



Herbal Components as an Advantageous Remedy for Pimple and Acne in Face-Wash: mini Review

Somesh Shukla, Divya Dwivedi, Archana Sah, Ashrit Kumar, Ayush Gupta, Divyanshu Pandey, Neelam Jain, Neeraj Jain, Raghavendra Kumar Dwivedi

¹Sakshi College of Pharmacy, Kanpur- 208017, U.P., India.

²Faculty of Pharmaceutical sciences Rama University, Mandhana, Kanpur-209217, U.P., India.

³Faculty of Pharmacy, Oriental University, Indore-453555, M.P., India

⁴Teerthankar Mahaveer College of Pharmacy, TMU, Moradabad- 244001, U.P., India.

Faculty of Pharmaceutical sciences Rama University, Mandhana, Kanpur-209217, U.P., India.

ABSTRACT-

Herbal formulations are in high demand on the global market. The human epidermis is the most vulnerable organ in the body to infections and disease-causing microbes. It also acts as the majorly responsible body part for respiration. As a result, it needs a great deal of care and protection. Many skin issues can occur throughout puberty due to internal component imbalances and hormone imbalances. The most prevalent skin condition is acne. The most commonly afflicted areas are the face and neck. The removal of oil from the face is a preventative measure. This will need proper cleaning and washing. Antibiotic gels and anti-acne washes or masks containing synthetic medicines are presently available on the market. Unfortunately, in addition to treating illnesses and killing infections, these medicines may have adverse effects. Various studies have demonstrated the effectiveness of herbal-based compositions for cleansing and oil removal. As a result of this necessity, we came up with the notion of using herbs and various plant derived components markedly useful in the various treatments of skin-related conditions. The characteristics of various face wash and their efficacy are reviewed in the current study comprehensively. The main objective of this study is the comparison of Ingredients used in various formulations of face wash like Neem, Aloe vera, Belpatra, Curry, Haldi, Lemon, Indian madder, Sweet flag, Lodhra, Gelling agent, Preservative, Neutralizer, Humectants, Vehicle, Perfume, Chelating agent, on the basis of evaluation and effective development of emerging techniques used in the markedly available face wash which reportedly proven as an advantageous measure of treatment.

2381

Key words: Facewash, Herbal formulations, Anti-acne, Anti-inflammatory, Anti-microbial.

DOI Number: 10.48047/Nq.2022.20.17.Nq880304

Neuroquantology 2022; 20(17):2381-2386

INTRODUCTION

Skin: The skin is the largest organ in the body, weighing approximately 15% of an adult. It prevents excess water loss from the body and plays a crucial role in thermoregulation, in addition to protecting against external, physical, chemical, and biological threats. Aside from adjusted nourishment, hormonal changes particularly during pubescence in the two genders cause many changes in the body. Among different changes, dryness, harshness,

and pimples are the most widely recognized. The pathogenesis of this is bacterial abundance and irritation. To conquer this issue the utilization of natural cures, for example, aloe vera, neem, and tulsi frothing face wash gel have been planned (1, 2).

Skin care preparations: Over the years, the preparations for skin care have grown tremendously. In the hope of developing a charming personality, safeguarding their



bodies, and avoiding unpleasant odors, people use a variety of skincare products, including lipstick, mouthwash, complexion cream, foot powder, and so on. Substances that are meant to be rubbed, poured, sprinkled, or otherwise applied to the human

body or any part of the body for the purpose of cleansing, beautifying, promoting attractiveness, or altering the appearance of the skin are referred to as skin care preparations (3).

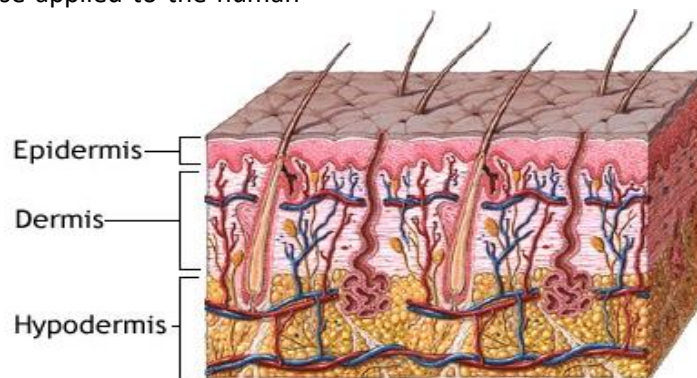


Figure 1: Diagram of Skin

Face wash

Makeup, oil, dirt, and other pollutants can be removed from the face's skin with the help of a cleanser, a facial care product. Acne prevention and pore unclogging are both aided by this. A cleaning agent can be utilized as a component of a healthy skin routine along with a toner and lotion (4).



Figure 2: Face wash container

Advantages of face wash:

- It assists with eliminating dead skin cells that assist new skin cells with supplanting old ones.
- It aids in maintaining healthy, fresh skin.
- It gives the skin a radiant appearance.
- The combination of dead skin cells and inordinate oil obstructs pores, which can prompt skin to break out whiteheads, zits, and an all-out tired appearance. All of the above skin issues can be avoided by regularly exfoliating the pores.

- Wrinkles will appear less quickly on your skin if dead skin cells are removed. (4)

Properties of face wash:

- The shedding speeds up blood flow and advances skin recovery and restoration.
- Overproduction of sebum by sebaceous glands clogs pores and contributes to oily skin and facial pores.
- Cleansers containing herbs and botanicals are necessary for oily skin because they will clean the pores and reduce oil build-up. These shedding chemicals contain calming

specialists and cancer prevention agents that improve and feed the harmed skin.

- Known for its helpful properties, the natural face wash is utilized to treat skin break out and pimples. Herbal face wash removes excess oil without stripping the skin of its nutrients thanks to its abundance of plant-based ingredients like neem.
- It ought to be aesthetically pleasing and stable.
- It ought to relax on application to the skin.
- It ought to spread without dragging easily.
- It should not feel greasy or oily upon application.
- The cream residue should not become viscous upon evaporation of water.
- Rather than being absorbed, its physical action should be to flush the skin and open pores.
- A slight emollient film ought to stay on the skin after its utilization. (4)

Uses of face-wash:

- Every day, to get rid of all traces of makeup.
- For skin cleansing.
- Hostile to maturing.
- Taking a bath and rejuvenating the skin keeps it clean and shiny.
- Stimulates their skin cell renewal and generation.
- Assist with stopping the pores clear (4)

Agents used face wash:

Therapeutic agents use in face wash:

Antimicrobial

An antimicrobial is a substance that prevents bacteria from growing and reproducing in its broadest sense. While anti-infection agents and antimicrobials both assault microscopic organisms, these terms have advanced throughout the years to mean two unique things. Nowadays, the most common way to talk about antimicrobials is as agents that are used to clean surfaces and get rid of bacteria that could be harmful (5)

Anti-inflammatory

It is the ability of a substance or treatment to lessen swelling or inflammation. Opioids, on the other hand, affect the central nervous system and block pain signals to the brain,

which is why anti-inflammatory medications make up about half of analgesics. Anti-inflammatory medications relieve pain by reducing inflammation (6)

Additives used in face wash

Antioxidants

Some types of cell damage may be delayed or prevented by antioxidants, which can be produced by humans or come from nature. Numerous foods, including fruits and vegetables, contain antioxidants. They can also be bought as food supplements. Examples; Vitamin E, vitamin A, vitamin C, and lycopene (7)

Gelling agent

Ingredients known as gelling agents can transform the water or oil phase into a gel that is thickened but not stiff. Gelling agents will make emulsions thicker and more fluid rather than stiff. When a force is applied, some of these gels will thin out (thixotropically) and return to their original viscosity when the force is removed. These gels make it conceivable to make thick items, that can be shaken, or mixed under high shear, for more straightforward packaging, or for splashing e.g. carbopol 934 and carbopol 940 (8).

Preservative

The essential justification behind utilizing additives is to make food varieties more secure by disposing of the impact of organic elements. Consumers face the greatest threat from food spoilage or toxic contamination caused by microorganisms like yeast, mold, and bacteria.

Some of these organisms are capable of secreting toxins, which are harmful to human health and can even kill an individual e.g. methylparaben, propyl paraben (9).

Humectants

Humectants are hygroscopic substances used to keep things wet; it is something contrary to a desiccant. It is frequently a molecule that has a number of hydrophilic groups, most frequently hydroxyl groups; However, it can also contain amines and carboxyl groups, which are sometimes esterified (the most important property is its ability to form

hydrogen bonds with water molecules). They are utilized in numerous products, including pesticides, cosmetics, food, and medicine. Through absorption, the humectants draw the water vapor into or beneath the surface of the organism or object, thereby attracting and retaining the moisture in the nearby air. Examples are propylene glycol, hexylene glycol, and butylene glycol (10).

Foaming agent

A substance that makes it easier to make foam, like a surfactant or a blowing agent, is a foaming agent. A surfactant, when present in modest quantities, lessens the surface strain of a fluid (decreases the work expected to make the froth) or builds its colloidal strength by hindering the blend of air pockets. The gas that makes up the foam's gaseous portion is called a blowing agent. Examples are sodium lauryl sulfate, azodicarbonamide, and titanium hydride (11).

Advantages of herbal cosmetics over synthetic cosmetics

These specialists are acquiring ubiquity as most ladies favour regular items over synthetic compounds for their own consideration to improve their excellence these items supply the body with supplements and upgrade well-being and give fulfilment as these are liberated from manufactured synthetic substances and have somewhat less secondary effects contrasted with engineered beauty care products.

Compatible with all skin types

All skin types can use natural cosmetics. Natural cosmetics like lipstick, eye shadow, and foundation are suitable for all skin tones, regardless of whether you are fair or dark. They can be used by women with oily or sensitive skin without making their condition worse. (12)

Wide selection to choose from

Although natural cosmetics are still relatively new to the beauty industry, they already provide a wide range of beauty products for makeup-averse individuals. Naturally formulated foundation, eye shadow, lipstick, blush, mascara, concealer, and many more products can be found. Additionally, natural cosmetics made locally or by internationally renowned designers can be found. (12)

Fits your budget

Normal beauty care products are not unreasonably costly. In fact, some of these items are less expensive than synthetic alternatives. During sales, they are offered at a discount and sold at a low price. Simply have to study to the point of searching for extraordinary arrangements. Due to side effects and the rising cost of modern medicine, WHO estimates that about 80% of the world's population relies on natural products for their health care. (12)




Not tested on animals

To ensure that they are safe and effective for human use, some cosmetics are initially tested on animals. In any case, regular beauty care products need not be tried on creatures. These regular definitions are tried by specialists in labs utilizing cutting-edge hardware without any creatures included. (12)

No side effects

Cosmetics made of synthetic materials can irritate your skin and lead to acne. They could clog your pores and cause oily or dry skin. One need not be concerned about these with natural cosmetics. The regular fixings utilized guarantee no after effects; They can be used at anytime, anywhere. To clear mild to moderately severe acne, for instance, herbal cosmetics are free of paraben, the most common cosmetic preservative that is thought to interfere with hormone function and penetrate the skin.

Table No.1: Herbs and its benefits

Sr. No	Ingredients	Skin benefit	Figure
1.	Aloe vera (vitamins, enzymes, minerals, sugars, lignin, salicylic acids, and amino acids.)	Moisturizing agent, fight acne and smoothing effects on the skin, and also acts as an antibacterial agent. (23)	
2.	Neem (Nimbin, nimbolide, ascorbic acid)	The antibacterial properties of neem fight acne-causing bacteria, which helps in the treatment and prevention of acne. Also, it's extremely useful in controlling oil production in the skin. (24)	
3.	Tulsi (Essential oil are camphor, eugenol And phytochemical constituents of tulsi are oleanolic acid, ursolic acid, eugenol, and linalool)	It has healing property, antibacterial, antifungal, and anti-inflammatory properties, and also Tulsi prevents blackheads, and acne and relieves skin infections(25)	

2385

REFERENCES

1. Singh, H. P., Samnhotra, N., Gullaiya, S., & Kaur, I. (2015). Anti-acne synergistic herbal facewash gel: formulation, evaluation and stability studies. *World Journal of Pharmaceutical Research*, 4(9), 1261-73..
 2. Mendhekar, S. Y., Thorat, P. B., Bodke, N. N., Jadhav, S. L., & Gaikwad, D. D. (2017). Formulation and evaluation of gel containing neem, turmeric, aloe vera, green tea and lemon extract with activated charcoal and honey. *Ejpmr*, 4(12), 439-443.
 3. Mane, P. K., & Dangare, A. (2020). Herbal Face Wash Gel Of Cy Nodon Dactylon Having Antimicrobial, Anti-Inflammatory

Action. *Pharmaceutical Resonance*, 3(1), 36-43.
 4. Mane, P. K., & Dangare, A. (2020). Herbal Face Wash Gel Of Cy Nodon Dactylon Having Antimicrobial, Anti-Inflammatory Action. *Pharmaceutical Resonance*, 3(1), 36-43.
 5. https://storify.com/ASEEM_SOOD/benefitsofherbalfacwash.
 6. <https://en.wikipedia.org/wiki>.
 7. <https://www.nlm.nih.gov/medlineplus/antioxidants.html>.
 8. http://www.ingredientstodiefor.com/category/Thickeners_Polymers_RheologyModifiers/c36.



9. <http://www.eufic.org/article/en/foodsafety/quality/foodadditives/artid/preservativesfoodlongersafer>.
10. What is a humectant (<http://www.wisegeek.org/whatisanhumectant.htm>), wisegeek.org.
11. McNaught, A. D. (1997). *Compendium of chemical terminology* (Vol. 1669). Oxford: Blackwell Science.
12. Alok, S., Shanker, C., Lalit, T. K., Mahendra, S., & Rao, C. (2008). Herbal medicine for market potential in India: an overview. *Academic Journal of Plant Sciences*, 1(2), 26-36.
13. Rasheed, A., Avinash Kumar Reddy, G., Mohanalakshmi, S., & Ashok Kumar, C. K. (2011). Formulation and comparative evaluation of polyherbal anti-acne face wash gels. *Pharmaceutical biology*, 49(8), 771-774.
14. Yadav, S., & Gupta, M. (2019). Formulation and evaluation of anti-acne herbal face wash gel. *Journal of Drug Delivery and Therapeutics*, 9(4), 523-525.
15. Agarwal, N., & Jindal, A. (2023). Herbal Components as an Advantageous Remedy for Pimple and Acne in Face-Wash: A Systemic Review. *Current Research in Pharmaceutical Sciences*, 01-20.
16. Singh, H. P., Samnhotra, N., Gullaiya, S., & Kaur, I. (2015). Anti-acne synergistic herbal face wash gel: formulation, evaluation and stability studies. *World Journal of Pharmaceutical Research*, 4(9), 1261-73.
17. Ganpat, M. M. A., Aswar, A. R., & Hingane, L. D. To Formulate and Evaluate Aloe-Vera Face Wash.
18. Gautam, A., & Upadhyay, S. (2022). Formulation and Standardization of Polyherbal Face Wash Gel for Acne Management. *Research Journal of Pharmacy and Technology*, 15(9), 3931-3935.
19. Vedamurthy, M. (2021). Topical Anti-Acne Agents. *Essentials for Aesthetic Dermatology in Ethnic Skin: Practice and Procedure*.
20. Yadav, S., & Gupta, M. (2019). Formulation and evaluation of anti-acne herbal face wash gel. *Journal of Drug Delivery and Therapeutics*, 9(4), 523-525.
21. Rasyadi, Y., Sartika, D., & Fitri, N. D. (2021). Uji Aktivitas Antibakteri Penyebab Jerawat Sediaan Gel facial wash ekstrak. Etanol. Daun. Kopi arabika (*Coffea arabica* L.). TERHADAP. *Cutibacterium acnes*. *JAFP (Jurnal Akademi Farmasi Prayoga)*, 8(1), 1-6.
22. Rekha, N., & Prabhu, D. S. (2021). Study on the efficacy of Natural Actives vs Natural Actives with Synthetic Ingredients in Anti Pimple Face Wash against *Propionibacterium acnes*. *IJO-International Journal of Biological Science*, 6(03), 01-05.
23. Sahu, P. K., Giri, D. D., Singh, R., Pandey, P., Gupta, S., Shrivastava, A. K., ... & Pandey, K. D. (2013). Therapeutic and medicinal uses of Aloe vera: a review. *Pharmacology & Pharmacy*, 4(08), 599.
24. <https://www.google.com/search?q=neem+skin+benefits>.
25. https://www.google.com/search?q=tulsi+ingredients&rlz=1C1CHZN_enIN940IN940&oq=tulsi+ing&aqs=chrome.1.69i57j0i512j0i22i30j0i10i15i22i30i625j0i22i30i6.16584j0j15&sourceid=chrome&ie=UTF-8