2025 Volume: 01 Issue: 07 www.ijrpa.com ISSN 2456-9995 Review Article

International Journal Research Publication Analysis

Page: 01-07

FORMULATION AND EVALUATION OF HERBAL SOAP BY USING ROSA RUBIGINOSA: A REVIEW HERBAL SOAP BY USING ROSA RUBIGINOSA

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Article Received: 17 November 2025

Article Revised: 07 December 2025

Published on: 27 December 2025

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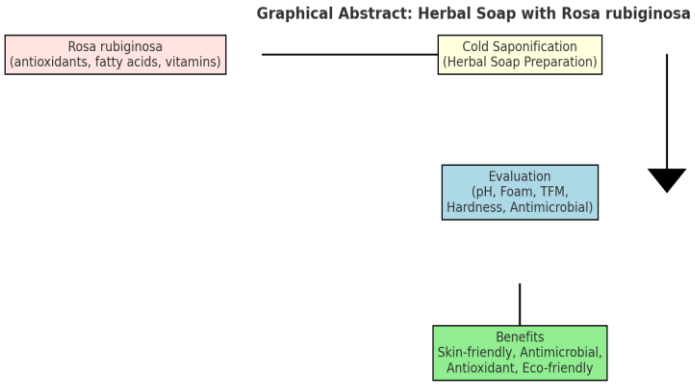
DOI: https://doi-doi.org/101555/ijrpa.6283

ABSTRACT

The growing demand for natural and eco-friendly skincare products has driven interest in herbal soap formulations. Rosa rubiginosa, commonly known as sweet briar rose, is rich in fatty acids, vitamins, and antioxidants, which promote skin hydration, regeneration, and anti-aging effects. This review highlights the formulation strategies, evaluation parameters, applications, and therapeutic potential of Rosa rubiginosa-based herbal soaps. In addition to its antioxidant and antimicrobial activities, this formulation aligns with consumer preferences for safe, sustainable personal care. Future prospects in herbal cosmetics include improved standardization, clinical validation, and commercialization.

KEYWORDS: Rosa rubiginosa, herbal soap, antioxidants, antimicrobial, natural skincare

Graphical Abstract:



1. INTRODUCTION

Herbal soaps have emerged as promising alternatives to conventional synthetic soaps due to their mild cleansing properties and incorporation of plant-based actives. Rosa rubiginosa is particularly valued in dermatology for its skin-regenerating and anti-inflammatory properties. This review focuses on its role in soap formulation.

2.Skin Structure and Background of Herbal Soap

Skin Structure:

- **Epidermis** – Protective outer layer.
- **Dermis** – Supports with glands, vessels, nerves.
- **Hypodermis** – Fat layer for insulation & cushioning.

Functions: Protection, sensation, temperature control.

Herbal Soap:

- Made from natural oils (coconut, olive, castor) & herbs (Neem, Aloe vera, Turmeric, Tulsi).
- **Benefits:** Gentle cleansing, antimicrobial, retains moisture, eco-friendly.

3. Rosa rubiginosa and Other key Ingredients

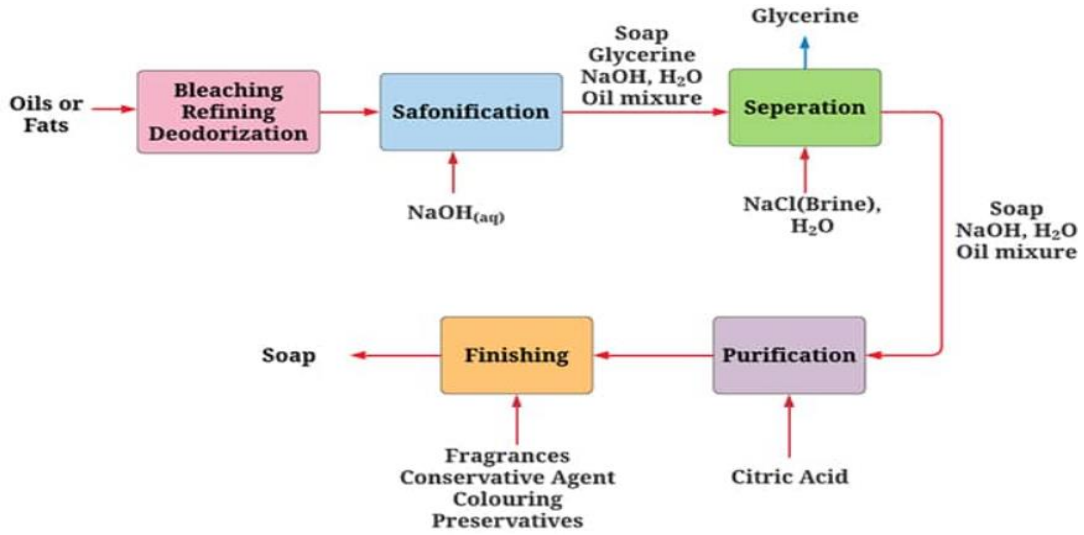
Key Ingredients & Benefits

INGREDIENT	KEY BENEFIT
ROSA RUBIGINOSA	**Antioxidant, hydrates, soothes skin, reduces scars**
ALOE VERA	**Moisturizes, heals, calms irritation**
CHAMOMILE	**Anti-inflammatory, reduces redness**
GREEN TEA	**Antioxidant, anti-aging, protects from UV**
NEEM EXTRACT	**Antibacterial, antifungal, and anti-inflammatory**

TULSI	**Antibacterial, skin purifier**

4. METHODS OF PREPARATION

Herbal soaps are typically prepared by cold saponification, preserving bioactive compounds. The process involves mixing plant oils with sodium hydroxide solution to yield soap and glycerin. Unlike project-based reports, the emphasis here is on the suitability of Rosa rubiginosa and synergistic oils rather than stepwise method.



Flow Diagram for Soap Production

Preparation of Herbal Soap

- **Collection of the necessary ingredients:**

  A high-quality soap base, such as goat milk or shea butter is needed. The herbal ingredients, such as essential oils, dried herbs, and botanical powders are collected.

- **Melt the soap base:**

  Cut the soap base into small pieces and melt it in a double boiler or microwave. Stir the soap base until it has melted to a smooth consistency.

- **Addition of the herbs:**

  After melting the soap base, take it off the heat and incorporate the herbal ingredients by stirring them in. Dried herbs, essential oils, or powders are used. Add the herbs slowly and stir continuously to ensure they are evenly distributed throughout the soap.

- **Pour into Moulds:**

  Once the herbs are added, pour the soap mixture into moulds. Silicone melds or plastic containers coated with cooking spray are used. Let it cool and harden for hours or overnight.
- **Cut and store the soap:**

  Once the soap is fully cooled and hardened, remove it from the melds and cut it into desired shapes and sizes. Store the soap in a cool, dry place until ready to use.

5. Evaluation Parameters

1. **pH Level (5.5–7.5)** – Balanced to match the skin's natural pH, reducing irritation and promoting healthy skin.
2. **Foamability & Stability** – Creates a rich, creamy lather that lasts—enhancing the cleansing experience.
3. **Moisture Content** – Lower moisture helps prevent microbial growth, improving shelf-life and product stability.
4. **Hardness** – A firmer soap resists melting and lasts longer with regular use, offering better value.
5. **Total Fatty Matter (TFM > 60%)** – Indicates higher quality soap with excellent moisturizing properties for soft, supple skin.
6. **Antimicrobial Activity** – Naturally inhibits harmful microbes like *Staphylococcus aureus, E. coli,* and *Candida albicans,* supporting healthier skin.
7. **Organoleptic Properties** – Attractive color, pleasant fragrance, and smooth texture enhance user satisfaction and market appeal.

6. Advantages and Limitations

Advantages of Herbal Soap

- Made from natural ingredients
- Provides antioxidant and antimicrobial protection
- Eco-friendly production process
- Better skin compatibility

Limitations of Herbal Soap

- Quality of herbal ingredients can vary
- Stability issues (shorter shelf life)
- Higher production cost than synthetic soaps

7. Applications and Market Relevance

Rosa rubigi nosa-based herbal soaps are useful in managing acne, dryness, minor infections, and sensitive skin care. Their growing popularity in cosmetic and dermatological markets reflects consumer preference for sustainable and multifunctional personal care products.

- **Acne Control** – Helps clear breakouts naturally
- **Hydrates Dry Skin** – Nourishes and softens
- **Soothes Sensitive Skin** – Ideal for delicate skin types
- **Fights Minor Infections** – Natural antimicrobial properties
- **Cosmetic & Skincare Friendly** – Trusted in beauty and dermatology
- **Eco-Smart Choice** – Plant-based, sustainable, and multifunctional

8. Future Prospects and Conclusion

Future Prospects & Conclusion

- **Clinical Validation** – Future studies should confirm the safety and effectiveness through real-world testing.
- **Scalable Production** – Developing stable, large-scale manufacturing methods will be key to market growth.
- **Raw Material Standardization** – Consistent quality of herbal ingredients is essential for product reliability.

CONCLUSION

The development and evaluation of herbal soap formulated with native medicinal plants—*Ocimum sanctum* (tulsi), aloe vera, *Curcuma longa* (turmeric), and *Azadirachta indica* (neem)—demonstrate the potential of plant-based ingredients to produce safe, effective, and eco-friendly personal care products. The soap exhibited favorable physicochemical characteristics, including suitable pH, foamability, hardness, and total fatty matter, while showing no microbiological contamination. The incorporation of herbal extracts enhanced antibacterial activity, suggesting suitability for various skin types, particularly sensitive and acne-prone skin. Overall, the study supports the use of locally available medicinal plants in sustainable cosmetic formulations and highlights the feasibility of scaling the product for commercial production.

9. REFERENCES

📚 References on Herbal Soap Evaluation Parameters

1. Choudhury, D., & Pal, N. (2016). Formulation and evaluation Of herbal soap using neem and tulsi. International Journal ofScience and Research, 5(5), 1982—1984.
2. Dahake, P. (2015). Herbal soap and its standards. International Journal ofPharmacy and Life Sciences, 6(1), 4113—4115.
3. Dhiman, R. K., & Aggarwal, N. (2021). Herbal cosmetics: Trends and market analysis. Journal of Herbal Medicine and Toxicology, 15(1), 1—6.
4. Ghosh, A. , & Das, A. (2017). Formulation and characterization ofherbal soap using natural ingredients. World Journal ofPharmaceutical Research, 6(12), 913—924.
5. Gupta, A., & Tiwari, R. (2020). Comparative analysis of neem and turmeric soap. Asian Journal ofPharmaceutical and Clinical Research, 13(6), 198—201.
6. Harish, G. , & Swathi, S. (2021). Herbal formulations and their importance in skincare. Research Journal ofPharmacy and Technology, 14(3), 1739—1743.
7. Kaur, G., & Kaur, M. (2019). Herbal soap using Azadirachta indica and Curcuma longa. International Journal of Pharmaceutical Research, I I (3), 115—118.
8. Khan, S. A. , & Arif, M. (2016). Standardization and quality control of herbal cosmetics. World Journal of Pharmacy and Pharmaceutical Sciences, 5(5), 1978—1984.
9. Kumari, R., & Kotecha, M. (2016). A review on formulation and evaluation of herbal soap. Asian Journal of Pharmaceutical Research and Development, 4(6), 21—28.
10. Mathur, R., & Sharma, S. (2020). Medicinal plants in personal care products. International Journal of Research in Ayurveda and Pharmacy, I I (5), 35—42.
11. Nirmal, S. A., & Malvankar, D. D. (2011). Herbal soap: A novel approach in cosmetics. Research Journal of Pharmacognosy and Phytochemistry, 3(1), 36—39.
12. Ramya, R., & Rajeswari, N. (2015). Evaluation of antimicrobial activity ofherbal soap and hand wash. International Journal of Pharmaceutical Sciences Review and Research, 31 (2), 210-214.
13. Rathi, P., & Dhamija, H. (2016). Review on herbal soap. International Journal of Pharmaceutical Sciences and Research, 7(2), 300—304.
14. Shetty, B. V., & Harini, A. (2017). Formulation and evaluation of turmeric-based herbal soap. Asian Journal of Pharmaceutical Research, 7(1), 15—18.
15. Soni, S., & Jain, P. (2016). Standardization and evaluation of herbal soap. International Journal of Pharmaceutical Research and Applications, 2(1), 93—98.

16. Swarnkar, S., & Jain, A. (2017). Herbal soap using neem and aloe vera. Journal of Drug Delivery and Therapeutics, 7(6), 137—140.
17. Yadav, N. , & Jain, R. (2017). Preparation and evaluation of herbal soap using neem and tulsi. International Journal of Research in Ayurveda and Pharmacy, 8(2), 85—88.
18. Akuaden NJ., et al. "Formulation, Physicochemical and Antifungi Evaluation of Herbal Soaps of Azadiracta Indica and Ziziphus Mauritiana". IOSR Journal of Applied Chemistry (IOSR JAC) 12.8 (2019): 26-34.
19. Arun SK. "Formulation and Evaluation of Herbal Soap". World Journal of Pharmaceutical Research 12.9 (2023): 2136-2147.