



Herbal soaps in skincare: Natural solution for healthy skin

Priyanka G. Ghonge *, Pooja R. Hatwar, Prashant G. Shelke, Ravindra L. Bakal and Sanika S. Khandare

Shri Swami Samarth Institute of Pharmacy, At Parsodi, Dhamangaon Rly, Dist -Amravati (444709) Maharashtra, India.

GSC Biological and Pharmaceutical Sciences, 2025, 31(03), 055-063

Publication history: Received on 25 April 2025; revised on 04 June 2025; accepted on 06 June 2025

Article DOI: <https://doi.org/10.30574/gscbps.2025.31.3.0218>

Abstract

Herbal soap is a natural, medication-based soap that contains antibacterial and antifungal agents, utilizing plant parts such as leaves, stems, roots, and fruits to treat various skin conditions. Unlike commercial soaps, herbal soaps are gentle on the skin, retaining moisture and providing a natural alternative to synthetic soaps that can cause skin irritation and allergies. The skin, being the largest organ in the human body, serves as a protective barrier against external pathogens, and herbal soaps can play a crucial role in maintaining skin health. Various herbs, such as aloe vera, neem, turmeric, reetha, and tulsi, are used in herbal soap preparation, offering benefits such as antimicrobial properties, skin nourishment, and aromatherapy. Herbal soaps can treat various skin conditions, including acne, eczema, and psoriasis, while also promoting skin radiance and protecting skin barriers. This review highlights the advantages of herbal soap over synthetic soap, including its natural ingredients, gentle nature, and antimicrobial properties. However, herbal soaps also have limitations, such as shorter shelf life and potential allergy reactions. Overall, herbal soap is a valuable alternative to synthetic soap, providing a natural and effective way to maintain skin health and treat various skin conditions.

Keywords: Skin Diseases; Polyherbal Soap; Essential Oils; Skincare; Antibacterial

1. Introduction

Herbal soap preparation is a medication or drugs that contains antibacterial and antifungal agents. Plant parts including leaves, stems, roots, and fruits are used mostly to treat diseases or injuries or to promote good health [1]. These days, there are a lot of companies that make herbal soap. There have been several herbal soaps made with different natural ingredients [2]. Numerous specialized cells and structures can be found in the skin. The chronic skin condition known as acne vulgaris, acne is caused by a blockage or inflammation in the pyloric gland, which happens when oil and dead skin cells clog hair follicles [3]. Herbal soaps work well for treating a variety of skin conditions. Additionally, glycerine which is typically not used in commercial soaps is included in these soaps. These soaps are suitable for dry skin problems since glycerine helps to retain the moisture in the skin [4].

Fungi, *Staphylococcus aureus* and *Streptococcus* species are the most frequent causes of skin infections. In ethnomedicine, plant extracts and juices are applied topically as antibacterial and anti-inflammatory substances to treat skin conditions. Add eczema, pruritus and ringworm [1]. Soap is used for hygienic and freshening purposes but after employing chemicals, Dry skin, skin damage and skin allergies are caused by soap. Chemicals in soap can cause several skin infections and illnesses. They block skin pores, obstruct breathing cells, slow down the skin's natural renewal process and accelerate the aging process. Furthermore, the use of chemicals causes serious harm to the environment as well. Skin, the largest organ in the human body, serves as both a first line of defense and a barrier against injury to the body by shielding the pores like sodium lauryl sulfate (SLS) and sodium laureth sulfate (SLES) [5].

* Corresponding author: Priyanka G. Ghonge

In cosmetic goods, sodium lauryl sulfate and sodium laureth sulfate are frequently used as surfactants, especially as foaming agents in face cleansers. The extensive use of surfactants in the cosmetics industry is demonstrated by these ingredients. Acute side effects, such as irritation of the skin, eyes, mucous membranes, upper respiratory tract and stomach are among the moderately hazardous consequences of SLS. Even though SLES is thought to be safer than sodium lauryl sulfate both substances can cause skin irritation, especially if used for an extended length of time [6]. The cosmetic is not covered by the drug license preview. Herbal cosmetics are products that contain phytochemicals from a range of botanical sources that affect skin function and supply nutrients for healthy skin or hair [7].

The skin, which covers the entire body, acts as a protective organ. The skin layer shields the body's organs from a variety of physical dangers, such as pressure, friction, temperature fluctuations, radiation exposure, and UV light. The skin barrier may be compromised by damage or injury to the skin, which would allow pathogenic bacteria or other infectious substances to enter [8]. Herbal cosmetics are preparations that contain phytochemicals from various botanical sources that influence skin functions and provide nutrients needed for healthy skin or hair. Natural herbs and their products are referred to as herbal cosmetics when they are used for their aromatic value in cosmetic preparations [9].

Medicinal soaps are a simple variation of ordinary soaps in which bioactive substances, either synthetic or natural, are mixed with the basic soap base to produce the final product. It is preferable to stay away from using dangerous synthetic chemicals in medical soap products because of the unfavorable side effects of synthetic ingredients. Natural materials derived from plants have grown in popularity to improve the crucial biological properties of medicinal soaps in recent years. Synthetic soap is substituted with this medicinal soap [10].

The soap has a long-lasting scent, good moisturizing properties, minimal irritation and good detergency or washing power. A variety of dried herbs, flowers and stems are added to a soap base to create herbal soaps. Because of their great medical value, affordability, accessibility and compatibility, herbs are natural products that can be used to treat nearly all diseases and skin conditions [11]. As antimicrobial agent and for cosmetic purposes, the active ingredients that give these therapeutic qualities are applied topically as creams, soaps, oils and ointments to treat skin conditions such ringworms, acne, wounds, and eczema [12].

The skin, which covers the exterior of the body, is the strongest organ. The epidermis, dermis and hypodermis are its three constituent layers. Since ancient times, people have used herbs to protect, decorate and cleanse their skin. Cosmetics are used to wash the skin, protect it from damaging UV rays, increase metabolism and keep the skin's moisture balance. Cosmetics for skin care [13].

2. Skin

The body's exterior is covered by the cutaneous membrane, sometimes known as the skin. The skin's functions include controlling body temperature, storing blood, providing protection from the elements, cutaneous sensations, excretion and absorption and the creation of vitamin D. The body is protected from microbial microbes by the external defense system. One of the most accessible organs on the human body for topical administration, the skin acts as the main conduit for topical medication delivery systems [14]. The biggest organ in the human body, the skin protects the internal organs from infection by covering the exterior of the body. It stops bacteria, fungi, viruses and parasites from growing by forming a physical barrier against water [15].

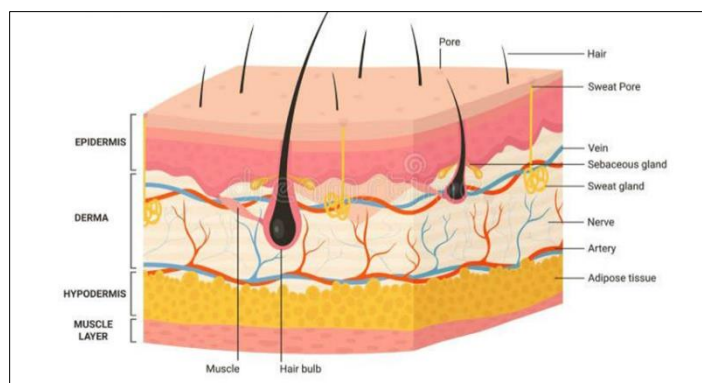


Figure 1 Skin anatomy [16]

2.1. Types of Skin

Considering Lipid Composition and Hydration State.

Preserving the integrity of the skin barrier and avoiding water loss requires maintaining skin hydrated. Skin types are classified by scientists as normal, combination, oily, dry and sensitive.

2.1.1. Normal Skin

Normal skin is neither too dry nor oily. Normal skin is smooth, has little pores and is balanced physically and functionally.

2.2. Dry Skin

The lack containing water in the epidermis causes the condition known as dry skin. Dry skin can occur in people for a number of reasons. Sunlight, chilly temperatures, and dry conditions all cause skin to become parched. Additionally, atopic dermatitis, diabetes, and hypothyroidism can all be triggered by dry skin.

2.2.1. Oily Skin

Sebum-Producing Skin During puberty, young people usually have oily skin. Environmental factors like UV radiation, chemicals and cosmetics, as well as genetic, hormonal, nutritional and stressor factors, can all contribute to oily skin. Typically, people with oily skin get acne and dandruff.

2.2.2. Combination Skin

It might be called oily and dry skin or normal and oily skin. The T-zones on the forehead, nose and chin look greasy, but the rest of the skin is either normal or dry.

2.2.3. Sensitive Skin

Chemicals like soaps, cosmetics, water and pollution, as well as physical elements like UV light, heat, cold and wind, microbes, physiologic elements like stress, and hormones like menstrual cycles can all trigger reactions in sensitive skin. All skin types exhibit it in response to a variety of stimuli [17].

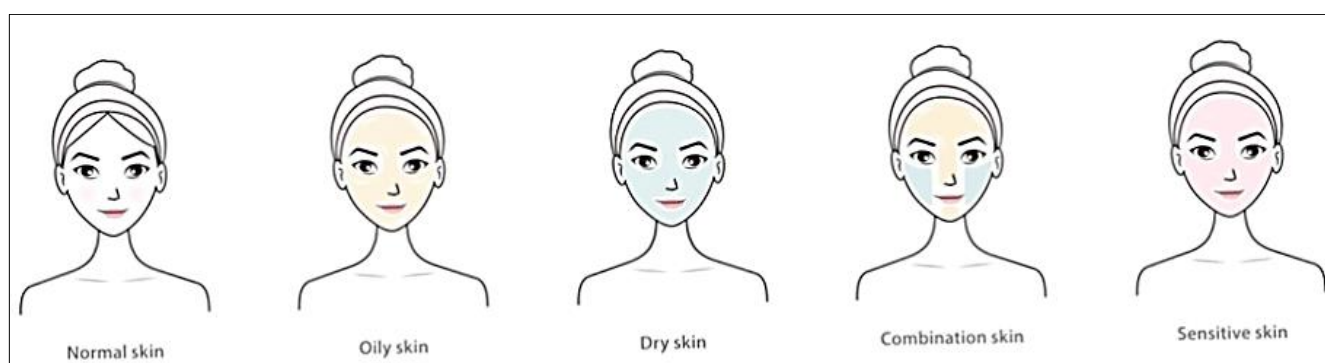


Figure 2 Illustrates several skin types based on moisture levels and lipid content [17]

3. Skin diseases

The most prevalent skin conditions are Eczema, acne, rashes, psoriasis, allergies, dry skin, urticaria and other skin conditions are among the most prevalent ones [18]. Shingles, lichen planus, rosacea scabies, atopic dermatitis, and melanoma [19].



Figure 3 Bacterial infections [19]

The skin is classified into 4 groups and for the class appropriate ingredients should be used to maintain its natural functionality

Table 1 Soap Classification [20]

Depending on usage	Using form	Considering elements	Depending on the manufacturing process
Glycerin soap	Handcrafted soaps	Animal Soap	The Melt and Pour Technique
Toilet soap	Bar soaps	Milk Soap	The Cold Press and Hot Press Methods
Non-toilet soap	3.Water-based soaps	Luxurious Soap	The Milling Method
Clear soap		Fragrances	

4. Ingredients used in herbal soap

4.1. Aloe Vera



Figure 4 Aloe vera [21]

- Biological name - Aloe barbadensis miller
- Common name Indian -Aloe and Burn Aloe
- Family - Liliaceae
- Part typically used - leaves
- Color - Green
- Chemical Constituents - Vitamin, enzyme, minerals, sugars, lignin, Saponin, salicylic acid and amino acid [21].

4.2. Neem



Figure 5 Neem [22]

- Botanical name - *Azadirachta indica*
- Family - Meliaceae
- Part typically used - Leave.
- Colour - Green.
- Active Constituents - flavonoids, Alkaloids, Azadirone, nimbin, Nimbodin, terpenoid, steroids [22].

4.3. Termeric



Figure 6 Turmeric [23]

- Biological name - *curcuma longa*
- Common name - haldi
- Family - Zingiberaceae
- Part typically used - root
- Chemical Constituents - curcumin, demethoxycurcumin, and Bisdemethoxycurcumin [23].

4.4. Reetha



Figure 7 Reetha [24]

- Biological name - *Sapindus mukorossi*
- Common name Indian - soapberry
- Family - Sapindaceae
- Part typically used - Seeds
- Chemical Constituents - saponins, sugars and mucilage [24].

4.5. Tulsi



Figure 8 Tulsi [25]

- Biological name - *Ocimum tenuiflorum*.
- Common name - holy basil.
- Chemical constituents - eugenol, oleanolic acid.
- Part used - leaves.
- Colour - Green [25].

5. Herbal soap

Herbal soap making herbal soap has antibacterial, anti-aging, antioxidant and antiseptic properties, making it a type of medication. It mostly treats diseases or injuries or promotes health by using plant parts such seeds, rhizomes, nuts and pulps. Due to their high medical value, affordability, accessibility and compatibility, herbs are natural items that are used to treat almost all illnesses and skin disorders [18].

5.1. Applications for herbal soap

- Antimicrobial
- Preserve skin health
- Boost skin radiance
- Natural soap promotes skin health
- No dangerous substances
- Better skin texture
- Less noticeable wrinkles
- Skin barriers that are protected [26].

5.2. Herbal soap varieties include

The subsequent five groups of skin washing products can be roughly classified based on their form, use, and usage.

- Cleaning Milk
- Cleaning Cream,
- Face Wash
- Body Soaps
- Toilet Soaps [27].

6. There are benefits to using herbal soap versus synthetic soap.

Herbal soap's natural ingredients, plant extracts, essential oils and herbs offer several advantages over synthetic soaps.

- Advantages of Aromatherapy benefits can be obtained from the essential canvases included in several herbal detergents. While taking a bath, these essential canvases may help to elevate the mood, calm the mind and provide a sense of wellbeing [23].
 - Gentle on the skin: Compared to synthetic soap, herbal soaps are frequently kinder and milder on the skin, making them suitable for more delicate skin types.
 - Natural ingredient: Shea butter, coconut oil, olive oil and aloe vera are among the skin-nourishing and moisturizing natural components that are commonly Included.
 - Antimicrobial properties: Some herbal substances, such as tea tree oil and neem, contain antimicrobial properties that help to cleanse and protect the skin from infections [28].
 - Fungi produce 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 [29].
-

7. Herbal detergents have the following drawbacks:

- Shorter shelf life because they usually don't contain preservatives, which could cause them to expire sooner than synthetic detergents. This suggests that they can degrade or become less effective over time, especially if not used within a certain time frame.
 - Quick pricing considering that they typically contain high-quality natural components and herbal detergents [30].
 - Allergy Reactions: Although uncommon, some people may have an allergy to herbs or oils that are used in the soap, which could cause irritation or response.
 - Availability: It might be more difficult for some customers to obtain Polyherbal Ubtan Soap because it is not as readily available in mainstream retailers as conventional soaps. [31].
-

8. The purpose of herbal soap is to thoroughly

- Cleanse the skin by eliminating pollutants, grime and oil without destroying the skin's natural oils.
 - Guard against stress, chemicals and allergies.
 - It should produce enough foam to satisfy the user
 - Encourage skin nourishment, combat body odor and revitalize the skin
 - Treat a variety of epidermal dysfunctions, including acne, psoriasis and eczema [13].
-

9. Conclusion

Herbal soap is a natural and effective way to maintain skin health and treat various skin conditions. With its antimicrobial properties, skin-nourishing ingredients, and aromatherapy benefits, herbal soap offers a valuable alternative to synthetic soap. The use of natural ingredients, such as aloe vera, neem, and turmeric, provides a gentle and non-irritating cleansing experience, making it suitable for sensitive skin types. While herbal soaps have limitations, such as shorter shelf life and potential allergy reactions, their benefits far outweigh their drawbacks. By choosing herbal soap, individuals can promote skin health, reduce the risk of skin conditions, and enjoy a more natural and effective cleansing experience. As the demand for natural and organic products continues to grow, herbal soap is poised to become a popular choice for those seeking a healthier and more sustainable approach to skin care.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

References

- [1] Ghanwat A, Wayzod S and Vanjire D. Formulation and Evaluation of Herbal Soap. *Current Trends in Pharmacy and Pharmaceutical Chemistry*. 2020; 2(2); 21-26

- [2] Nuryati A, Setiawan B, Martsiningsih MA. Herbal Soap Formulation as Anti-Bacterial in the Context of Increasing the Community's Healthy Living Movement. *Journal of Health Sciences*. 2024; 5(4); 451-467
- [3] Attaullah A, Govindarajulu A, Mohana PK, Mubeena KF, Sreenithi R, Rafiq S, Shaik SJ. Formulation of Herbal Soap against Acne Causing Bacteria. *Asian Journal of Biological and Life Sciences*, 2021; 10(3); 608-612
- [4] Devi AS, Sivani DV, Anusha D, Sarath G, Sultana SM. Formulation and Evaluation of Antimicrobial Herbal Soap. *International Journal of Pharmaceutical Sciences Review and Research*. 2021; 71(2); 122-125
- [5] Patil JN, Kunal Patil KC, Patil PK and Chaudhar HS. Formulation and Evaluation of Camphor Aloe Soap. *World Journal of Pharmaceutical Research*. 2023; 12(4) 1257-1273
- [6] Ariawa DC, Suradnyana IGM, Suena NMDS. Formulation of lerak liquid extract (*Sapindus rarak* DC.) as a biosurfactant for facial soap. *Jurnal Kefarmasian Indonesia*. 2024; 14(1); 1-11
- [7] Amrutkar SV, Patil AR, Ishikar SK. A Review on Herbal Soap. *Research Journal of Topical and Cosmetic Sciences*. 2022; 13 (01); 2321-5844
- [8] Yuliawati Y, Maimum M, Sani KF. Formulation and evaluation of soap preparations from *Curcuma zedoaria* rhizome. *Riset Informasi Kesehatan*. 2024; 13(2); 269-275.
- [9] Karnavat DR, Amrutkar SV, Patil AR, Ishikar SK. A Review on Herbal Soap. *Research Journal of Pharmacognosy and Phytochemistry*. 2022; 14(3); 208-213
- [10] Jithendran R, Gowri S. Formulation and Evolution of Polyherbal Soap: A Review Article. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)*. 2021 9; 2321-9653
- [11] Devipriya NP, Nivetha L, Kumar D. Formulation, Development and Characterization of Herbal Soap Using *Borassus flabellifer* and *Curcuma zedoaria*. *International Journal of Pharmaceutical Sciences Review and Research*. 2021; 69(2); 134-139
- [12] Sai GM, Varaprada D, Abesana KC, Ritheesh M, Blessi KP. Formulation and Evaluation of Polyherbal Soap. *Indo American Journal of Pharmaceutical Research*. 2023; 13(10); 1185-118
- [13] Thomas M, Anisree GS, Akhila G, Akshaya J, Pooja S, Ashila S. And Asna N. Formulation of herbal soap. *World Journal of Pharmaceutical Research*. 2024; 13(19); 1315-1326
- [14] Gopi L, Sandhiya S, Ramya V, Sandhiya S, Rohini B, Reshma R. Formulation and Evaluation of Antifungal Herbal Soaps. *IJPPR*. 2023; 27 (2); 439-454.
- [15] Alugunulla VN, Boddu S, Dulla JB, Tirupati CV, Kuppam C, Inampudi R, Vaddiganti T, Vaddiganti S, Vagolu C. Synthesis, Preparation, and Characterization of Natural Soaps from Some Selected Plant Extract. *J Biochem Technol*. 2024; 15(1); 6-11
- [16] Lahare P, Chavan S, Shinde K, Joshi MA. Review on Herbal Soap. *International Journal of Advanced Research in Science, Communication and Technology*. 2024; 4(1); 2581-9429
- [17] Mangle AP, Bakal RL, Hatwar PR, kalamb VS and Jumde KS. The role of serums in addressing skin concerns: Exploring efficacy, safety and Trends in Beauty and Skincare. *GSC Biological and Pharmaceutical Sciences*. 2024; 29(02); 066-076
- [18] Selvamani M, Surya Prakash R, Siva Shankar D, Subash K, Siva Guru M, LV. Vigneswaran, M. Senthil Kumar. Formulation And Evaluation of Polyherbal Soap. *World Journal of Pharmacy and Medical Research*. 2022; 8(2); 170 – 173.
- [19] Joshi AT, Priyanka CH, Jyothirgamayee K, Akhila N, Sreya P. Development and Formulation of Antibacterial ppolyharbal Soap. *IJBPA*, 2024; 13(8); 3810-3818
- [20] Bhujbal OS, Bhosale DV, Jangam PN, Bafana YS. Formulation And Evaluation of Herbal Soap. *International Journal for Multidisciplinary Research*. 2023; 5(3); 1-8.
- [21] Nimase PA, Ghangale CP, Pange AY, Thange NB, Thokal PP, Darkunde SV, Patel AS, Mane HN. Herbal Soap Formulation for psoriasis management. *IJARIE*. 2024; 10(3); 2395-4396
- [22] Bornare PS, Deokar TD, Shinde AA, Musmade DS. Formulation and evaluation of herbal neem soap. *International Journal of Medicine Research*. 2021; 6(1); 9-12
- [23] Rajput JP, Goukonde R and Sanap G. Review on herbal soap. *World Journal of Biology Pharmacy and Health Sciences*, 2023; 16(03); 188-193

- [24] Gagare SA, Bhosale TD, Chavan SC, Wamane VB. Formulation and Evaluation of Herbal Soap by using natural Ingredients. IJSDR. 2023; 8(5); 2004-2010
- [25] Sapale SR, Sambare PP, Prajapati PD, Raut RD, Dhangar H. Formulation and Uses of Herbal Soap. International Journal of Research Publication and Reviews, 2024; 5(6); 442-445
- [26] Dalavi SD, Wable RA, Sake VS, Dr. Khedakar AN. Formulation and eva of herbal soap IJCRT. 2024; 12(5); 404-416
- [27] Patel S, Sengar M, Patidar V, Hirve N. Formulation and Evaluation of herbal soap. IJNRD 2024; 9(4); 404-413
- [28] Das S, Agarwal S, Samanta S, Das KMR. Formulation and evaluation of herbal soap. Journal of Pharmacognosy and Phytochemistry 2024; 13(4); 14-19
- [29] Saini K, Yadav T, Dubey G, Singh RP. Application of Phytoconstituents in Herbal Soap Formulation. J. Adv. Res. Pharm. Sci. Pharmacol. Interv. 2023; 6(2); 1-16
- [30] Bagade TR, Sormare SG, Bhadade PS, Rath G. Harbal Soap: A Review of their Antimicrobial and Anti-inflammatory Properties. International Journal of Current Science. 2024; 14(2); 405-414
- [31] Ladkat V, Nikam R, Sable PN, Kathmode R, Hiremath A. Formulation and evaluation of polyherbal ubtan Soap: A Natural Skincare Solution. International Journal of Innovative Science and Research Technology. 2025; 10(2); 212-219