



## Review on Herbal Soap

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### ABSTRACT:

Herbal soaps and hand sanitizers are made using the leaves and bark of neem, basil, soap berry and acacia powder. Ayurvedic medicine is also known as medicine, the natural ingredients in herbs have no side effects on the human body, most herbs are made from many herbal ingredients that have a long history of drug use or folk medicine. There are many herbal ingredients on the market today. Many toxic bacteria in the air can cause chemical and skin damage, and cosmetics are not enough for skin and body care. The neem tree has attracted worldwide attention for its many medicinal properties; neem leaves and its components have been shown to have anti-inflammatory, anti-hyperglycemic, anti-ulcer, anti-malarial, anti-fungal, anti-bacterial properties. mutagenic and anti-cancer properties. This study was conducted to evaluate the effects of aqueous, ethanolic and ethyl acetate extracts of neem leaves. Herbal ingredients include reetha, neem, shikekai and tulsi; Among these, neem leaves and seeds have been shown to be effective against certain dermatophytes. Shikeki and Reetha produce hand sanitizers and have cleansing and foaming properties, while Tulsi has anti-bacterial properties.

KEYWORDS: Cosmetics, Herbal, Soap, Formulation, Antibacterial

### INTRODUCTION:

The word cosmetic was derived from the Greek word "kosm tikos" meaning having the power, arrange, skill in decorating<sup>1</sup>. The origin of cosmetics forms a continuous narrative throughout the history of man as they developed. The man in prehistoric times 3000BC used colors for decoration to attract the animals that he wished to hunt and also the man survived attack from the enemy by coloring his skin and adorned his body for protection to provoke fear in an enemy (whether man or animal)<sup>2</sup>. The cosmetics, according to the Drugs and Cosmetics Act is defined as articles intended to be rubbed, poured, sprinkled or sprayed on, introduced into or otherwise applied to the human body or any part there of for cleansing, beautifying, promoting attractiveness or altering the appearance. The cosmetic does not come under the preview of drug license. Herbal cosmetics are prepared with various plant-derived phytochemicals that are related to skin functionality and provide essential nutrients for healthy skin or hair. Plants and their products are called herbal cosmetics 3-5 when their aromatic values are used in the preparation of cosmetics. The Medicines and Cosmetics Act stipulates that herbs and essential oils used in cosmetics must not be claimed to penetrate the skin or provide medical benefits.

\*Medicinal preparations are medicinal or medicinal preparations containing antibiotics and antiseptics, often using plants such as leaves, stems, roots and fruits to treat injuries or diseases or to maintain good health<sup>6</sup>. Preparations contain antibiotics, can be used topically and in many ways, such as creams, topical gels, soaps, solvents or ointments. Many creams and lotions are used to treat various skin conditions<sup>7</sup>. Most skin diseases are caused by fungi, *Staphylococcus aureus* and *Streptococcus* <sup>6</sup>. In the field of ethnomedicine, the juice and extracts of the plant leaves are used topically as an antibacterial and anti-inflammatory agent to treat skin diseases such as eczema, ringworm, and pruritus.<sup>8</sup> The liquid gel form is used to treat psoriasis. The natural preparation of herbal soap softens the skin epidermis, increases penetration and clears acne, promoting healing and timely resolution.

Herbal soaps in this article review contain neem, tulsi, shike, and raita as natural botanical ingredients that have or show antibacterial, antifungal, and anti-inflammatory activities. Neem is the main ingredient of this soap and has medicinal properties. Neem leaves and extracts have immunomodulatory, anti-inflammatory, anti-ulcer, anti-malarial, anti-fungal, antibacterial, antioxidant and anti-cancer properties. Tulsi is the most beneficial. Tulsi can be used for diabetes and can lower blood sugar. Tulsi is also used in serious respiratory diseases. The juice of its leaves relieves cold, fever, bronchitis and cough. Tulsi reduces stress, strengthens the body, reduces pain and also has anti-inflammatory properties, so Tulsi is also used as an important ingredient in these hand sanitizers. Tulsi's key anti-inflammatory properties benefit the soap<sup>9</sup>.

Reetha is an excellent hand sanitizer. Therefore, it is a better alternative to soap and face wash due to saponins. It is also suitable for sensitive skin. The combination of Reetha and chickpeas provides a gentle yet rich effect on the skin and keeps the skin moist and cool as it has cooling properties. Reetha prevents dryness of the skin, softens the skin and also helps treat eczema and psoriasis. Shikekai is effective in treating various skin diseases such as itching and also has anti-wrinkle properties<sup>9</sup>.

In ancient time the written information on ayurveda like charaka samhitha and varnya kashaya has explained the usage of herbs in getting glowing complexion. The herbs used were chandana, nagkeshara, padmak, khus, yashtimadhu, manjistha, sariva, payasya, seta (sweta durva) and lata (shyama

durva). These ayurvedic herbs are used to purify blood and eliminate vitiated doshas like (vata, pitta, kapha) from the body as they are mainly responsible for skin disorders and other diseases. The herbs mentioned in khushthagna mahakashaya effective in skin disorders, include khadira, abhaya, amalaki, haridra, bhallataka, saptaparna, karavira, vidanga and jati. Some of the natural products used in ancient times include, the use of indigo and raktachandan as bindi/tika, madder root for beautifying lips and cheeks, aloe as skin protectant, chandan, vetiver and haldi as face packs. Use of Ayurvedic medicine in addition to beauty products. Ayurveda is known for its permanent healing and judging by the current market, herbal cosmetics will be successful in the market. Knowing the structure and functions of the skin and its appendages, and knowing natural or herbal care or treatments for its problems will help increase the importance of cosmetics. The skin has the ability to constantly repair itself to maintain normal function. Most of the skin problems in youth are oily skin and acne, while in older ages the skin becomes dry. To have better skin, it is important to understand how our skin works and take appropriate care of it. The skin is divided into 4 groups and appropriate components for each group should be used to maintain its natural functions (Table-1) 10-11.

#### Skin Types and Basic Skin Care:

##### Basic Skin Care Requirements

- a) Cleanser that removes dust, dead cells and dirt that clogs the skin. Some hand sanitizers contain vegetable oils such as coconut oil, olive oil, and olive oil.
- b) Use toner: Toner helps tighten the skin and prevents exposure to many toxins or other substances floating in the air. Environmental pollution. Some herbs used as toners are witch hazel, geranium, sage, lemon, burdock vine, and essential oils.
- c) Moisturization: Moisturization helps the skin become softer. After moisturizing, it shows a healthy shine and is not prone to aging. Some herbal moisturizers include vegetable glycerin, sorbitol, rose water, jojoba oil, aloe vera and orris.

##### Herbal Soap

Herbal soap preparation is a type of medicine with antibacterial, anti-aging, antioxidant, antibacterial properties, in which some seeds, roots, nuts and shells are generally used to heal injuries or diseases or to restore health. [5] Compared to the content of commercial soaps, hand sanitizers contain artificial colors, fragrances, fluoride, etc. does not contain. [6] Medicinal plants are natural products that treat almost all diseases and skin problems due to their medicinal properties, effectiveness, availability and compatibility. [7]

##### The most common skin diseases

The most common skin diseases are eczema, acne, rash, psoriasis, allergy, dry skin, urticaria, etc. are things. Table-2) 12-18.

#### Skill 2: Special skin problems and herbal remedies

##### Soap

soap is a cleaning agent that everyone knows. Many authors define soap in different ways. Warra, 19, was considered a detergent produced in the form of granules, strips, flakes or liquid obtained by reacting sodium or potassium salts of various natural fatty acids (non-volatile fatty acids). Soaps can also be said to be water-soluble salts of fatty acids having eight or more carbon atoms. Soap is used for cleaning, bathing, spraying, etc. It is used for many purposes. The cleansing effect of soap is due to the negative ions of hydrocarbon chains attached to the carboxyl group of fatty acids<sup>20</sup>. The affinity of the hydrocarbon chain to oil and gas and the affinity of the carboxyl group to water are the main reasons why soap is often used with water for cleaning purposes<sup>21</sup>.

Besides the raw materials, other chemicals are also added to the product to improve its field of application. For example, soap made for medical use also has other important chemicals added to create soap<sup>22</sup>. In addition to potassium and sodium salts, other metals such as calcium, magnesium and chromium are also used in the production of non-metallic soaps, which are used for other purposes than as hand sanitizers. Another property of soap, such as hardness, is a function of the iron contained in the salt. For example, if the same fat or oil is used in both, the soap containing the sodium salt will show some hardness compared to the soap containing the potassium salt<sup>23</sup>. Although calcium soaps are used in animal formulations, they differ from the properties of soaps made from water-insoluble divalent metals such as magnesium, calcium, aluminum or iron used for laundry and cleaning purposes. . Soap is produced by saponification of triglycerides (fat or oil). In this process, triglycerides react with strong bases such as potassium or sodium hydroxide to form glycerol and fatty acid salts.

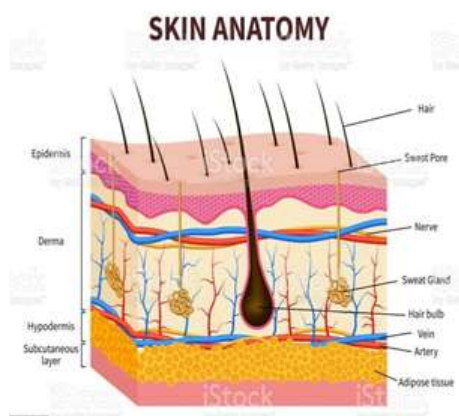


The discovery and art of soap was made before 1660. Soap refers to the product obtained by alkalizing fats and oils, the same has played an important role in the history of human progress, but its findings are inconsistent. And its results are slowly gaining value. It is therefore absolutely impossible to follow in the steps of Liebig and others and try to measure past success by reference to soap knowledge or lack thereof. Also, in the 1st century AD, the Phoenicians and Gauls in West Africa invented soap on their own and were more successful than the Egyptians and Greeks, who knew nothing about soap.

But the Egyptians and Greeks were aware of medicinal preparations containing alkali, pressure, and various vegetable oils, among some other ingredients. Papyrus Ebers writes about using this ointment to treat cold sores and remove fat around the eyes<sup>25</sup>. Many lead plasters are also known. The Berlin Papyrus again gives instructions for making lotions using natron and butter<sup>27</sup>, and Hippocrates uses a mixture of oil and lye as a laxative.<sup>26</sup> In early writings, Assyrians used castor oil and alkali as shampoo<sup>27</sup>. In addition to this knowledge, the process of extracting lye from wood ash has been known to almost all countries since ancient times. But in any case, their use in soap does not seem to predate the Christian era.

### **Skin**

Skin is important for all physicians to understand important information about the structure and function of human skin. The skin is also called epidermis. The skin area of adults is 1.2 to 2.2 square meters. There are two types of skin: hard skin that covers most of the body and hands, feet, etc. such as hairless skin. [1] The skin is a part of the body that is frequently exposed to sunlight and environmental pollution, and is also used to protect against diseases.



### **MATERIAL AND METHOD**

#### **Chemicals:**

These include stearic acid, soft paraffin, ethanol and orange oil. Collection, identification and processing of plants: Neem, basil leaves, soapberry seeds and acacia barks were collected from mature plants. The leaves were dried in a hot oven, crushed, and stored in an airtight bottle for research.

#### **Extraction:**

Neem, basil, soap berry and acacia powder are extracted from the decoction. Place 9 grams of the above powder in an Erlenmeyer flask and extract with water for four hours, stirring occasionally. Then filter.

Herbal Soap Recipe: 28

To obtain neem extract, basil, soap fruit and acacia powder are added to the soap prepared with alkaline glycerin soap containing 1 g stearic acid and 0.70 universal Soft paraffin. Weight 1 g stearic acid, 0.70 g soft paraffin and 5 ml ethanol. First, melt the glycerin alkaline soap and add 1 g stearic acid, 0.70 g soft paraffin and 5 ml ethanol. Add the extract to the molten mixture and stir continuously for 30 minutes until the molten mixture becomes homogeneous. Pour the semi-solid mixture into the mold and let it dry.

#### **Contents of the Soap**



### **Neem**

Botanical name: *Azadiracta indica*

Part typically used: Leaves Color: Green

Description: Compound alternate, rachis 15-25cm long, 0.1cm thick, leaflet with oblique, serrate, 7-8.5 cm long and 1-1.7 cm wide slightly yellowish green in color.

Constituents:- Flavonoids, Alkaloids, Azadirone, Nimbin, Nimbidin, Terpenoids, Steroids, Margosicacid, Vanilic acid, Glycosides, B-sitosterol, Nimbectin, Kaempeerol, Quercusertin are present in Neem Leaf



### **TULSI**

Botanical name: *ocimum tenuiflorum*

Common name: holy basil Part typically used: leaves Color: Green

Chemical constituents: eugenol, terpenes, germacrene



### **RITHA**

Botanical name: sapindus mukorossi

Part typical used: seed Colour: Brown

Uses: Detergent, surfactant

Description:- The fruit is a small leathery skinned drup 1 to 2 cm in diameter, yellow ripening blackish , containing 1 to 3 seeds



### **SHIKEKAI**

Biologicalname:-*Acaciaconcinna*

Commonname:-shikekai

Chemical Constituents:-Spinasterone,AcacicacidPartTypicalused:-Fruitspods

Colour:-Brown

Uses:-Antidandruffdetergent.

FormulationandEvaluationofHerbalSoap

### **Evaluations30,31**

Theherbalsoapformulatedwasevaluatedforthe following:

1. Organolepticevaluation:

- i. Colour: brown
  - ii. Odour: orange
  - iii. Appearance: Good
2. Physicalevaluation<sup>32,33</sup>

The herbal soap formulated was evaluated for the following properties:

- a) pH: The pH was determined by using pH paper, the pH was found to be basic in nature
- b) Foam retention: 25 ml of the one percent soap solution was taken into a 100 ml graduated measuring cylinder, the cylinder was covered with hand and shaken 10 times. The volume of foam at 1 minute interval for 4 minutes was recorded. It was found to be 5 minutes.
- c) Foam height: 10 cm
- d) Antimicrobial test: There was various study conducted on antimicrobial activity of neem and hence according to research paper by antimicrobial activity of Azadirachta indica leaf, bark and seed extract.

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## CONCLUSION:

According to previous studies, the antibacterial properties of neem were examined by water extraction of neem, basil, soap berry and acacia plants and by performing various tests. The proposed method showed good results during different experiments. It has been determined by some volunteers who used this soap that it does not cause skin irritation, thus proving that the soap does not cause skin irritation. In addition, various physical properties of the prepared soaps, such as pH, appearance and odor, which were found to be beneficial, were also evaluated.

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