

## FORMULATION AND EVALUATION OF HERBAL BODY WASH

Nikhil Tiwari, Mamta Kadawla, Neha Yadav, Shabnam Kumari\*, Kartik, Hariom

BM College of Pharmacy, Farrukhnagar, Haryana.



\*Corresponding Author: Shabnam Kumari

BM College of Pharmacy, Farrukhnagar, Haryana.

Article Received on 07/05/2025

Article Revised on 27/05/2025

Article Accepted on 17/06/2025

## ABSTRACT

Skin is the largest organ that is covering the human body, which helps in the regulation of the temperature of the body, responding to the sensory stimulus and fighting the harmful microbes that are concerning it. So that is the reason, the cleanliness of the body is the minimum necessary for preventing and combating the probable infections. Currently herbs like neem, turmeric, aloe are serving humans as antibacterial. These herbs are potent in fighting viruses, bacteria and fungus. In the current research, a face wash is prepared using various drugs or herbal origins like Aloe-Vera, and neem. Herbal cosmetic also known as "natural cosmetics". With the beginning of the civilization, mankind had the magnetic dip towards impressing others with their looks. At the time, there were no fancy fairness creams or any cosmetic surgeries. The only thing they had was the knowledge of nature, compiled in the Ayurveda. With the science of Ayurveda, several herbs and floras were used to make ayurvedic cosmetics that really worked. Ayurvedic cosmetics not only beautified the skin but acted as the shield against any kind of external affects for the body. Ayurvedic cosmetics also known as the herbal cosmetics have the same estimable assets in the modern era as well. There is a wide gamut of the herbal cosmetics that are manufactured and commonly used for daily purposes. The usage of herbal medicines has increased dramatically in the last several years. It is believed that around 80% of the world's population uses herbal plant extracts in their medicines, both in developed and developing nations. It is recognized as one of the main medical treatments, particularly in underdeveloped nations, for a variety of illnesses. The field of medicinal research known as "Herbal Medicinal Products" emerged as a result of the astounding increase in the use of herbal plants and their extracts.

## Herbal body wash

Herbal body wash preparation contains antibacterial & antifungal agents which mainly uses of part of plants such as like leaves, stem, roots & fruits to treatment for a injury or disease or to achieve good health. Mostly skin infection is caused by fungi, staphylococcus aureus and streptococcus species. Ethno medical, juice & extract from leaves of the plants are topically applied as antimicrobial and anti-inflammatory agents in treatment of skin disease including eczemas, ringworm and pruritus. In this review article herbal body wash containing neem, Aloe Vera, sandal wood powder lemon essential oil as natural plant ingredients and this content gives or shows antibacterial antifungal & anti-inflammatory activity. The body wash is a unique blend of pure herbs for clear glowing skin enriched with blends of herbal possess softening, healing, nourishing properties and cleansing

## Plant profile

## 1) Aloe vera

**Scientific name:** *Aloe barbadensis miller***Common names:** Aloe Vera, True Aloe, Miracle Plant, Burn Plant

**Description:** Aloe Vera is a succulent plant known for its fleshy, green, spear-like leaves filled with a clear gel. These leaves grow in rosettes and have serrated edges. The plant typically reaches a height of 60–100 cm and thrives in warm, arid climates. Its vibrant green hue and low-maintenance nature make it a popular choice for home gardens.

**Native region:** Aloe Vera is believed to have originated in the Arabian Peninsula but is now widely cultivated around the world, particularly in regions with tropical or subtropical climates.

**Uses:** Aloe Vera has been treasured for centuries for its medicinal, cosmetic, and culinary benefits.

- **Medicinal:** The gel inside the leaves is used to soothe burns, heal wounds, and treat skin conditions like acne or eczema. It's also consumed for digestive health and as an immune booster.
- **Cosmetic:** Aloe Vera is a key ingredient in skincare products for its hydrating and rejuvenating properties.
- **Culinary:** In some cultures, Aloe Vera is used in drinks and desserts, though it's crucial to process it properly as certain parts are not edible.



## 2) Neem

**Scientific name:** *Azadirachta indica*

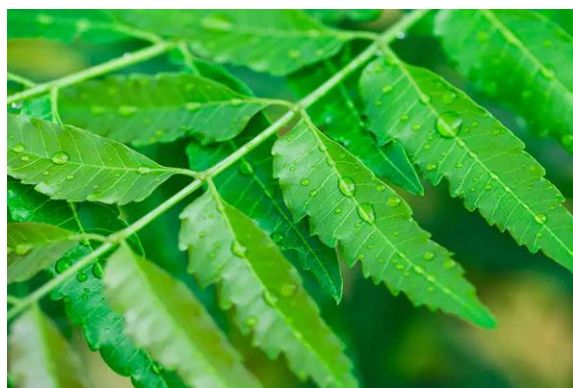
**Common names:** Neem, Indian Lilac, Margosa Tree

**Description:** The Neem tree is an evergreen plant characterized by its broad, dense canopy of pinnate leaves, fragrant white flowers, and small, oval-shaped fruits. It can grow up to 20–30 meters in height and is known for its resilience, thriving even in poor soil conditions.

**Native region:** Neem is native to the Indian subcontinent and is widely grown across tropical and subtropical regions of Asia, Africa, and South America.

**Uses:** The Neem tree is celebrated for its myriad medicinal, agricultural, and cosmetic applications:

- **Medicinal:** Neem oil, leaves, and bark are used in traditional Ayurvedic medicine to treat ailments like skin infections, fever, and digestive disorders. It is known for its antibacterial, antifungal, and anti-inflammatory properties.
- **Agricultural:** Neem oil is a natural pesticide and insect repellent, effective in organic farming practices. Its seeds are used in fertilizers and soil conditioners.
- **Cosmetic:** Neem is a common ingredient in skincare and hair care products, valued for its purifying and nourishing effects.



## 3) Sandalwood powder

**Scientific name:** *Santalum album* (Indian Sandalwood)

**Common names:** Sandalwood Powder, Chandan Powder

**Description:** Sandalwood powder is derived from the heartwood of the Sandalwood tree. It is fine-textured,

with a characteristic woody and earthy aroma. The powder has been cherished for centuries due to its therapeutic, cosmetic, and spiritual uses.

**Origin:** Indian Sandalwood, native to South India, is renowned for producing the highest quality Sandalwood and its derivatives. It is now grown in other tropical regions as well.

**Uses:** Sandalwood powder is prized for its versatility and rich properties:

- **Cosmetic:** It is a common ingredient in face packs, masks, and scrubs due to its ability to brighten skin, reduce blemishes, and soothe irritation.
- **Medicinal:** Known for its cooling and antiseptic properties, it's used to treat skin inflammations, acne, and minor wounds.
- **Aromatherapy and Spirituality:** Burnt as incense, it is used in meditation and religious rituals to promote tranquility and spiritual well-being.



## 4) Lemon essential oil

**Scientific name:** *Citrus limon*

**Common names:** Lemon Oil, Lemon Essential Oil

**Description:** Lemon essential oil is a highly concentrated liquid extracted from the peel of lemons. It has a bright, zesty aroma and is pale yellow in color. The oil is widely valued for its refreshing scent and numerous therapeutic and practical uses.

**Origin:** Lemon trees are native to Asia but are cultivated worldwide in regions with temperate climates, such as the Mediterranean and parts of North and South America.

**Uses:** Lemon essential oil is versatile and widely used in aromatherapy, household cleaning, skincare, and more:

- **Aromatherapy:** Its uplifting scent helps reduce stress and anxiety while promoting mental clarity and focus.
- **Household cleaning:** With natural antibacterial properties, it is used in homemade cleaning solutions and as an air freshener.
- **Skincare:** Known for its astringent qualities, lemon oil helps reduce oily skin, brighten complexion, and combat acne.
- **Health:** When diffused or applied topically (diluted with a carrier oil), it may alleviate nausea and enhance circulation.



### Marked products available

- 1) 100% PURE
- 2) URSA MAJOR
- 3) OSEA
- 4) Nécessaire
- 5) DR.BRONNER'S
- 6) KHADI INDIA

### METHOD AND MATERILS

Now let's see how we extract our constituents from ingredients

#### • Aloe vera gel

For aloe vera we just do simply extraction method in this we take aloe vera from field and soak it in water for 2 hours just rinse out its bad crude essence.

#### • Neem powder

Harvest healthy, green neem leaves. Avoid leaves that are wilted or damaged. If the leaves are dusty or dirty, rinse them gently with water and pat them dry with a clean cloth. Spread the neem leaves on a tray or clean surface. Place them in a well-ventilated area away from direct sunlight to dry. This may take 2–3 days, depending on humidity levels. Ensure the leaves are completely dry and crispy. Once dried, use a grinder or blender to grind the leaves into a fine powder. You may need to do this in

batches to achieve a consistent texture. To ensure the powder is smooth, you can sift it through a fine mesh strainer.

#### • Sandalwood powder

For a sandalwood powder, we just take a piece of wood of sandal wood tree and remove its bark layer and soak it for 2-3 hours in water then blend it in mixture grinder after grinding we just do sundry and then sieve it from sieve machine we will get fine powder.

#### • Lemon essential oil

The Soxhlet extraction method for lemon essential oil involves using a solvent to extract the oil from lemon peels. First, fresh lemon peels are cleaned and dried to remove moisture. The dried peels are then placed in the Soxhlet apparatus, which consists of a distillation flask, an extraction chamber, and a condenser. A suitable solvent, such as hexane or ethanol, is added to the distillation flask. The solvent is heated, and its vapors pass through the extraction chamber containing the lemon peels. As the vapors condense and drip back into the chamber, they dissolve the essential oil from the peels. This process is repeated multiple times, ensuring thorough extraction. Finally, the solvent-oil mixture is collected and subjected to evaporation or distillation to separate the essential oil from the solvent, leaving behind pure lemon essential oil. This method is efficient for extracting high-quality oil with minimal loss of volatile compounds.

### Procedure

1. Boil a sufficient amount of water and pour it over the dried herbs.
2. Let it steep for 30 min, then strain the liquid.
3. Mix the herbal infusion with the liquid castile soap with other ingredients.
4. Add 10-15 drops of lemon essential oil for fragrance and additional benefits.
5. Stir well and pour into a clean empty bottle and then labeling for storage and use.

### TABEL

S. No	Ingridients	Measurement (200ML)
1	Aloe vera	25ml
2	Neem powder	20gm
3	Sandalwood powder	20gm
4	Lemon essential oil	20ml
5	Liquid castile soap	50ml
6	Distilled water	65ml

### RESULT AND DISCUSSION

#### Results

The final formulation of the herbal body wash demonstrated excellent consistency, lathering properties, and a pleasant natural aroma. The pH of the body wash was maintained within a skin-friendly range (5.5 – 6.5), ensuring it is gentle and non-irritating to the skin. Stability tests showed no signs of phase separation or

microbial growth over a four-week observation period, indicating the product's robustness and shelf-stability. Users reported a soothing effect post-application, with no dryness or allergic reaction, which affirms the suitability of the natural ingredients used. The product also exhibited effective cleansing power, comparable to commercial products, without the use of sulfates or synthetic fragrances.

## DISCUSSION

### Discussion

The successful development of this herbal body wash highlights the potential of natural ingredients in creating effective, skin-friendly personal care products. Unlike many conventional store-bought body washes that rely on artificial fragrances, harsh surfactants, and synthetic preservatives; this herbal formulation utilizes plant-based components known for their mildness and therapeutic properties. Conventional products, although widely accessible, often strip the skin of its natural oils, leading to dryness, irritation, or allergic responses, especially for sensitive users. In contrast, the herbal body wash retains the skin's moisture, supports its natural barrier, and offers additional benefits from herbal actives such as anti-inflammatory, antimicrobial, and antioxidant properties. Moreover, creating a personal herbal formulation allows for full transparency and customization—free from unnecessary additives and micro plastics commonly found in mass-produced products. This not only benefits personal health but also reduces environmental impact. In conclusion, the results affirm that a thoughtfully crafted herbal body wash can be a superior alternative to conventional artificial body washes. It proves that sustainability and skincare performance can coexist harmoniously, offering a holistic solution for modern-day consumers who are increasingly conscious of their choices. Would you like to include specific ingredients or testing methods in the write-up as well? I can tailor it more closely to your actual formulation.

## CONCLUSION

The present study was carried out with the aim of preparing the herbal body wash that is safer than the chemical containing products. Herbal body wash was formulated with the aqueous extract of medicinal plants that are commonly used for cleansing body traditionally, the present study involves the use of neem, aloe vera, turmeric, orange peel, honey and other plant extracts instead of synthetic compound. The main purpose behind this investigation was to develop a stable and functionally effective body wash by excluding all types of synthetic additives, which are normally incorporated in such formulations. To evaluate for good product performance of the prepared body wash, many tests were performed. The results of the evaluation study of the developed body were revealed a comparable result for quality control test, but further scientific validation is needed for its overall quality.

## REFERENCE

1. S.S Deshmukh, SM Borker, AB waghmode, formulation and evaluation of Volume I and herbal body wash, 2024; 183: 14.55-4695.
2. Dipesh R Karnavat, Samiksha V. Amrutkar, Ashwini R. Patil, Suraj K. Ishikar. A Review on Herbal Soap. Research Journal of Pharmacognosy

- and Phytochemistry, 2022; 14(3): 208-3. doi: 10.52711/0975-4385.2022.00037.
3. Datta, D., Debnath, S., Sirisha, P., Nagasree, T., Swetha, D., & Babu, M. N. Formulation and Evaluation of Multipurpose Herbal Wash. Research Journal of Topical and Cosmetic Sciences, 2013; 4(2): 48-53.
4. Sayali P. Ingulkar, Ragini Salunke, Herbal Body Wash, Int. J. of Pharm. Sci, 2024; 2, 5: 1360-1366. <https://doi.org/10.5281/zenodo.11313834>.
5. Rafiq, Shahina SJ. Formulation of herbal soap against acne causing bacteria. Asian J Biol Life Sci, 2021; 10(3): 609.
6. Wulandari, Rima, Nugraheni IK, Kiptiah M. Betel leaf extract as an anti-bacterial agent in solid soap formulation and characterisation. Jurnal Pijar Mipa, 2023; 18(3): 436-441.
7. Fu, Yue, et al. utilizing the above-ground extract of Paris polyphylla as a natural antioxidant and antimicrobial additive in soap formulation. Biomass Conversion and Biorefinery, 2024; 14(8): 9821-9838.
8. Hayati, Rima, et al. Formulation and Antibacterial Activity of Averrhoa bilimbi L. Fruits Extract in Vegetable Oil-Based Liquid Hand Soap. Malacca Pharmaceutics, 2023; 1(1): 30-36.