



# A Review on Herbal Soap (Herbal Mint and Tulsi)

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## ABSTRACT

**Background:** The global importance of herbal product has increased medicinally and economically. Herbal product known for the Natural composition and minimum side effects For the treatment Purpose of bacterial and microbial skin infection, herbal soap plays main role. Tulsi (*Ocimum tenuiflorum*) and Mint (*Mentha piperita*) are the main ingredient of herbal soap

**Objective:** Herbal soap can be used in treatment of skin disease. Herbal soap contains Shea butter, coconut oil, olive oil, Aloe vera to hydrate and nourish the skin. It also provides aromatherapy benefits like stress alleviation, mood enhancement and relaxation.

**Methods:** The extracts of plant material were obtained through various extraction procedures suitable for them. The extract was then mixed with fatty oil for preparing a soap using the cold saponification method

**Conclusion:** On the basis of study result it can be concluded that by cold saponification an herbal soap is formulated. An herbal soap can bring a vast difference in a field of herbal cosmetics.

**Keywords:** Herbal soap, plant extract, Tulsi, herbal mint

## INTRODUCTION

The classification of plants into 3 categories: Trees, Shrubs & Herbs was done by Theophrastus, a Greek philosopher (Das et al., 2024) The largest sensory organ in the body is the skin it protects the body organ by serving as a barrier. The hypodermis, Dermis and Epidermis are the three primary layers (SHARMA et al., 2022). A soap is a substance used to wash or clean that is made up from a mixture of fatty acids and sodium or potassium salts. By using natural herbs and ingredients that are healthier for skin, a herbal soap is prepared. These soaps have therapeutic characters which are beneficial to the skin such as moisturizing strength and nourishment (Dr.A. et al., 2021a).

One or more substances that can be used for treatment purpose of plant parts are called medicinal plants. Medicinal plant may include seed, leaves, roots, bark, and flower of plant. The route of administrations are orally inhaled or directly applied topically on the skin. The value of main component mainly relies on the bioactive phytochemical constituents. In this the production physiochemical action is done in the body. Alkaloids essential oil, flavonoids, tannins, terpenoid, saponins and more are the bioactive phytochemical constituents. (Patel et al., 2024) . Herbal medication or drug contain antibacterial, antimicrobial, anti-inflammatory and antifungal substance which is used for the treatment for injury. (Jagruti Pravinsing Rajput et al., 2023).

The glycerine is also included as a main volume maker of herbal soap. this glycerine helps in keeping the skin hydrated and moisturized for treating dry skin. This soap also contain super fatty oils, vitamin E, aloe, and essential oils which helps in treatment of skin diseases and for nourishment purposes. (Dr.A. et al., 2021b). A natural or herbal soap may be divided based on soap production method: a hot process soap and a cold process soap. The hot process soap is called as transparent soap, this soap has good moisturizing effect, less of irritant, good fragrance. The herbs used in production of herbal soap are used for treatment, cost effective, availability, compatibility.

The action of herbal soap includes protection against various skin disorders (including rashes, scabies) and treatment of skin infection (such as ringworm) (Nisha P et al., 2021). Mostly skin infections are caused by fungi, *Staphylococcus aureus* and *Streptococcus* species. The herbal soap made using the ingredients herbal mint, tulsi, glycerine, rosewater, borax and natural colorant. Understanding the composition and fundamental functions of the skin and its appendages, as well as natural or herbal solutions for any issues they may have, can assist to increase the significance of herbal cosmetics (V. Amrutkar et al., 2022).

The chemicals used in synthetic soap cause significant harm to other organs of the body after being absorbed by the skin, which makes room for the creation of a herbal product with few adverse effects. In India, utilizing herbal medicine to treat illnesses has been a popular practice since ancient times (Bhasin et al., 2023)



**Soap:** soap is the main product which is used mostly in cleaning process of body. The soap act as cleanser to remove the bacteria or microorganism from the skin Soap as another name that is any water-soluble salt of fatty acids containing more than eight carbon atoms The negative ions on the hydrocarbon chain attached to the carboxylic group of the fatty acids is the cleaning action of soap.(Patel et al., 2024)

soaps are used to stay fresh, to maintain hygiene, to cure skin damage and skin allergies. The use of chemical also leads to damage or pollution in nature. Since, skin is the largest and sensitive organ which is present in the outer layer of body. SLS, DEA, BHT, Triclosan, isopropyl, alcohol colour dyes are the chemical used in formation of normal soap which can lead to cancer in individuals.(Ahire et al., n.d.) Soap are used remove dirt and microorganisms, strains, bad smells from the body. Toxic mercury aluminium, barium, phenol and other chemical are the main ingredients of commercial soaps. These chemicals are absorbed in body by the route of internal organs through skin absorption. They also include negative side effects. Soaps when dissolved in water shows the formal ability to remove microorganism from the skin.

### **Objective**

- A. Soaps are surfactants which are used for bathing and treatment of skin infection.
- B. In industry soaps are used as thickeners and components of some lubricants(Komal Arun, 2023).
- C. A variety of bioactive herbal plant extracts with varying ethnic and dermatological significance in Ayurveda, such as sapindus mukorossi, acacia nilotica, citrus limon, piper betle, and curcumalonga, are used to evaluate herbal bath soap(SHARMA et al., 2022).
- D. Essential oils that have aromatherapy properties are frequently found in herbal cosmetics. These oils can provide a spa-like experience in the convenience of your own home by promoting mental and physical relaxation (Yadav et al., 2023a).

### **1. Need of Work**

These ingredients help moisturize the skin, keeping it soft, supple, and hydrated. Cleansing: Herbal soaps effectively cleanse the skin, removing dirt, oil, and impurities without stripping away the skin's natural oils. They can help maintain the skin's natural pH balance and prevent excessive drying. In terms of the human body, antimicrobial properties aid in the prevention of skin infections and other illnesses. The ability to stop bacteria from growing is known as an antibacterial feature.(Sindhu et al., 2019).

### **2. Herbal soap, as opposed to synthetic one, have some advantages:**

Some of the reasons due to which natural soaps are better than synthetic ones are as follows:

#### **Natural Goods:**

Natural components including herbs, plant extracts, and essential oils are used to make herbal soaps. Because they do not include harsh chemicals that might irritate skin or trigger allergic reactions, these components are kind to the skin.

#### **Moisturizing:**

Hydrating Natural oils found in herbal soap helps in skin hydration. They maintain the skin elastic and silky, avoiding flakiness and dryness.

#### **Healing Properties:**

Hydrating Natural oils that aid in skin hydration are found in herbal soaps. They prevent dryness and flakiness by keeping the skin elastic and silky.

#### **Fragrance:**

Essential oils that have aromatherapy properties are frequently found in herbal soaps. These oils can create a spa-like atmosphere in the convenience of your own home by promoting mental and physical relaxation.

#### **Safe Use:**

Adverse reactions are less likely to occur while using natural cosmetics. Dermatologists have demonstrated that they are hypoallergenic and safe to use at any time.

#### **Economical:**

Commercial soaps are frequently more expensive than herbal cosmetics. They are a cost-effective choice for people on a tight budget because they are manufactured with easily accessible natural components.

#### **Acne Control:**

By lowering inflammation and eliminating bacteria, herbal soaps can aid in the management of acne. Turmeric and neem oil are two ingredients that are well-known for their ability to prevent acne.



### **Skin brightening:**

Ingredients in certain herbal cosmetics have the potential to whiten and brighten skin. Licorice extract, for instance, is well known for its capacity to lessen hyperpigmentation and black spots (Yadav et al., 2023a)

### **Contents of herbal soap:**

#### **TULSI**

Botanical name – *ocimum tenuiflorum*

Common name – holy basil

Part used – leaves

Color – Green

Chemical constituents – eugenol, pinene, terpens, estragol (V. Amrutkar et al., 2022b)

#### **HERBAL MINT**

Botanical name – *Mentha piperita*

Common name – peppermint

Part used – leaves

Color – green

Chemical constituents – flavonoids, menthol,  
(V. Amrutkar et al., 2022b)

#### **RITHA**

Botanical name – *sapindus mukorossi*

part used - seed

color – brown

uses – surfactant

(V. Amrutkar et al., 2022b)

#### **BETEL LEAVES**

Botanical name – *piper betle*

Parts used: Leaves

Color – green

Application: The anti-filarial, anti-cancer, cytotoxic, anti-allergic, gastro-protective, antibacterial, and antifungal properties of piper betle have been the subject of numerous investigations, which have demonstrated that it contains important chemical components.

(SHARMA et al., 2022)

#### **COCONUT OIL**

Botanical name – *cocus nucifera*

Common name – coconut

Part used – Oil

Uses – It is used in treatment of skin condition like eczema, reduces stretch mark and get lifeef from sunburn.

(SHARMA et al., 2022)

### **Uses of soap :**

Manage acne tulsu and mint antibacterial qualities combat the microorganisms that cause acne, aiding in both its prevention and treatment.

Treats both whiteheads and blackheads.

As a moisturizer, aloe vera hydrates the skin without making it feel oily.

For those who have oily skin, it is ideal. Additionally, it combats sunburn or acne. The primary use of this soap is for any skin issue. (Komal et al., 2024)

### **Herbal medicinal products are in greater demand than the synthetic ones because of many reasons:**

- Lesser Side effects
- Better safety and efficacy
- Easily available
- Better compatibility with additives
- Potent therapeutic effect
- Cost-friendly
- Greater are for selection
- No requirement of animal testing

- Better compatibility with all types of skin(Sindhu et al., 2019).

### **Herbal Soap Making Terms**

#### **Additives:**

Additives components that are added to soap as it is being hand-milled The final bar gains unique qualities from these additions. Examples include, adding more oils to form a super-fatted soap, which increases its moisturizing properties and makes it gentler and richer.(Bhavani et al., 2023)

#### **Antioxidants:**

They are substances that stop natural ingredients, like fruits or vegetables, from reacting with oxygen and become rancid, thereby delaying the soap's deterioration. For instance, vitamin E oil.(Bhavani et al., 2023)

#### **Antiseptic:**

Antiseptics substances that prevent germs from growing in the product and on living tissue Lavender is an best example.(Bhavani et al., 2023)

#### **Emollients:**

skin-moisturizing wrinkle-reducing, elasticity-boosting, and protective ingredients. For example, Glycerine(Bhavani et al., 2023).

### **Detail Information of Tulsi**



Scientifically referred to as *Ocimum sanctum* or *Ocimum tenuiflorum*, tulsi is a significant herb that is a member of the Lamiaceae family. Because of its many applications in health, perfumes, religion, ceremonies, food, and the manufacture of essential oils, it is widely grown across the world. There are two primary cultivars of tulsi: Krishna tulsi, which has purple leaves, and Rama tulsi, which has green foliage. Because of its exceptional therapeutic qualities, Tulsi has been the subject of extensive investigation (Shinde et al., 2023). Antidiabetic, wound-healing, antioxidant, radiation-protective, immunomodulatory, antifertility, anti-inflammatory, antibacterial, antistress, and anticancer properties are only a few of its many positive effects. Crucially, research has demonstrated that tulsi is safe for human consumption and non-toxic(Shinde et al., 2023).

### **Historical Significance**

#### **Tulsi**

Tulsi's historical relevance Based on their chemical makeup and place of origin, basil oils can be divided into three main categories: European, exotic, or reunion types. Tulsi, commonly referred to as Holy Basil, has a long history in the Indian subcontinent. For more than 3,000 years, Ayurvedic medicine has utilized this esteemed and fragrant herb. Because of its extraordinary therapeutic properties, tulsi is frequently referred to as the "Elixir of Life" in Ayurveda. Chemical components of Tulsi Tulsi, also known as Holy Basil, essential oils are complex combinations with roughly 20–60 components in different amounts. Terpenoids, which are hydrocarbons that include oxygen, and terpenic hydrocarbons like myrcene, pinene, terpinene, limonene, p-cymene,  $\alpha$ - and  $\beta$ -phellandrene make up the majority of

these oils. Terpenoid components include aliphatic aldehydes like citral and citronellal, aromatic phenols like carvacrol, thymol, safrol, and eugenol, acyclic monoterpene alcohols like geraniol and linalool, monocyclic alcohols like menthol and 4-carvomenthol, and other compounds like verbenol, menthone, pulegone, carvone, thujone, verbenone, fenchone, citronellic acid, cinnamic acid, and linalyl acetate.

African-style. Four essential oil chemotypes have been found in *O. basilicum*: methyl chavicol, methyl eugenol, linalool, and methyl cinnamate. The plant's origin and cultivar can affect the chemical components and proportions of each in Tulsi essential oils. In Bangladesh, Brazil, Cameroon, Egypt, Europe, Guinea, India, Iran, Italy, Mali, Nigeria, Pakistan, Rwanda, Thailand, Togo, Turkey, Um Ruaba, and Yaounde, among other countries and areas across the world, Tulsi species have been gathered for various investigations. These essential oils vary around the world, and this is reflected in the diversity of their chemical composition. (Shinde et al., 2023).

Biologically active chemical constituents: Researchers have identified around 140 distinct chemicals in the neem tree since its discovery in 1942. These substances fall into two categories: non-isoprenoids and isoprenoids. Diterpenoids and triterpenoids are examples of isoprenoids, whereas proteins, amino acids, carbohydrates, and other compounds are examples of non-isoprenoids.

Neem oil is a good natural pesticide because it contains nimbin and azadirachtin, both of which have insect-killing properties. Some of the chemicals in neem have anti-inflammatory and anti-cancer capabilities, while gedunin and its derivatives have demonstrated promise in the treatment of malaria. Neem's proteins, amino acids, carbohydrates, and other compounds also have therapeutic uses, such as reducing inflammation and oxidation. (Shinde et al., 2023).

Using soap Treat acne: Tulsi antibacterial qualities combat germs that cause acne, aiding in both acne prevention and therapy. Addresses whiteheads and blackheads Aloe Vera is a moisturizer that hydrates skin without making it feel oily. Because it fights sunburn and acne, it is ideal for people with oily skin. This soap is primarily used to treat all skin issues. (Komal et al., 2024).

GOAL - Herbal soaps are ideal for delicate skin types since they are made to gently cleanse the skin without removing its natural oils.

They frequently include botanical extracts, essential oils, and natural herbs that are known for their medicinal and skin-nourishing qualities.

These components have the potential to improve skin health overall, relieve inflammation, and hydrate the skin. Using herbs with anti-inflammatory, antibacterial, or antifungal qualities, herbal soaps can help reduce the symptoms of certain skin disorders like psoriasis, eczema, or acne.

Essential oils are used in many herbal soaps for aromatherapy purposes, which can improve mood, ease stress, or encourage relaxation when taking a bath.

Compared to traditional soaps, they are more environmentally friendly because they are frequently biodegradable and free of harsh ingredients. (Pallavi et al., 2024).

### **Herbs Used in Soap:**

Peppermint







Peppermint is a hybrid species of mint, a cross between water mint and spearmint. Indigenous to Europe and the Middle East, the plant is now widely spread and cultivated in many regions of the world. It is occasionally found in the wild with its parent species.

#### 1. Aloe Vera

Aloe vera is a plant that is frequently used in cosmetics and belongs to the liliaceae family. It has a therapeutic effect on wounds on the skin and can soften and moisturize the complexion. Aloe vera contains amino acids that have cleansing qualities, including leucine and isoleucine, as well as the glycosides saponin and other components including vitamins and folic acid.

#### 2. Chandan

To exfoliate dead skin cells, it was applied to the face as face packs and scrubs. restores youth and stimulates the production of new cells. It is also used as a detanning agent to treat sunburns.(Deshmukh et al., 2024).

#### 3. Castor Oil

The fixed oil produced by cold-expressing *Ricinus communis* seeds, which belong to the Euphorbiaceae family, is called castor oil. Half of the fixed oil, a viscous fluid that is nearly colourless when pure and has a faint odour, is found in the seeds. In addition to being calming to the skin, the oil serves as a barrier to defend against harsh weather conditions. Castor oil produces a clear, light-coloured, odourless soap that dries and solidifies nicely.(Ghule & Laxman Ghule, 2020).

#### 4. Pea

*Pisum sativum*, the common pea, can also be useful in treating acne. Proteins, lecithins, carbs, lipids, and salts are all found in the seeds that are used. It has anti dermatosis and nutritional properties. They have a noticeable impact on a variety of skin conditions. Acne and wrinkled, fading skin are treated with face masks prepared from crushed fresh fruit.(Meena et al., n.d.).

#### India's regulatory status:

The ingredients in herbal drugs are used to prepare them for both medicinal and cosmetic purposes. The Ministry of Ayurveda, Naturopathy and Yoga, Siddha, Homeopathy, and Unani system is further governed by AYUSH, which oversees the developing herbal market in India. The rules were established in 1945 and are outlined in the Drug and Cosmetic Act (C&D) of 1940. Manufacturers of herbal products are required to follow the rules established by the AYUSH. The recommendations should be followed in all aspects of the composition, formulation, labelling, manufacturing, labelling, and packing processes. The Good Manufacturing Practices outlined in 2016 are referred to as Schedule-T.(Kaur et al., 2020).

#### Advantages of Herbal Soap:

##### Herbal Cleansers

Skin conditions are a serious public health concern since they affect individuals and communities in profound ways. They lower quality of life, create distress, and interfere with regular functioning. The prevalence of these illnesses is rising as more people use skin care products that contain dangerous synthetic chemicals. Fungi create the most frequent type of skin infection, which requires immediate treatment and ongoing care. Skin disorders have long been a problem for millions of people. Acne scars, hives, dryness, rashes, cracked skin, psoriasis, sun damage, dullness, stretch marks, eczema, and suppleness are some of the most common skin conditions.(Yadav et al., 2023b).

### DISCUSSION AND CONCLUSION

Herbs have captivated the scientific interest of the biotechnology, cosmetic, pharmaceutical, and food sectors since ancient times. They are now utilized for a variety of applications, including flavouring, beverages, medicine, dyeing, scents, and other industrial processes. Regarding peppermint's health benefits, it can be said that the plant has a great deal of potential to treat human illnesses in addition to having a prosperous international trade. Further research is required to fully understand its physicochemical properties and how its molecule interacts with the human body(Nayak et al., 2020). Among the advantages of herbal soap are their affordability, lack of adverse effects, environmental friendliness, and safety. In contrast to synthetic makeup, the future appears bright. The herbal soap industry will experience huge and substantial expansion if these herbs are properly regulated and standardized.

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