



**INTERNATIONAL JOURNAL OF
PHARMACEUTICAL SCIENCES**
[ISSN: 0975-4725; CODEN(USA): IJPS00]
Journal Homepage: <https://www.ijpsjournal.com>



Research Article

Formulation & Evaluation of Herbal Medicated Bath Bomb

Nayan Thorve*, Vaishnavi Katkar, Sanjay Garje, Gaffar Sayyed

SAJVPM's, College of Pharmaceutical Sciences and Research Center, Kada, Beed, MH-414202.

ARTICLE INFO

Published: 25 May 2025

Keywords:

Herbal bath bomb, neem, green tea, magnesium sulfate, essential oils, skincare, effervescence, natural cosmetics

DOI:

10.5281/zenodo.15507219

ABSTRACT

Herbal medicated bath bombs represent an innovative fusion of traditional herbal knowledge and modern cosmetic science, offering a natural, eco-friendly, and therapeutic alternative to synthetic bath products. This research focuses on the formulation and evaluation of herbal bath bombs using plant-based ingredients such as neem, green tea, beetroot, rose water, honey, and essential oils, combined with standard effervescent agents like sodium bicarbonate and citric acid. The primary objective is to create a formulation that provides skin nourishment, detoxification, relaxation, and antimicrobial benefits suitable for all skin types. The bath bombs were prepared using a standardized method involving precise blending, molding, and drying steps to ensure structural integrity and functional efficiency. A comprehensive evaluation was conducted, including tests for physical appearance, pH, effervescence duration, spreadability, stability under varied environmental conditions, and skin compatibility. The ingredients were selected for their proven cosmetic and medicinal properties—green tea for its antioxidant and anti-aging effects, neem for antimicrobial action, glycerin and honey for moisturization, and magnesium sulfate for muscle relaxation. Preliminary results demonstrated that the formulated bath bombs possess favorable sensory properties, quick and consistent effervescence, optimal skin compatibility (no irritation), and an acceptable pH range, supporting their potential as a safe and effective herbal skincare product. This study underscores the growing relevance of sustainable, chemical-free personal care solutions and highlights the viability of herbal bath bombs as a multi-benefit cosmeceutical product. Further studies including user acceptability trials and microbiological safety assessments are recommended to validate long-term usability and commercial potential.

INTRODUCTION

The skin, being the largest organ of the human body, plays a vital role in protection, regulation, and sensation. Maintaining healthy skin is not only

*Corresponding Author: Nayan Thorve

Address: SAJVPM's, College of Pharmaceutical Sciences and Research Center, Kada, Beed, MH-414202.

Email ✉: nayanthorve2003@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.



essential for aesthetic appeal but also for overall physiological balance. In the modern era, increased exposure to pollution, stress, and synthetic chemicals in personal care products has led to a surge in dermatological issues such as dryness, irritation, allergies, and premature aging. As a result, there is a rising preference for natural and herbal skincare solutions that are both effective and safe. Herbal bath bombs have emerged as a novel and luxurious addition to personal care routines, combining therapeutic effects with the soothing experience of a fizzy bath. These products are compact spherical formulations that typically contain a weak acid (citric acid) and a carbonate base (sodium bicarbonate) that react in water to release carbon dioxide, creating an effervescent effect. Unlike conventional bath products that may contain harsh chemicals, herbal bath bombs incorporate natural ingredients such as neem, green tea, beetroot, rose water, honey, and essential oils, which provide multiple benefits including hydration, detoxification, relaxation, and antimicrobial protection. The concept of herbal bath therapy is rooted in traditional medicine, where plant-based ingredients have been used for centuries for their healing properties. Ingredients like neem possess

antibacterial and antifungal effects; green tea offers antioxidant and anti-aging benefits; glycerin and honey act as natural moisturizers; and magnesium sulfate (Epsom salt) relieves muscle tension and promotes relaxation. When these ingredients are delivered through a bath bomb, they not only cleanse the skin but also rejuvenate the body and mind through aromatherapy and transdermal absorption. This study is focused on the formulation and evaluation of herbal medicated bath bombs with an aim to develop a natural, skin-friendly, and sustainable cosmetic product. The formulation process emphasizes the use of biodegradable, non-toxic, and eco-conscious ingredients that align with the growing consumer demand for clean beauty products. The prepared bath bombs are evaluated for key parameters such as physical appearance, texture, pH, effervescence duration, spreadability, skin compatibility, and stability to ensure quality, safety, and user satisfaction. In summary, this research aims to contribute to the advancement of herbal cosmetics by introducing an effective and innovative bath care product that combines relaxation with therapeutic skin benefits.

MATERIALS AND METHODS:

Table 1: List of Materials (Composition)

| Sr. No. | Name of Ingredients | Quantity | Uses |
|---------|---------------------|------------|-----------------------------------|
| 1 | Sodium Bicarbonate | 48 gm | Effervescent agent, skin softener |
| 2 | Citric Acid | 22 gm | Effervescence, mild exfoliation |
| 3 | Rice Starch | 12.5 gm | Binder, soothing agent |
| 4 | Magnesium Sulphate | 1.2 gm | Muscle relaxant, detoxifier |
| 5 | Glycerine | 0.3-0.4 ml | Humectant, moisturizer |
| 6 | Vitamin E Oil | Q.S. | Antioxidant, skin nourisher |
| 7 | Neem Powder | 9 gm | Antibacterial, antifungal |
| 8 | Beetroot Powder | 4 gm | Natural colorant, antioxidant |
| 9 | Green Tea Extract | 3 gm | Antioxidant, anti-inflammatory |
| 10 | Rose Water | Q.S. | Fragrance, skin toner |
| 11 | Honey | Q.S. | Moisturizer, antibacterial |
| 12 | Essential Oil | 2-3 drops | Fragrance, aromatherapy |
| 13 | Distilled Water | Q.S. | Solvent, aids in binding |

Table 2: List of Equipment

| Sr. No. | Name of Equipment | Purpose |
|---------|---------------------------------|--|
| 1 | Weighing balance | To accurately weigh ingredients |
| 2 | Beakers | For mixing and holding solutions |
| 3 | Measuring cylinders | For measuring liquid ingredients |
| 4 | Glass rods | For stirring and mixing |
| 5 | Water bath | To maintain gentle heat for extract incorporation |
| 6 | pH meter | To check and adjust the pH of the formulation |
| 7 | Bath Bomb Molds | To shape and form bath bombs |
| 8 | Dropper | For adding essential oils and rose water precisely |
| 9 | Storage containers (HDPE/Glass) | For storing the finished product |

The equipment listed above was used during the preparation and evaluation of the herbal medicated bath bombs. All apparatus were thoroughly cleaned and sanitized before use to maintain hygiene and ensure the accuracy and reliability of the formulation process. Proper handling techniques were followed to avoid contamination and ensure uniform mixing. This helped in achieving consistent texture, shape, and stability of the final bath bomb formulations.

Procedure

The present study was carried out to formulate herbal medicated bath bombs using natural ingredients such as sodium bicarbonate, citric acid, rice starch, magnesium sulphate, neem, beetroot powder, green tea extract, honey, rose water, and essential oils. All raw materials used were of analytical grade, and the preparation was done under hygienic laboratory conditions. The method involved a sequential process of mixing, binding, molding, and drying, followed by evaluation of the final formulation.

1. Preparation of Dry Mixture

All dry ingredients including sodium bicarbonate, citric acid, rice starch, magnesium sulphate, neem powder, beetroot powder, and green tea extract

were weighed accurately. These powders were passed through a sieve and blended thoroughly in a clean mixing bowl to ensure uniform distribution of each component.

2. Addition of Moisture Phase

A small amount of distilled water was added gradually using a spray bottle to moisten the dry mixture. Simultaneously, glycerine, rose water, honey, vitamin E oil, and selected essential oils were added dropwise to avoid excessive wetting, which could trigger premature effervescence. The mixture was gently stirred with a spatula to achieve a slightly damp, sand-like consistency.

3. Molding the Bath Bombs

Once the correct texture was achieved (where the mixture held its shape when pressed), it was immediately transferred into clean, dry bath bomb molds. The mixture was firmly compressed into the molds to ensure the structural integrity of the final product.

4. Drying and Hardening

The filled molds were kept in a refrigerator for 30–50 minutes to allow the bath bombs to set. Alternatively, they were left at room temperature to air dry for 24 hours. Once completely dried and

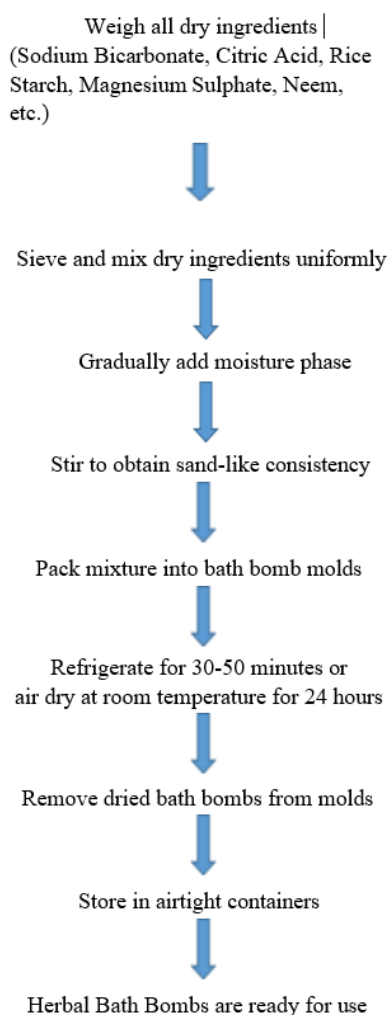


hardened, the bath bombs were carefully removed from the molds.

5. Storage

The prepared herbal bath bombs were stored in airtight containers to protect them from moisture and preserve their physical integrity, fragrance, and stability until further evaluation.

Flowchart of Procedure



Evaluation Of Herbal Medicated Bath Bomb

The formulated herbal bath bombs were evaluated for various physicochemical and functional parameters to assess their quality, stability, and suitability for use. The following tests were carried out:

1. Physical Appearance

The bath bombs were visually examined for their shape, color, texture, and presence of any cracks or deformities. A well-formed, smooth surface and uniform appearance indicated proper formulation and compression.

2. pH Determination

To evaluate skin compatibility, the pH of the dissolved bath bomb solution was measured. 1 gram of the bath bomb was dissolved in 100 ml of distilled water and allowed to stand for 30 minutes. The pH was measured using a calibrated digital pH meter. Ideal pH values for skin-friendly products range between 5.0 and 7.0.

3. Effervescence Time

This test assessed the duration of the fizzing reaction when the bath bomb was placed in water. A single bath bomb was dropped into a beaker containing 200 ml of warm water, and the time taken for complete dissolution and effervescence was recorded using a stopwatch.

4. Texture and Hardness

The surface texture and hardness of the bath bombs were evaluated manually to check for brittleness or crumbling. A firm, yet dissolvable structure was considered ideal.

5. Spreadability in Water

Upon dissolution, the dispersion of color, fragrance, and active ingredients in water was visually assessed. Good spreadability ensured even distribution and optimal exposure of skin to active components.

6. Skin Irritation Test

A small amount of the bath bomb solution was applied to a patch of skin on the forearm and



observed for 30 minutes to 3 hours. Any signs of redness, itching, or irritation were noted. Absence of such symptoms indicated the formulation was dermatologically safe.

7. Stability Study

The prepared bath bombs were stored under different environmental conditions (room temperature, refrigerated, and high humidity) for 2 weeks. Observations were made for changes in physical appearance, color, texture, and integrity to assess stability.

RESULT AND DISCUSSION

The prepared herbal medicated bath bomb formulations (F1, F2, and F3) were evaluated based on physical properties, effervescent behavior, skin compatibility, pH, and moisturizing potential to determine their suitability as skincare

products. The evaluation also considered their aesthetic appeal and consumer-friendly characteristics.

Formulation Composition and Variation

Three formulations—F1, F2, and F3—were developed using the same core ingredients, with slight variation in the concentration of essential oils and herbal extracts to assess their impact on skin feel, fragrance intensity, and therapeutic benefit. All formulations contained a standard base of sodium bicarbonate, citric acid, rice starch, magnesium sulfate, and glycerin. F1 had a higher concentration of rose water and green tea extract, F2 included more neem and beetroot powder for enhanced antibacterial and brightening properties, while F3 combined moderate amounts of all key extracts to offer a balanced therapeutic effect.

Table 3: Composition of Herbal Bath Bomb Formulation

| Sr. No | Ingredients | F1 | F2 | F3 |
|--------|--------------------|------------|------------|------------|
| 1. | Sodium Bicarbonate | 45 gm | 48 gm | 42 gm |
| 2. | Citric Acid | 24 gm | 22 gm | 21 gm |
| 3. | Magnesium Sulphate | 1.5 gm | 1.2 gm | 1.5 gm |
| 4. | Rice Starch | 12.2 gm | 12.5 gm | 13.2 |
| 5. | Glycerin | 0.3-0.4 ml | 0.3-0.4 ml | 0.3-0.4 ml |
| 6. | Vitamin E | QS | QS | QS |
| 7. | Neem Extract | 10 gm | 9 gm | 12 gm |
| 8. | Green Tea Extract | 2 gm | 3 gm | 3 gm |
| 9. | Rose Water | QS | QS | QS |
| 10. | Beetroot Powder | 5 gm | 4 gm | 7 gm |
| 11. | Honey | QS | QS | QS |

1. Physical Evaluation

All three formulations (F1, F2, and F3) exhibited excellent physical characteristics such as smooth texture, spherical shape, and no visible cracking or crumbling. F1 had a light pink hue and floral fragrance owing to its higher content of rose water

and green tea. F2 stood out with a vibrant pink color and an earthy aroma contributed by neem and beetroot, enhancing its aesthetic and functional appeal. F3 shared a similar color and fragrance to F2 but without the same vibrancy. Overall, F2 offered the most visually appealing and distinctive sensory attributes among the three.



Table 4: Physical Evaluation of Formulations

| Formulation Code | Odour | Colour | Texture | Cracking |
|------------------|----------|------------|---------|----------|
| Marketed | Pleasant | White | Smooth | Absent |
| F1 | Pleasant | Light Pink | Smooth | Absent |
| F2 | Pleasant | Pink | Smooth | Absent |
| F3 | Pleasant | Pink | Smooth | Absent |

2. pH Evaluation

pH plays a crucial role in determining the skin compatibility of any cosmetic product. The pH of the bath bomb solution was measured by dissolving 1 gm in 100 ml of demineralized water. F1, F2, and F3 exhibited pH values within the range of 5.8, 6.1, and 5.9 respectively, indicating a slightly acidic to neutral range, which is safe and compatible for skin. All three formulations demonstrated pH values within the ideal range for skincare products (4.5–6.5), ensuring skin-friendly action. F1 had a mildly acidic pH of 5.8, F3 followed closely with 5.9, while F2 showed a slightly higher pH of 6.1, aligning well with the skin's natural pH balance. This slightly elevated pH, combined with the antimicrobial benefits of neem and beetroot, enhances the cleansing potential of F2 while preserving the skin's protective acid mantle. The balanced pH levels of all three formulations help in preventing irritation, dryness, and microbial invasion, thereby

contributing to their dermatological safety and overall effectiveness.

Table 5: PH of prepared Formulations

| Formulation Code | pH |
|------------------|-----|
| Marketed | 6.0 |
| F1 | 5.8 |
| F2 | 6.1 |
| F3 | 5.9 |

3. Effervescence and Solubility

All three formulations produced an immediate fizz upon immersion in water and left no residue. F1 dissolved completely in 3.0 minutes, F3 in 3.5 minutes, and F2 in 4.0 minutes. Although F2 had the longest dissolution time, this was likely due to its richer herbal matrix, which allows for a sustained release of active ingredients. Despite the slight delay, F2's superior herbal load may offer prolonged therapeutic benefits during use.

Table 6: Effervescence and Solubility

| Formulation Code | Effervescence Onset | Total Dissolution Time | Residue |
|------------------|---------------------|------------------------|---------|
| Marketed | Immediate | 2.5 min | None |
| F1 | Immediate | 3.0 min | None |
| F2 | Immediate | 4.0 min | None |
| F3 | Immediate | 3.5 min | None |

4. Skin Irritability Test

None of the formulations (F1, F2, or F3) caused any signs of irritation, redness, or inflammation after 1 and 3 hours of patch testing on human volunteers. This confirms that all three are

dermatologically safe; however, F2's combination of neem and beetroot—both known for their antimicrobial and soothing properties—adds further credibility to its use for sensitive or problematic skin.



Table 7: Skin Irritability Test of prepared formulations

| Formulation Code | Irritability (1 hr) | Irritability (3 hrs) |
|------------------|---------------------|----------------------|
| Marketed | None | None |
| F1 | None | None |
| F2 | None | None |
| F3 | None | None |

5. Washability and Skin Feel

All three formulations were easy to rinse off and left the skin feeling soft and refreshed. F1 offered enhanced moisturization due to its higher glycerin and rose water content, while F2 provided a

balanced skin feel—smooth, hydrated, and nourished. F3 also contributed to a soft and hydrated feel but lacked the distinctive moisturization or antimicrobial edge of the other two. F2, therefore, emerges as the most well-rounded in terms of post-application skin benefits.

Table 8: Washability and Post-Use Skin Feel

| Formulation Code | Washability | Skin Feel After Use |
|------------------|-------------|---------------------|
| Marketed | Good | Hydrated and smooth |
| F1 | Good | Soft, refreshed |
| F2 | Good | Smooth, moisturized |
| F3 | Good | Soft, Hydrated |

The overall evaluation reveals that all three herbal bath bomb formulations—F1, F2, and F3—exhibited favorable results across the tested parameters. F1 provided a pleasant user experience with good moisturization and quicker solubility, attributed to higher rose water and glycerin content. F3 also demonstrated good hydration and skin feel, making it a balanced formulation in terms of usability and aesthetics. However, F2 stood out as the most favorable formulation, showcasing superior performance in color vibrancy, skin compatibility, and potential antimicrobial activity due to the synergistic effect of neem and beetroot. Its slightly higher pH, longer dissolution time, and enhanced post-use moisturization collectively contributed to its effectiveness.

All three formulations demonstrated:

- Excellent aesthetic and sensory attributes
- Safe pH levels compatible with human skin

- Smooth effervescence and complete solubility
- No signs of skin irritation
- Easy rinsability and a nourishing, refreshing post-bath effect

**Fig.1 Medicated Herbal Bath Bomb Formulations**

SUMMARY AND CONCLUSION:



The present study was undertaken with the objective of formulating and evaluating a herbal medicated bath bomb using natural and skin-beneficial ingredients aimed at providing therapeutic, cosmetic, and relaxing effects. The formulation combined herbal actives such as neem powder, green tea extract, beetroot powder, honey, and rose water with standard bath bomb components like sodium bicarbonate, citric acid, rice starch, and magnesium sulphate. Each ingredient was selected for its proven benefits in skincare, including antioxidant, anti-inflammatory, antimicrobial, moisturizing, and soothing properties. Two formulations (F1 and F2) were prepared with slight variations in herbal extract concentrations to assess their impact on physical properties, aesthetic appeal, and skin compatibility. Upon evaluation, both F1 and F2 exhibited excellent physical characteristics, including spherical shape, smooth texture, and a pleasant natural fragrance. Effervescence tests confirmed good solubility and dispersion of actives, with complete dissolution in under 5 minutes and no residue left behind. The pH values of the formulations (5.8 for F1 and 6.1 for F2) were found to be within the safe range for topical use, supporting skin barrier function and minimizing the risk of irritation. The skin irritation test further confirmed the dermatological safety of both formulations, as no adverse reactions were observed. The post-application evaluation showed that the skin remained soft, hydrated, and refreshed, with no greasy or sticky residue, highlighting the moisturizing effect of ingredients such as glycerine, honey, and vitamin E oil. F1, with slightly higher concentrations of green tea extract and rose water, showed marginally better moisturization and fragrance retention, while F2 demonstrated enhanced coloration and antibacterial potential due to increased neem and beetroot content. Both variants, however, proved effective, stable, and suitable for consumer use.

In conclusion, the results confirm that the developed herbal bath bomb formulations are safe, effective, and skin-friendly, offering a natural and eco-conscious alternative to synthetic bath products. The combination of therapeutic and aesthetic benefits makes these formulations promising candidates for commercial herbal cosmetic products. Future studies may focus on microbial stability, consumer acceptability trials, and long-term shelf life assessments to further validate their application and market potential.

REFERENCES

1. Patel, S. R., Vadiya, N. M., Saiyad, A. A., Rajeghorpade, R. A., & Meshram, D. B. (2024). Formulation and Evaluation of Herbal Bath-Bombs of *Camellia Sinensis* Powder. *Indo American Journal of Pharmaceutical Research*, 14(04). DOI: 10.5281/zenodo.11142804.
2. Bhujbal, P. R., Mashalkar, T. S., Kopnar, V. P., & Khedkar, A. N. (2024). Formulation and Evaluation of Herbal Bath Bombs. *International Journal of Innovative Research in Medical and Pharmaceutical Sciences (IJIRMPs)*, 12(3). Available at: www.ijirmps.org.
3. Lachman, L., Lieberman, H. A., & Kanig, J. L. (1986). *The Theory and Practice of Industrial Pharmacy*. 3rd Edition. Philadelphia: Lea and Febiger.
4. Kokate, C. K., Purohit, A. P., & Gokhale, S. B. (2013). *Pharmacognosy*. 47th Edition. Pune: Nirali Prakashan.
5. Wiart, C. (2006). *Medicinal Plants of the Asia-Pacific – Drugs for the Future*. Singapore: World Scientific Publishing Co.
6. Namita, P., Mukesh, R., & Vijay, K. J. (2012). *Camellia sinensis* (Green Tea): A Review. *Global Journal of Pharmacology*, 6(2), 52–59.
7. Sultan, Z., Zafar, M., Shahab, S., Najeeb, S., & Naseem, M. (2016). Green Tea (*Camellia*



- Sinensis): Chemistry and Oral Health. *Open Dentistry Journal*, 10, 3–10.
8. Sharma, B. D., & Sanjappa, M. (1993). *Flora of India*, Volume 3. Calcutta: Botanical Survey of India.
9. Musial, C., Kuban-Jankowska, A., & Gorska-Ponikowska, M. (2020). Beneficial Properties of Green Tea Catechins. *International Journal of Molecular Sciences*, 21(5), 1744.
10. Yamamoto, T., Juneja, L. R., & Kim, M. (1997). *Chemistry and Applications of Green Tea*. New York: CRC Press.
11. Agrawal, S. S., & Paridhavi, M. (2007). *Herbal Drug Technology*. 2nd Edition. Hyderabad: Universities Press (India) Pvt. Ltd.
12. Walker, B., & Harris, M. E. (2003). Bath Bubbler. *Journal of Chemical Education*, 80(12).
13. Aslani, A., & Daliri, A. (2016). Design, Formulation and Evaluation of the Physiochemical Properties of Effervescent Tablets. *Journal of Reports in Pharmaceutical Sciences*, 5(2), 122–134.
14. Reginald, B., & Samatha, M. (2019). Antifungal Activity of Piper betle and Ocimum sanctum Linn on Candida albicans: An In Vitro Comparative Study. *Journal of Oral and Maxillofacial Pathology*, 23, 333–337.
15. Priyajugale, A. K. (2020). Preparation and Evaluation of Antifungal Bath Bomb of Betel Leaves. *SGVU Journal of Pharmaceutical Research & Education*, 5(1), 465–470.
16. Mavchi, Y. L., Mali, T. R., & Marathe, G. T. (2021). Formulation and Evaluation of Natural Anti-Acne Cream Containing Lemongrass Extract. *International Journal of Scientific Research*, 3(11), 18–26.
17. Promila, V. K., & Madan, P. (2018). A Review on the Phytochemistry and Pharmacology of Cymbopogon citratus (Lemongrass). *The Pharma Innovation Journal*, 7(3), 300–304.
18. Shah, S. G., & Shri, R. (2011). Scientific Basis for the Therapeutic Use of Cymbopogon citratus (Lemongrass). *Journal of Advanced Pharmaceutical Technology and Research*, 2(1).
19. Nambiar, V., & Matela, H. (2012). Potential Functions of Lemongrass (Cymbopogon citratus) in Health and Disease. *International Journal of Pharmaceutical & Biological Archives*, 345, 1035–1043.
20. Moika, Y., & Roopal, D. (2019). Comparative Study of Antimicrobial Activity of Lemongrass (Cymbopogon citratus), Clove (Syzygium aromaticum), and Tulsi (Ocimum). *Asian Journal of Pharmaceutical and Clinical Research*, 12(4), 230–234.
21. Singh, V., & Ebibeni, N. (2011). Antimicrobial Activity of Lemongrass (Cymbopogon citratus) Oil Against Microbes of Environmental Clinical, and Food Origin. *International Research Journal of Pharmacy and Pharmacology*, 1(9), 228–236.
22. Patel, S., & Siddaiah, M. (2018). Formulation and Evaluation of Effervescent Tablets: A Review. *Journal of Drug Delivery and Therapeutics*, 8, 296–303.
23. Datta, A., & Singh, M. (2010). Antimicrobial Property of Piper betel Leaf Against Clinical Isolates of Bacteria. *International Journal of Pharmaceutical Sciences and Research*, 2.
24. Sarhan, M. M., & Abu Shahla, A. N. K. (2007). Effects of Cymbopogon citratus L. Essential Oil on Growth, Morphogenesis, and Aflatoxin Production of Aspergillus flavus ML2 Strain. *Journal of Basic Microbiology*, 47(1), 5–15.
25. Nanda, S., & Jaspal, D. (2014). Formulation and Evaluation of Herbal Cosmetics. *Journal*

- of Pharmaceutical Science and Research, 6(4), 196–202.
26. Alikhan, A., Maibach, H. I., & Zhai, H. (2010). *Cosmetics in Dermatology*. New York: Springer.
27. Shah, P., & Nayak, S. (2017). Formulation and Evaluation of Herbal Bath Bombs. *Journal of Ayurveda and Integrative Medicine*, 8(1), 75–81.
28. Joshi, A., & Sharma, D. (2019). Study of Skin-Soothing Effects of Herbal Extracts in Bath Bombs. *International Journal of Cosmetic Science*, 41(2), 130–136.
29. Gupta, R., & Chauhan, R. (2020). Efficacy of Herbal Essential Oils in Skin Care Products. *Indian Journal of Dermatology*, 65(3), 213–219.
30. Dash, S., & Mishra, A. (2021). Herbal Ingredients in Cosmetics: Benefits and Challenges. *Journal of Natural Products and Medicine*, 5(2), 145–158.
31. Thasni, K. S., Vandhana, V., & Gupta, D. P. (2022). A Review on Formulation and Evaluation of Herbal Derived Bath Bombs. *International Journal of Creative Research Thoughts*, 10(4), 273–280.

HOW TO CITE: Nayan Thorve*, Vaishnavi Katkar, Sanjay Garje, Gaffar Sayyed, Formulation & Evaluation of Herbal Medicated Bath Bomb, *Int. J. of Pharm. Sci.*, 2025, Vol 3, Issue 5, 4055-4064. <https://doi.org/10.5281/zenodo.15507219>

