

A REVIEW ON POLYHERBAL ANTI ACNE FACE WASH**Monika M.¹, Tejashree P.¹, Ramya R.¹, Hema S.¹, Akash P.¹, Anju K. P.²**

¹Department of Pharmaceutics, Spurthy College of Pharmacy, Rajiv Gandhi University of Health Science, Bengaluru, Karnataka.

²Assistant Professor, Department of Pharmaceutics, Spurthy College of Pharmacy, Rajiv Gandhi University of Health Science, Bengaluru, Karnataka.

Article Received on
04 August 2025,

Revised on 25 August 2025,
Accepted on 15 Sept. 2025

<https://doi.org/10.5281/zenodo.17213407>



***Corresponding Author**

Monika M.

Department of
Pharmaceutics, Spurthy
College of Pharmacy, Rajiv
Gandhi University of Health
Science, Bengaluru,
Karnataka.

ABSTRACT

The study investigates the creation and assessment of an herbal anti acne face wash with the aim of providing a safe, effective and ecofriendly alternative to traditional chemical - based cleansers. This formulation consists of a blend of natural ingredients such as neem leaves, nutmeg seeds, curry leaves, turmeric oil, aloe vera, bel Patra, honey, rose water, and shahi jeera, which provide anti-bacterial, anti-microbial, anti-inflammatory, anti-oxidant, and astringent properties. The global market is witnessing a rising demand for herbal formulations, and this herbal anti-acne face wash exhibits a multifunctional effect. Each ingredient in this face wash possesses unique properties, contributing to skin softening, acne removal, and promoting healing. This formulation was evaluated according to several criteria, which included physical tests, consistency, pH, grittiness, greasiness, spreadability, washability, foamability, viscosity, and skin irritability tests, in order to assess the quality of the product.

KEYWORDS: Herbal anti acne face wash, anti-bacterial, herbal formulations, skin irritability tests.

INTRODUCTION

Acne is caused by the inflammation of hair follicles, resulting in a range of skin imperfections such as white patches, whiteheads, blackheads, and pimples. Hormonal imbalance, germs, dead skin cells are some of the causes for acne.^[1] Acne vulgaris is the most common chronic inflammatory skin disorder that impacts the pilosebaceous unit.^[2] Acne is

typically linked to the puberty; however, it will affect people of any age.^[1] It's severity condition often vary from mild break outs with a few spots to more serious cases that causes painful, widespread exceptions on the face, chest, back or shoulders.^[1]

Acne can be managed by combination of approaches such as leading healthy lifestyle maintaining proper skin care routine in some cases using oral or topical medication dermatologist can provide some medications based on severity of acne and skin type.^[3]

In recent year many people have willing to use antiacne herbal face wash due to herbal ingredient used in the face wash herbal face wash does not contain harsh chemicals Herbal face wash contains plant-based ingredients such as neem, bel Patra, nutmeg, turmeric, curcumin, aloe vera, and tea tree, among others.^[4]

SKIN

Skin is the largest organ in human body. It occupies 70% body weight of human.^[5] The structure comprises three layers: the outermost layer is referred to as the epidermis, the middle layer is known as the dermis, and the innermost layer is called the hypo-dermis.^[6]

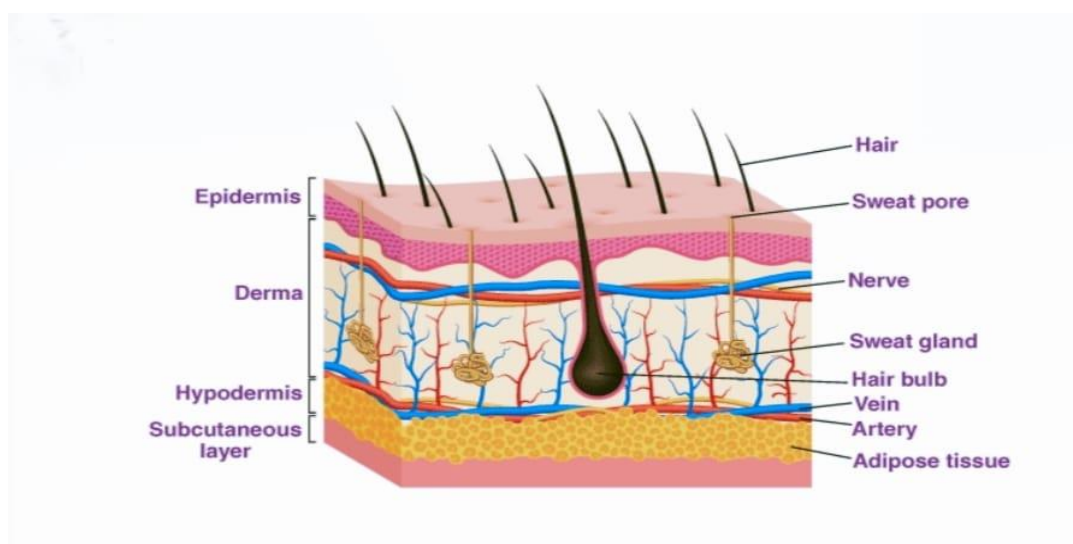


Figure 1: Anatomy Of Skin.

SKIN CARE PREPARATION

According to the drugs and cosmetics act 1940 and 1945 skin care preparation are reported as a subjected that are intended to be rubbed, poured, sprinkled and sprayed on to or introduced into or applied to the human body or any part thereof for the purposes of cleansing, beautifying, perfuming, altering the appearance, and enhancing attractiveness.^[7]

SKIN CARE PREPARATION FOR FACE^[7,8,10]

1. Creams
2. Lotions
3. Moisturizers
4. Compact powders
5. Face masks
6. Face packs
7. Face wash or face cleansers

ACNE

Acne is most commonly seen skin problems in all skin type.^[12] acne can be seen Peale at the type 18-30 year.^[3] Acne will be experienced by everyone at least once in their lifetime at some point. Acne caused in both men and women.^[13]

Acne is condition caused due to clogged of hair follicles under the skin surface, it forms widespread skin ailment is responsible for causing acne.^[14] Acne is caused mainly due to excess of sebum oil production on the skin which keeps drying out, dead skin cell clogs the pores, dust, causes lesions known as zits or pimples.^[15] There are different types of acne come Dónal, pustular, cystic, and nodular.^[3] White leads and blackheads come under the class of come Donal acne. Come Dónal acne are non-inflamed type of acne blackheads are those little dark spots seen on the skin. They happen when oil and dead skin cells clog a pore and because the pore is opened inside the material get exposed to air and turns black. They can make the skin feel bit rough.^[14]

Whiteheads: look like tiny white or skin-coloured bumps. These are form when pores get clogged with oil and dead skin cells, but here the pore stays closed. Since the trapped stuff isn't exposed to air it stays white.^[14]

Papules: are small red bumps that we notice when pore gets inflamed. They usually firm a little raised and can fell tends when we touch them.^[15]

Nodules: are large bumps compared to papules that sit deeper under the skin they usually bigger than 5mm and can feel quite head or painful because they reach into the deeper layer of the skin.^[13]

Cysts: are formed bumps under the skin but unlike nodules they are often smaller (less than 5mm) and tend to feel softer because they are with pus or fluid they can also be and may leave marks if not treated properly.^[3]

Acne treatment can work in different ways, such as^[12]

- Reducing oil production to keep the skin from becoming too greasy.
- Using antibiotics that stop the growth of bacteria like *Propionibacterium acnes* and *staphylococcus epidermidis*, which are the main germs responsible for acne.
- Removing dead skin build-up (keratolytic action) so that pores don't get clogged with oil and debris.
- Reducing inflammation to ease redness, swelling, and irritation, preventing acne from getting worse.

FACE WASH

Face wash is the facial care product which is used to clean the makeup, dead skin cells, oil, dirt and other pollution accumulated on the skin.^[8,9] Washing your face twice daily, in the morning and in the night, it helps to remove the pores on the skin and to prevent skin conditions like acne.^[10] Face wash is always used together with toner and moisturizer.^[9] Face wash is available in various forms like gels, foams and creams. Face wash often includes various skin care ingredients.^[11]

Objectives^[1,10]

- To formulate and evaluate herbal antiacne face wash.
- To formulate herbal antiacne face wash suitable for all age and treating skin conditions such as tanning.
- To avoid use of harmful chemicals on face.

Advantages^[9,25,8,20]

- Cleanses the face by removing dirt and impurities.
- Helps the skin stay hydrated.
- Slows the visible effects of ageing.
- Assists in treating acne.
- Helps address various skin problems.
- Removes dead skin cells.

- Makes the skin appear brighter and more radiant.
- Keeps the skin fresh and healthy.
- Promotes pore exfoliation when used regularly.

Disadvantages^[25,21]

- Limited use is advised; frequent application is not recommended.
- Using face wash more than twice a day can cause dryness.
- May lead to skin irritation, redness, or inflammation, especially when products contain harsh chemicals.
- Excessive washing can enlarge pores over time.
- The manufacturing process can be complex.
- Certain formulations may strip the skin of its natural moisture.

Properties^[21,9,20]

- Should have a visually appealing look.
- Must not feel sticky during application.
- Exfoliation should promote skin recovery and renewal by improving blood circulation.
- Needs to leave a thin, moisturising layer on the skin after use.
- Should spread evenly without dragging on the skin.
- Must feel soft when applied.

LIST OF HERBAL INGREDIENTS USED IN HERBAL ANTI ACNE FACE WASH:

1. NEEM LEAVES^[1,14,24,23]

Botanical name: Azadiruchta indica



Figure 2: Neem Leaves.

Uses

Neem as a various property such as,

- Antibacterial, antifungal, anti-inflammatory, antiseptic and antiacne etc.
- Neem is highly beneficial for oily and acne prone skin.
- Neem is used for various skin diseases like rashes, irritation etc.
- Reduce scars treat dry skin and wrinkles.

2. NUTMEG SEED^[14,1]

Botanical name: -Myristica fragrana.



Figure 3: Nutmeg Seed.

Uses

- Nutmeg as antiacne property.
- It has wide range of properties such as antibacterial anti-inflammatory, antiseptic and bacterial.

3. CURRY LEAVES^[23,21]

Botanical name: -Murraya koenigii.

It is also known as sweet neem and it is use In Indian traditional food.



Figure 4: Curry Leaves.

Uses

- It is widely used in many skin diseases like as acne etc.
- It as rich anti-oxidant and anti-inflammatory property.
- It is rich in vitamin A and C which helps to brighten the skin and treat acne.

4. TURMERIC OIL^[8,1,24]

Botanical name: -Curcuma longa.



Figure 5: - Turmeric Oil.

Uses

It has various properties such as antibacterial, antifungal.

- Turmeric works amazingly foe skin brightening and lightening.
- It cures various skin conditions including acne, rashes, skin darkening, skin pigmentation etc.
- It also used for psoriasis.
- Constant using may provide glow to the skin.

5. ALOE VERA^[8,23,24]

Botanical name: -Aloe baradensis miller.



Figure 6: Aloe Vera.

Uses

- It has anti-inflammatory and anti-oxidant.
- Anti-inflammatory properties of aloe vera reduces the redness acne, burner and even wounds.
- Anti-oxidant properties of aloe vera helps to repair the UV damage and slow down the aging of the skin.
- Aloe vera also have various skin benefits making skin glow to keeping the skin soft and supple.

6. BEL PATRA^[11,23]

Botanical name: - Aegle marmelos.



Figure 7: Bel Patra.

Uses

- Bel Patra has an anti-oxidant property and that is useful in various skin disorder.
- Bel Patra assists in the regulation of blood sugar levels.
- It has a mild anti-inflammatory property that reduces the inflammation and treat ulcer.

7. HONEY^[24]

Figure 8: Honey.

Uses

- Deeply hydrates the skin.
- Cleans pores.
- Helps to reduce the wrinkles.
- It acts as humectant.
- Honey used as thickening agent in various creams, facial mask etc.

8. ROSE WATER^[14,24]

Figure 9: Rose Water.

Uses

- Rose water used as a solvent in a skin care preparation.
- It also has a various skin benefits/properties such as antibacterial and antiseptic properties which cures acne.
- Balances oil generated in skin.
- Natural hydration to the skin.
- Rose water helps to cure fine lines and wrinkles.

9. SHAHI JEERA^[1,14]**Uses**

- Used as perfume

METHODS OF PREPARATION**A. MACERATION**

It is oldest form of evaluation method.^[16] This method is mainly employed for the extraction of pharmaceutical preparations. It has been utilized for an extended period and is easy to implement.^[19] Maceration extraction involves placing a coarse powder (neem, nutmeg, curry

leaves) extract of the raw material in a sealed vessel with the solvent.^[18] Choosing the correct solvent is crucial in the solvent extraction.^[16] The solvent is allowed to sit at room temperature for a period ranging from 3 to 7 days, depending on the active compounds that are to be extracted, and regular agitation should be applied until soluble matters are dissolved.^[20] Mixture is then strained, the more (the damp solid material) is pressed of the polled liquid are clarified by filtration or decantation after settling.^[19]

Advantages^[16,17]

- Simple method.
- Skilled operator not required.
- Energy same process.
- Thermolabile materials are used.

Disadvantages^[16,17]

- It's time-consuming process.
- Solvent required is more.
- Not exhaustively extract the drug.

B. PERCOLATION

Percolation is most commonly used extract for tincture and fluid extracts. Percolation is always performed in narrow, conical shaped vessels¹⁶. Initially, the raw materials (curcuma longa, aloe vera, bel Patra) are dampened using an appropriate solvent and stored in a sealed container for a duration of 4 hours. The substances are then placed into a percolator, and the top is sealed. A coating of solvent is placed on the surface, following which the percolator is closed and allowed to sit for 24 hours. After the period lows outlet of percolator is opened allow the extract to dip slowly drop wise fresh solvent is added as needed until about 3 quarters of the final required volume is collected.

The remaining solid material is then pressed to remove any leftover liquid which is combined with the percolator. Finally, the liquid is clarified by filtration or letting it stand and then decanting. The process continues until a drop of liquid from the percolator, after it evaporates, does not leave any solid residues.

Advantages^[17]

- Short time is required.
- More complete extraction.
- Suitable method of potent and costly drug.

Disadvantages^[17]

- Trained person is required.
- Special attention required in case of particle size.

C. INFUSION

This technique is quite straightforward; it is utilized in the preparation of coarsely ground raw substances.¹⁷ Powder drug (Rose petals) is soaked in cold or boiled water for short period of time. It becomes saturated until a diluted mixture of straightforwardly dissolvable components from unprocessed plant materials is formed.

Advantages^[17]

- Less time consuming.
- Terminable constituent may be treated.

Disadvantages^[17]

- Trained person is required.
- It is complicated.

EVALUATION PARAMETERS OF HERBAL ANTI ACNE FACE WASH**1. PHYSICAL EVALUATION^[5]**

The physical assessment includes the following examinations

- **Colour:** The colour of the herbal anti acne face wash was assessed through visual inspection.
- **Odour:** The odour of the formulation was evaluated by smelling the sample.
- **Consistency:** The consistency of the face wash was examined manually.

2. PH^[22]

The pH. of 1% aqueous solution of the formulation was measured by using a calibrated digital pH. meter at constant temperature.

3. GRITTINESS^[5]

The grittiness test determines if there are any gritty particles present in the formulation. The product was checked by applying on the skin and evaluating the texture.

4. WASHABILITY^[2,14]

The product was applied on the skin and then the ease and extent of washing with water were checked manually.

The product is easily washed with water which means that it is easily washable.

5. FOAMABILITY^[5,22]

Small amount of product was taken in a beaker containing water. Initial volume was noted; beaker was shaken for 10 times and final volume was noted.

Foamability was also analysed by applying on to skin with contact with water.

6. SPREADABILITY^[13]

Spread-ability of the formulation was determined by measuring the spreading diameter by keeping 1gm of sample between two horizontal glass plates. The standard weight 20gm applied on the upper glass plate. The spreading quality checked by visual inspection.

Spreadability(s) = $M \cdot L / M$

Were,

M = weight tied to upper slide

N = L – length of glass slide

T = time taken sperate the slides.

7. VISCOSITY^[2]

The measurement of the viscosity of prepared formulation was carried out with brook field viscometer. The measurements were over a speed setting of 100 rpm at 25⁰C using brook filed viscometer.

8. SKIN IRRITABILITY TEST^[22]

This test was performed on a few healthy human volunteers of either sex after obtaining consent for the same about a few drops of the formulation were applied to an area of skin and kept as such for certain minutes and note down any irritancy occurs.

CONCLUSION

Natural remedies are much safer and more acceptable than synthetic drugs with minimal side effects. An herbal face wash recipe works better than store-bought options. Herbal components like neem leaves, nutmeg, curry leaves, bel Patra, aloe vera, rose water, turmeric oil, shahi jeera, honey, which is well – known for its anti – bacterial, anti-inflammatory, anti-acne, anti-septic, anti-oxidant properties. In this study several parameters such as physical parameters like colour, odour, consistency, viscosity test, Ph, test, spread-ability, washability, foamability, grittiness, greasiness, skin irritability test can be evaluated. Thus, the research indicated that this herbal face wash for acne can be used successfully for skincare.

REFERENCES

1. Budge PN, Chakurkar PV, Suryawanshi PA, Suryawanshi RR, Azeem SA. A Review on Formulation and Evaluation of Herbal Anti-Acne Facewash. *Int J Adv Res Sci Commun Technol.*, 2025 Apr; 5(2): 133-8.
2. Gunjal A, Hussain F, Pathan M, Mali V, Jadhav A. Formulation and evaluation of poly-herbal anti-acne facewash. *Int J Pharm Sci & Res.*, 2024 Jan; 15(1): 246-52.
3. Jadhav PA. Formulation and evaluation of anti-acne face wash gel. *World J Pharm Pharmaceut Sci.*, 2017; 6(5): 1514–1518.
4. Reshmi KS, Sreya TC, Gogula B. A review article on: Herbal Face Wash. *World J Pharm Pharmaceut Res.*, 2024 Sep; 13(9): 717-726.
5. Singh HP, Samnhotra N, Gullaiya S, Kaur I. Anti-acne synergistic herbal face wash gel: formulation, evaluation and stability studies. *World J Pharm Pharm Res.*, 2015 Sep; 4(9): 1261–1273.
6. Kolarsick PAJ, Kolarsick MA, Goodwin C. Anatomy and physiology of the skin. *J Clin Aesthet Dermatol.*, 2011; 4(9): 22-35.
7. Mane PK, Dangare A. Herbal face wash gel of *Cynodon dactylon* having antimicrobial, anti-inflammatory action. *Pharm Reson.*, 2020; 3(1): 36-43.
8. Tiware SA, Warghane KK, Waghmare P, Rumale NP. A review on herbal face wash. *Int J Pharm Chem Anal.*, 2023; 10(4): 220-8.
9. Bhagwat JD, Bagwe GG, Babar HD, Avhad PB, Aryan, Uppalwar S. Formulation and evaluation of herbal face wash. *Int J Multidiscip Res.*, 2024 May-Jun; 6(3): 1-11.
10. Kise AR, Wagh AG, Kale SM. Formulation and evaluation of antiacney facewash. *EPRA Int J Res Dev.*, 2024 Jun; 9(6): 118–23.

11. Kamavaram S, Bais SK. Formulation and evaluation of herbal face wash from Bel Patra leaves. *Int J Pharm Herbal Technol.*, 2024 Oct-Dec; 2(3): 2300-9.
12. Ghotkar MN, Kharade SS, Chavan RS, Jadhav RS, Jagtap NM, Vambhurkar GB. Formulation and evaluation of herbal facewash for acne. *Asian J Pharm Anal.*, 2018; 8(4): 183–185.
13. Sinare SB, Sinare PP, Dokhe PG. Formulation and evaluation of herbal face wash gel. *World J Pharm Pharm Res.*, 2023 Jun; 12(10): 777–783.
14. Koli DS, Mane AN, Kumbhar VB, Shaha KS. Formulation & evaluation of herbal anti-acne face wash. *World J Pharm Pharm Sci.*, 2016 Jun; 5(6): 2001–2007.
15. Jadhav PJ, Mane AN, Gilda SS, Kumbhar VB, Jadhav MB, Ghadge AA. Formulation & evaluation of poly-herbal anti-acne face wash gel. *World J Pharm Pharm Res.*, 2016 Jul; 5(7): 1184–1190.
16. Rasul MG. Conventional extraction methods use in medicinal plants: their advantages and disadvantages. *Int J Basic Sci Appl Comput.*, 2018 Dec; 2(6): 10-14.
17. Sindhu RK, Kaur P, Sanjana, Manshu, Kaur P, Goyal A, Bala R, Sandhu A. Phytochemicals: extraction, isolation methods, identification and therapeutic uses: a review. *Plant Arch.*, 2021 Jan; 21(Suppl 1): 174–184.
18. Ghosh U, Haq MA, Chakraborty S. Application of systematic technologies for the extraction of novel phytoconstituents from pharmacologically important plants. *Int J Chem Anal Sci.*, 2011; 2(9): 1153-8.
19. Hidayat R, Wulandari P. Methods of Extraction: Maceration, Percolation and Decoction. *Eureka Herba Indonesia.*, 2021; 2(1): 68–74.
20. Sirsat SH, Rawat S, Jaybhaye SS, Ambhure P, Shelke A. Formulation and evaluation on herbal anti acne face wash. *EPRA Int J Res Dev.*, 2024 Nov; 9(11).
21. Agarwal N, Abhishek A, Jindal A. Herbal Components as an Advantageous Remedy for Pimple and Acne in Face-Wash: A Systemic Review. *Current Research in Pharmaceutical Sciences.*, 2023; 13(1): 01–20.
22. Dubile DK, Waghmare SU, Dhapse A, Wagh BB. Preparation and evaluation of herbal anti-acne face wash gel. *International Journal of Advanced Research in Science, Communication and Technology (IJARSCT).*, 2024; 4(4): 558–563.
23. Bilal M, Kumar P, Singh NK, Adil M, Arora K. A review on multi-herbal anti-acne facewash. *World Journal of Pharmaceutical Research.*, 2020; 9(12): 397–400.
24. Sehgal A, Banyal M, Gupta J, Joshi S. Formulation and evaluation of anti-acne herbal facewash. *Int J Adv Res Ideas Innov Eng (IJARIIE).*, 2023; 9(2): 19670–1662.

25. Duhan P, Dahiya G, Kataria R P. Formulation and evaluation of herbal facewash: a step towards nature and a boon to skin. International Journal of Newgen Research in Pharmacy & Healthcare., 2023; 1(1): 22–27.