particularly important due to their high exertion and lack of adverse goods. The most current type of skin infection in humans is a fungus, which necessitates ferocious care both for healing and for maintaining excellent skin. Anti fungal cleaner is a particular kind of soap that is used to treat various fungal infections.

Ayurvedic medicine from ancient India lists several of its medical benefits, including its energy as an antifungal agent.

**KEYWORDS:** Antifungal activity, Antioxidants, Herbal soaps, Plant Materials.

### I. INTRODUCTION :

Herbal cosmetics are created by combining one or further herbal substances with other cosmetic ingredients to produce a base that can be used to treat a variety of skin conditions. New medicine products for cosmeceutical and medicinal uses constantly use plants as their primary source of ingredients. Cosmetics are an substance which used to apply on the human body parts like face, hands to soothing the skin, promoting beauty, enhancing the without any changes in the body functions and body structures. Presently use of herbal cosmetics by the people

adding day by day and great need of herbal cosmetics skin care products day to day life. In addition to dosage form, similar as cream, powder, soaps, or solutions, herbal cosmetics are also distributed by the part of the body they are intended to be administered to, similar as cosmetics for the skin, hair, nails, teeth, and mouth. The most frequent type of skin infection caused by fungi demands ferocious care for both immediate treatment and long-term conservation of healthy skin. The majority of commercial soap on the market today contains chemical ingredients that have antibacterial exertion and may have depilatory goods on skin infections.

The fundamental conception of aesthetic skin care is ingrained in the medical systems of the Rigveda, Yajurveda, Ayurveda, Unani, and homeopathy. This is the goods that use plants in extract or crude form. Herbs are important for disease prevention and health creation. The following are the advantages of herbal cosmetics. Types of skin cosmetics are available in markets similar as sunscreen, anti-wrinkle, anti-aging, anti-acne etc. Topical antifungal detergent are used as a supportive treatment for a variety of fungal illnesses, including eczema, psoriasis, athlete's foot, and many more. Due to their each-natural ingredients, broad spectrum of effectiveness, and few side effects, herbal soap compositions are relatively popular in the treatment of fungus infections.

Fungal infection:

Fungal infections, generally referred to as mycosis, are skin conditions that are brought on by fungi. Fungi come in a million different species.

They live in the soil, on plants, household items, and indeed on your skin. They can occasionally cause skin conditions like rashes or pimples. Multitudinous fungus species can fungus infections to do. On occasionally, fungi that are unusual for being on or inside of your uncontrolled cell growth can affect in infection.

#### Antifungal:

Antifungal agents are known as anti-mycotic medicine, fungistatic is used to prevent and treat mycosis, similar as athlete's foot, ring worm, candidiasis serious systemic infection similar as cryptococcal meningitis and other. Topical antifungal detergents are used as a probative treatment for a variety of fungal illnesses, including eczema, psoriasis, athlete's foot, and many more. Due to their each-natural ingredients, broad spectrum of effectiveness, and few side effects, herbal cleaner compositions are relatively popular in the treatment of fungus infections. These medications are growing in popularity today. Presently, people are more likely to get a fungal infection thanks to. With the aid of the suggested remedy, people can exclude fungal infections and the discomfort they bring. The advantage of antifungal soap is to treat the infection with minimum side effects and also with cost effective way.

#### Herbal soap:

Everyone is familiar with the basic cleaning product known as soap. Cleaner /soap has been characterized in a variety of ways. It can be any cleaning agent that is produced in the form of bars, flakes, or liquid and is made by reacting salts of sodium or potassium with different adipose acids that are deduced from natural sources (salt of non-volatile adipose acids). Any water-soluble salt of adipose acids with eight or further carbon atoms is referred to as cleaner. Detergents are made for many different purposes, similar as cleansing, bathing, and administering drug.

Herbal soap medications are drugs because they've antibacterial, anti-aging, anti-oxidant, and antiseptic characteristics. They

frequently use plant parts including seeds, rhizomes, nuts, and pulps to treat injuries, treat illnesses, and promote health. When compared to the constituents of marketable soap, herbal soap doesn't contain artificial colors, flavors, fluorides, or other complements. Due to their high medical value, cost effectiveness, availability, and comity, herbs are the natural particulars most generally used in the treatment of practically all conditions and skin diseases. Herbal soap medications are drugs or pharmaceuticals that primarily use parts of plants, similar as leaves, stems, roots, and fruits, to treat injuries, treat ails, and promote health.

#### MATERIALS AND METHODS :

##### 1] ALOEVERA :



Synonym: Chinese Aloe, Cape Aloe

Biological Source: It obtained from the dried juice of the leavers of Aloe barbadensis miller.

Family: Asphodelaceae (Liliaceae)

Kingdom: Plantae

Chemical constituents:

Aloe Vera contains over 75 potentially active substances, similar as vitamins, enzymes, minerals, carbohydrates, lignin, saponins, salicylic acids, and amino acids. The most important elements of Aloes are three isomers of Aloins, Barbaloin, , which element the so - called 'crystalline'

Color: Green

Chemical Constituents: Minerals, Sugars, Vitamins A C E, Lignin, Saponin enzyme, Salicylic acid

Uses: Psoriasis Seborrhea Dandruff, Minorburns, Skin scrapes, Skin injured by radiation, Herpes, Acne.

Antifungal activity: Aloe Vera exhibits important antifungal action against certain pathogenic fungi.

## 2] TULSI :



Synonyms: Holy basil, Gauri

Biological source: It consists of the fresh and dried leaves of *Ocimum sanctum* L.

Family: Labiatae

Chemical constituents: The primary chemical factors of tulsi are oleanolic acid, ursolic acid, rosmarinic acid, eugenol, carvacrol, estragole, linalol, and caryophyllene. These compounds have been used for numerous times in food goods, cosmetics, dental treatments, and other products for the mouth and teeth. which is made up of roughly 71% eugenol and 20% methyl eugenol. *Ocimum sanctum* fresh leaves and stem extract produced significant amounts of the phenolic compounds (antioxidants) cirsilineol, circimaritin, Leaves of *Ocimum sanctum* contain 0.7% volatile oil. isothymusin, and rosmaric acid from Eugene.

Medicinal Uses:

Antifungal activity: *Ocimum sanctum* contains antifungal properties, and the extracts from the leaves may be helpful for treating dermatophytic infections. Tulsi exhibit antifungal action against the certain pathogenic fungus. The ancient medical practices of Ayurveda, Greek, Roman, Siddha, and Unani all make extensive use

of tulsi leaves. The herb tulsi has also been used to treat respiratory conditions. Tulsi leaves are constantly used to make Ayurvedic drug, which is used to treat a variety of illnesses and ailments. It's relatively helpful for habitual/chronic fever. The whole plant used has; Hypotension, Antiperiodic exertion, Antibacterial properties, Expectorant properties.

## 3] GREEN TEA :



Synonyms : *Camellia sinensis*

Biological Source : Green tea is made from the *Camellia sinensis* plant. Its dried leaves and leaf buds are used to make tea.

Family : Theaceae

Chemical Constituents : Catechin, Caffeine, Theaflavin, Epigallocatechin gallate, Theanine, Epicatechin, Theogallin, Gallic acid.

Medicinal Uses : The presence of catechins in green tea help reduce irritation, redness, swelling and itching caused by Psoriasis, Dermatitis or any other medical condition. It help to moisturizes skin. It helps to remove skin acne, pimples, and spots on the skin.

Catechin present in green tea has antioxidant, anticancer, Antifungal and antiviral activity.

## 4] MULTANI MITTI :



Synonyms : Fuller's earth

Biological Source :

Chemical Constituents : Hydrated aluminium silicate, magnesium chloride, calcium bentonite.

Medicinal Uses : It is a natural result for acne, scars, oily and dull skin. Multani mitti helps to remove excess oil from the skin and prevents pimples. It also has cleansing and cooling property due to which it removes excess dirt from skin. Multani mitti has natural bleaching properties that help in lightening skin blemishes, acne scars, and sun tan.

5] VIT E :



Vitamin E is a nutrient that body needs to support immune system and helps cell to regenerate. Vitamin E is best known for its anti-oxidant properties that help reduce UV damage in skin.

Vitamin E also helps to nourish and protect skin from damage caused by free radicals.

Uses: Vitamin E oil is used as anti-oxidant for skin. It improves dry skin condition.

6] ROSE WATER :



Medicinal Uses : Rose water contains numerous antioxidants which can help protect skin from oxidative stress.

The strong anti inflammatory property of rose water help to treat internal and external ailments.

Other benefits of rose water such as : prevent infection, hydrates skin, soothes skin irritation, promotes skin health, enhance skin tone etc.

7] GLYCERIN SOAP BASE :



Glycerin is a by-product of soap production. Glycerin soap is natural by-product of saponification with added ingredient due to moisturizing property. During the soap manufacture process, the fats/oils and lye blend together to form soap while, the natural glycerin maintains its integrity as glycerin and basically settles in between the soap molecules. Glycerin soap base is most often used in melt and pour method in formulation of soap product. Perfume like orange peel oil is used as fragrance in very small quantity in herbal soap formulation to mask unpleasant odor of herbs and produce good aroma to enhance its smell.

8] STEARIC ACID :

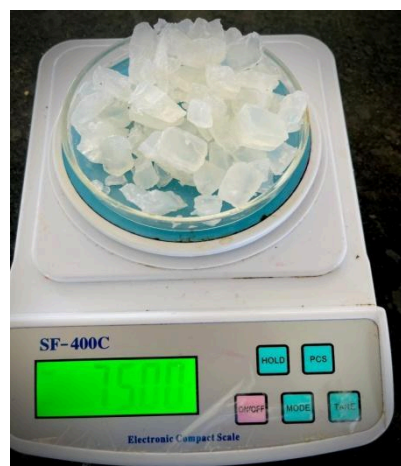


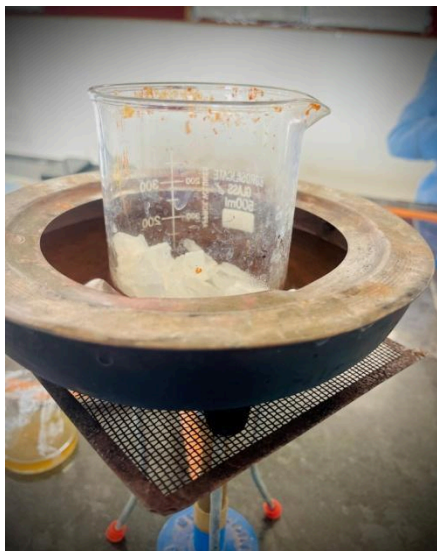
Formula For Poly herbal Soap :

Sr.No.	Ingredients	Quantity	Uses
1)	Glycerin Soap Base	75 gm	—
2)	Tulsi Powder	7 gm	Antifungal/ Antioxidants/ Anti-inflammatory
3)	Green Tea	1 gm	Antioxidants/ Antifungal/ Antivirus
4)	Aloevera	2 gm	Anti-aging / Anti-fungal
5)	Rose Water	7-10 drops	Anti-inflammatory/ Antioxidants
6)	Vit.E	2 capsules	Antioxidants
7)	Multani Mitti	5 gm	Cleansing and Cooling Properly/ Remove excess oil from skin
8)	Stearic Acid	1.5 gm	Hardening
9)	Ethanol	4 ml	Solvent

Method Of Preparation :

1. Wash all apparatus neatly and dry it.
2. Weigh accurately all the ingredients on digital weighing balance.
3. The small pieces of the basic glycerin soap put into the beaker and melted on Heating Mantle at temperature below 60°C.
4. Green tea, tulsi powder extract were added after that all of the components such as aloevera , vit e capsule , multani mitti , rose water , ethanol , stearic acid were combined together.
5. The liquid was poured into the mould , which was then allowed to harden at room temperature.





Evaluation Parameters :

1. Determination of clarity, colour & shape : clarity, colour and shape was checked by naked eyes.
2. Determination of pH : The digital pH meter is used to determine the soap's pH.
3. Odour : The smell of formulation was checked by applying preparation on hand and feels the fragrance of perfume.
4. Foam height : 0.5 grams of sample of soap was taken dispersed in 25 ml distilled water. Then, transferred it in to 100ml measuring cylinder; volume was make up to 50 ml with water. 25 strokes were given and stand till aqueous volume measured up to 50 ml and measured the foam height, above the aqueous volume was measured.
5. Foam retention : 25 ml of the 1% soap solution was taken in to a 100 ml graduated measuring cylinder. The cylinder was covered with hand and shaken 10 times. The volume of foam at 1 minute intervals for 4 minutes was recorded.

**II. RESULT :**

Sr. No	Physicochemical Parameters	Herbal Soap Result
1.	Colour	Brown
2.	Shape	Oval
3.	Odour	Aromatic

4.	pH	7.2
5.	Foam Height	2.8 cm
6.	Foam Retention	3 min 30 sec

### III. CONCLUSION :

In this content we concluded that antifungal soaps form herbal origin are set and hence we can conclude that the aloe vera, tulsi and green tea can be combined to make soap/cleaner that has antifungal properties that can be used on a variety of skin conditions as well as in daily life for healthy skin. Vit.E has antioxidant property. While multani mitti remove excess oil from skin and rose water has antioxidant and anti-inflammatory property.

Herbal antifungal soaps/detergents shows better activity and less side effects as compare to the synthetic soaps. They are safe to use, Herbal soaps have a strong impact on the skin, in terms of making it soft, smooth and supple.

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