



Review Article

Formulation and Evaluation of Herbal soap

Payal*, Munish Goyal, Nasira Abbasi, Sharandeep Kaur

Aakash Institute of Medical Sciences, Nalagarh, 174101

ARTICLE INFO

Published: 16 Apr. 2025

Keywords:

Herbs, Herbal soap, curry leaves, tulsi, turmeric, aloe vera, neem oil.

DOI:

10.5281/zenodo.15225582

ABSTRACT

A natural skincare product, herbal soap is made using extracts from organic products or plants. There are no harsh chemicals in it. In this we made herbal soap using turmeric, tulsi, aloe vera, neem oil and curry leaves. Each of these plants have their own medicinal and skincare properties such as antibacterial, antifungal, anti-inflammatory, skin rejuvenating, repairs acne, moisturizing etc. These properties help in skin repairing and glowing. Therefore, herbal soaps are more beneficial as compared to synthetic soap.

INTRODUCTION

Cosmetics-The term cosmetic is derived from the Greek word "kosm tikos," which means to have the power, organize, or ability in beautifying. The drug and Cosmetics are defined under D&C Act as substances intended to be given to the human body by friction, dripping, sprayed, or sprinkling or a section of it for cleaning, enhancing, promoting beauty, or changing the style. (**Amrutkar SV**)

Soap-As per the definition soap is a compound made from chemical that is created when a fatty acid a metal radical reacts. (**Kuntom A**) Soap is used to remove impurities from the body, such as allergens and bad smells. (**Arun SK**)

Disadvantages-

1. Potential for Skin Irritation- Many synthetic soaps include irritating substances, preservatives, and artificial perfumes that can

cause skin irritation or allergic responses in individuals with allergies. (**Lash T**)

2. Toxicity of chemicals- Some synthetic soaps contain substances like parabens, phthalates, or formaldehyde-releasing preservatives, which have been linked to longterm health hazards, including hormone disruption and increased cancer risk. (**Berg G**)

Herbal soap-Herbal soap is created with natural components sourced from various herbs and plants. (**Kareru PG**) Herbal soap does not include synthetic colors, flavors, fluorides, or other additions.

Advantages

1. Moisturizing and Nourishing- Numerous natural soaps contain moisturizing components like glycerine, aloe vera, or

*Corresponding Author: Payal

Address: Aakash Institute of Medical Sciences, Nalagarh, 174101.

Email ✉: chandelpayal20@gmail.com

Relevant conflicts of interest/financial disclosures: The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.



honey, which are recognized for their skinhydrating properties. **(Bhat, R. S.)**

2. Free of Harsh Chemicals- Herbal soaps usually do not include sulfates, parabens, artificial scents, or colours, which are prevalent in commercial soaps and can irritate the skin and cause allergic responses. **(Nedorost)**
3. Suitable for All Skin Types- Herbal soaps are extremely adaptable and may be tailored to certain skin types, such as sensitive, dry, or oily skin. **(Zouboulis, C.C)**

Ingredient Profile

Curry leaves-

Curry leaves, a fragrant botanical native from the Indian subcontinent, are frequently utilized in

South Asian culinary arts. The incorporation of curry leaves in herbal soap provides a number of benefits due to its high concentration of bioactive substances such as antioxidants, vitamins and essential oils (Jain)

Botanical Name- *Murraya koenigii*

Family- Rutaceae



Fig.No. 1 – Curry leaves

Table No. 1- Curry leaves activity with its active phytoconstituent

Activity	Active phytoconstituent
Antioxidant activity	Carbazole alkaloids
Anti-inflammatory activity	Carbazoles
Antimicrobial & Antifungal activity	Carbazoles, essential oil, flavonoids and phenolic compounds
Skin brightening & tanning	Carbazoles, vitamin C, Flavonoids and beta- carotene

Tulsi- Tulsi is a cherished herb in Indian traditional medicine and considered a sacred plant in hindu culture **(Singh, G)** The presence of Tulsi in soap improves its capacity to purify, cleanse, and repair skin. **(Bhattacharyya, S.)**

Botanical Name- *Ocimum sanctum*

Family- Lamiaceae



Fig.No. 2- Tulsi

Table No. 2- Tulsi activity with its active phytoconstituent

Activity	Active phytoconstituent
Antioxidant activity	Rosmarinic acid & eugenol
Antifungal activity	Flavonoids & Urosolic acid
Skin healing	Tannins & eugenols
Skin toning	Rosmarinic acid & vitamin C
Stress relief	Eugenol & flavonoids

Turmeric: Curcuma plant roots are used to make turmeric a bright yellow spice that is frequently used in traditional medicine and cosmetics. Turmeric, when used in soap, provides a natural way to improve skin health (**Al-Dosary**)

Botanical Name- Curcuma longa

Family- Zingiberaceae



Fig.No.3- Turmeric

Table No. 3- Turmeric activity with its active phytoconstituent

Activity	Active phytoconstituent
Antimicrobial activity	Curcumin & desmethoxycurcumin
Antimicrobial activity	Curcumin & Bisdemethoxycurcumin
Skin healing	Curcumin
Skin Detoxification	Curcumin & turmerones
Evens skintone	Curcumin & bisdemethoxycurcumin

Aloe vera-The succulent plant aloe vera is well-known for its thick, meaty leaves that contain a gel-like material that has several health and skin advantages. Aloe vera offers many skin benefits such as skin healing, moisturizing, repairs acne and healing etc. that's the reason it is used in soap. (**Dweck**)

Botanical name-*Aloe barbadensis* Miller.

Family- Asphodelaceae



Fig.No. 4- Aloe Vera

T

Table No. 4- Aloe Vera activity with its active phytoconstituent

Activity	Active Phytoconstituent
Moisturization	Acemannan
Soothing & Healing	Glycomannan & Aloin
Antioxidant Activity	VitaminC (Ascorbic acids) & VitaminE (Tocopherol)
Antimicrobial activity	Aloin ,emodin, saponin
Gentle cleansing	Saponins

Neem Oil- Neem oil is derived from the seeds of the Azadirachta indica plant, plus also named neem tree which is located near the subcontinent. It is frequently used as an addition within certain

soap compositions are intended to heal skin issues or provide gentle natural treatment

(**Kumar A**)

Table No. 5- Neem oil activity with its active phytoconstituent

Activity	Active Phytoconstituent
Antimicrobial & Antiseptic activity	Azadirachtin, Nimbidin, Nimbin Salannin & Meliantriol
Anti-inflammatory activity	Nimbidin, nimbin & salannin
Moisturization & Skin nourishment	Oleic acid, linoleic acid, tocopherols, salannin.
Balancing oil	Azadirachtin, nimbin & oleic acid
Color & fragrance	Oleic acid nimbidin

CONCLUSION-

Herbal soap's benefits extend beyond just cleansing; herbal soaps often possess additional therapeutic properties that can nourish, hydrate, and protect the skin. In this we made a soap using tulsi, aloe vera, turmeric and neem oil which possess many beneficial activities and are free of harmful substances. The ingredients used in this herbal soap have many properties some of them are antibacterial, antioxidant and anti-inflammatory activity etc. These plants also help in giving moisturizing, cleansing, nourishing, and also prevents premature ageing. Further in vitro and in vivo studies can be carried out for its safety and efficacy.

REFERENCES

- Amrutkar SV, Patil AR, Ishikar SK. A review on herbal soap. *Research Journal of Topical and Cosmetic Sciences*. 2022;13(1):49-54.
- Kuntom A, Siew WL, Tan YA. Characterization of palm acid oil. *Journal of the American Oil Chemists' Society*. 1994 May;71:525-8.
- Arun SK. Formulation and Evaluation of Herbal Soap. *World Journal of Pharmaceutical Research*. 2023 Apr 10;12:2136-47.
- Lash, T. (2019). "Understanding the Skin: How Soap Affects the Skin's Barrier Function." *Journal of Dermatological Science*.
- Berg, G. (2021). "Chemical Additives in Personal Care Products and Their Effects." *Environmental Health Perspectives*.
- Kareru PG, Keriko JM, Kenji GM, Thiong'o GT, Gachanja AN, Mukiira HN. Antimicrobial activities of skincare preparations from plant extracts. *African Journal of Traditional, Complementary and Alternative Medicines*. 2010;7(3).
- Saikia AP, Ryakala VK, Sharma P, Goswami P, Bora U. Ethnobotany of medicinal plants used by Assamese people for various skin ailments and cosmetics. *Journal of Ethnopharmacology*. 2006 Jun 30;106(2):149-57.
- Bhat, R. S., et al. (2015). "The effectiveness of glycerin and aloe vera for moisturizing the skin." *Cosmetic Dermatology*
- Nedorost, S. T., et al. (2015). "Sulfates, parabens, and their effects on the skin." *Journal of Investigative Dermatology*.
- Zouboulis, C. C., et al. (2009). "Natural soaps and their use for sensitive skin." *Journal of Cosmetic Dermatology*.
- Jain, S. K., & Sharma, S. (2015). "Traditional uses, phytochemistry, and pharmacological properties of *Murraya koenigii* (L.) Spreng". *Journal of Medicinal Plants Studies*, 3(6), 199-205.
- Singh, G., & Kapoor, S. L. (2009). "Antioxidant and antimicrobial properties of *Ocimum sanctum* (Tulsi)". *Phytotherapy Research*, 23(5), 776-779.



13. Bhattacharyya, S., & Hazra, A. (2014). "Therapeutic potentials of *Ocimum sanctum* (Tulsi)". *International Journal of Pharmaceutical Sciences and Research*, 5(1), 103110.
14. Al-Dosary, A. M., Alwadai, N., & Bahbah, E. I. (2019). Therapeutic properties of turmeric (*Curcuma longa*): A review. *Journal of Medicinal Plants Research*, 13(7), 115123
15. (Dweck, A. C. (2007). Aloe vera: A review of its pharmacology, applications, and safety profile. *Cosmetic Dermatology*, 20(10), 28-3
16. Kumar, A., & Sharma, S. (2017). *Azadirachta indica* (Neem) and its health benefits. *Journal of Pharmacognosy and Phytochemistry*, 6(4), 382-388.

HOW TO CITE: Payal*, Munish Goyal, Nasira Abbasi, Sharandeep Kaur, Formulation and Evaluation of Herbal soap, *Int. J. of Pharm. Sci.*, 2025, Vol 3, Issue 4, 9218-9222. <https://doi.org/10.5281/zenodo.15225582>

