

# A Review on Herbal Face Wash

<sup>1</sup>Jadhav Sumit Rajabhau, <sup>2</sup>Neha Mahadev Jadhav, <sup>3</sup>Nangare Mahesh Kailas, <sup>4</sup>Nilesh Satyawar Shelke,

<sup>5</sup>Narhare Vaibhavi Tukaram, <sup>6</sup>Jadhav Vaishnavi Sachin,

<sup>1,2,3,5,6</sup>Students, Shivlingeshwar College of Pharmacy, Almala, Latur, Maharashtra

<sup>4</sup>Assistant Professor, Department of Pharmaceutics, Shivlingeshwar College of Pharmacy, Almala, Latur, Maharashtra

**Abstract:** Herbal facewash formulations have gained significant attention due to their efficacy, safety, and minimal side effects compared to synthetic alternatives. This study focuses on the formulation and evaluation of a herbal facewash enriched with Aloe vera, Neem, Turmeric, and Green Tea extracts, known for their antimicrobial, antioxidant, and skin-nourishing properties. The prepared formulation was assessed for pH, foam stability, cleansing efficiency, and skin compatibility, ensuring its suitability for daily skincare. The results demonstrated effective removal of excess oil, dirt, and microbial contaminants while maintaining skin hydration and preventing acne. The absence of harsh chemicals makes the herbal facewash a promising alternative for individuals seeking natural skincare solutions. Further studies can explore its long-term dermatological benefits and consumer acceptability.

**Keywords:** Herbal facewash, Aloe vera, Neem, Turmeric, Green tea, Antimicrobial, Skin hydration, Natural skincare, Acne prevention, Foam stability, pH balance

## I. INTRODUCTION

Inflammation in hair follicles causes acne, which manifests as variety of skin imperfections, including blackheads, whiteheads, and pimples. Hormonal fluctuations, germs, dead skin cell accumulation, and excessive oil production are some of the common causes. Acne is typically linked to puberty; however, it can affect people of any age. Treatment options include oral or topical drugs, lifestyle changes, and the adoption of excellent skincare habits. A dermatologist can provide customized guidance for the best results. Increased oil production, bacterial development, hormonal changes, and inflammation are the main reasons of acne, which usually affects the face, chest, shoulders, and back.[1] It can range in intensity from moderate, with a few blemishes, to severe, with painful and widespread eruptions. Changing one's lifestyle, following recommended skincare practices, and occasionally turning to medicine are all necessary for managing and treating acne. Herbal face wash, made with plant-based components instead of harsh chemicals and artificial additions, provide a gentler cleansing choice. Aloe vera, tea tree oil, chamomile, and neem are a few examples of the calming, anti-inflammatory, and antibacterial ingredients they frequently include.[2][3]

### SKIN:

The skin, the largest organ of the human body, is a complex structure with multiple layers and functions. It serves as a barrier between the internal and external environments, protecting against injury, infection, and dehydration. It also plays a vital role in regulating body temperature, sensing the environment, and synthesizing vitamin D.[4]

### Anatomy of the Skin

The skin is composed of three main layers:

- **Epidermis:** The outermost layer of the skin is the epidermis, a thin, stratified epithelial tissue. It consists of five layers:
- **Stratum corneum:** The outermost layer, composed of dead cells filled with keratin, a tough protein.
- **Stratum lucidum:** A thin layer of cells found only in thick skin (palms and soles).
- **Stratum granulosum:** A layer of cells containing granules of keratin and a substance called lamellar bodies, which help to form the skin barrier.
- **Stratum spinosum:** A layer of cells containing spiny projections that help to hold the cells together.



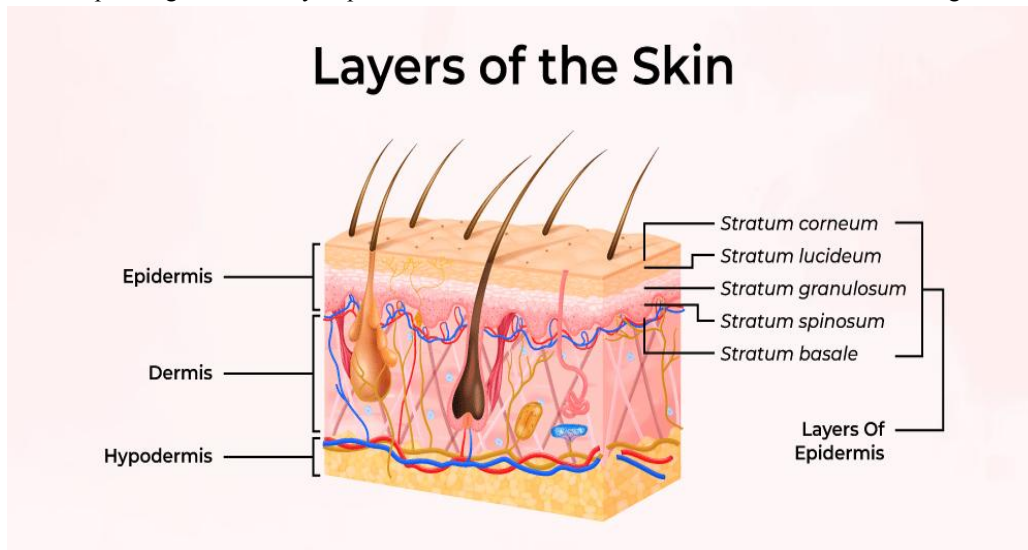
- **Stratum basale:** The innermost layer, containing cells that divide and produce new cells to replace those that are lost.
- **Dermis:** The middle layer of the skin is the dermis, a thicker layer of connective tissue. It contains blood vessels, nerves, hair follicles, sweat glands, and sebaceous glands.
- **Papillary layer:** The upper layer of the dermis, containing loose connective tissue and blood vessels.
- **Reticular layer:** The lower layer of the dermis, containing dense connective tissue and collagen fibers.
- **Hypodermis:** The deepest layer of the skin is the hypodermis, also known as the subcutaneous tissue. It is composed of adipose tissue (fat) and loose connective tissue. The hypodermis helps to insulate the body and store energy.

**Physiology of the Skin**

The skin performs many important functions, including:

- **Protection:** The skin acts as a barrier against injury, infection, and dehydration. The epidermis provides a physical barrier, while the dermis contains cells that help to fight infection.
- **Thermoregulation:** The skin helps to regulate body temperature by sweating and by adjusting blood flow to the skin.
- **Sensation:** The skin contains sensory receptors that allow us to feel touch, pain, temperature, and pressure.
- **Vitamin D synthesis:** The skin produces vitamin D when exposed to sunlight. Vitamin D is important for bone health.
- **Excretion:** The skin excretes waste products, such as sweat and sebum (an oily substance produced by the sebaceous glands).

The skin is a complex organ with many important functions. It is essential for our health and well-being.



**II. STRUCTURE OF SKIN**

**Skin Disorders :**

**Acne :**

Acne is commonly located Trusted Source on the face, neck, shoulders, chest, and upper back. Breakouts on the skin are composed of redness, blackheads, whiteheads, pimples, or deep, painful cysts and nodules. This condition may leave scars or darken the skin if untreated.[5][6]



**Cold sore:**

This condition causes a red, painful, fluid-filled blister that appears near the mouth and lips. People with lighter skin may notice more redness than those with darker skin. The affected area will often tingle or burn before the sore is visible.

**Blister:**

Blisters are characterized by a watery, clear, fluid-filled area on the skin. They may be smaller than 1 centimetre (cm) (vesicle) or larger than 1 cm (bulla) and can occur alone or in groups.

**Hives:**

This causes itchy, raised welts that occur after exposure to an allergen. Hives on darker skin can appear raised or inflamed and might be slightly darker or lighter than your natural skin colour. On lighter skin, hives usually appear red.

**Actinic keratosis:**

This condition causes a thick, scaly, or crusty skin patch. It's typically less than 2 centimetres or about the size of a pencil eraser. It often appears on parts of the body that receive a lot of sun exposure, such as the hands, arms, face, scalp, and neck.

**Rosacea:**

This chronic skin disease goes through cycles of fading and relapse. Relapses may be triggered by spicy foods, alcoholic beverages, sunlight, stress, and the intestinal bacteria *Helicobacter pylori*.

**Carbuncle**

This causes a red, painful, and irritated lump under your skin. It may be accompanied by fever, body aches, and fatigue. It can also cause skin crustiness or oozing.

**Latex allergy**

This causes a rash, which may occur within minutes to hours after exposure to a latex product. It may be less visible on darker skin or appear lighter or darker than surrounding tissue. It also causes warm, itchy wheals at the site of contact, which may take on a dry, crusted appearance with repeated exposure to latex.

**Eczema:-**

Eczema is characterized by pink, red, brown, purple, or gray, sometimes with scaly patches that flake off. Affected areas may be itchy, greasy, or oily. On light skin, eczema can cause a red rash. This rash may appear brown, purple, or gray on darker skin. Hair loss may also occur in the area with the rash.

**Psoriasis:-**

This causes scaly, silvery, sharply defined skin plaques. Darker-skinned people might also experience dark brown or purplish patches on the skin. Patches are commonly located on the scalp, elbows, knees, and lower back.

**ACNE:**

Acne can appear as pimples without abscesses. Or it may appear as pus-filled cysts that break open (rupture) and result in larger abscesses. These may be painful or look unappealing. It can happen anywhere on the body, and it can be superficial or deep. But acne most often appears in areas where there is a high concentration of sebaceous glands, including:

- Face
- Chest
- Upper back
- Shoulders
- Neck

**TYPES OF ACNE**

Acne can present as a variety of lesions, most frequently known as pimples. Medical professionals classify things according to their attributes. Among the varieties of acne are:





**Whiteheads:** A white lump that remains beneath the skin's surface due to clogged hair follicles.

**Blackheads:** Clogged follicles that break open once they reach the skin's surface. Not dirt, but air exposure discolouring stored sebum is why they appear black.

**Papules:** Inflammatory lesions that generally appear as little, pink skin lumps that are touch-sensitive. Pustules, often known as pimple Papules topped with lesions filled with white or yellow pus that are frequently red at the base.

**Nodules:** large, painful, solid lesions that are firmly ingrained in the skin.

#### **TREATMENT OF ACNE**

Healthcare provider may recommend using a topical acne medication to treat your skin. You can rub these medications directly onto your skin as you would a lotion or a moisturizer. These could include products that contain one of the following ingredients:

##### **Benzoyl peroxide:**

This is available as an over-the-counter product (such as Clearasil®, Stride® and PanOxyl®) as a leave-on gel or wash. It targets surface bacteria, which often aggravates acne. Lower concentrations and wash formulations are less irritating to your skin.

##### **Salicylic acid:**

This is available over the counter for acne as a cleanser or lotion. It helps remove the top layer of damaged skin. Salicylic acid dissolves dead skin cells to prevent your hair follicles from clogging.

##### **Azelaic acid:**

This is a natural acid found in various grains such as barley, wheat and rye. It kills microorganisms on the skin and reduces swelling.

Retinoids (vitamin A derivatives): Retinol, such as Retina-A®, Tarmac® and Differin®, which is available without a prescription, breaks up blackheads and whiteheads and helps prevent clogged pores, the first signs of acne. Most people are candidates for retinoid therapy. These medications aren't spot treatments and must be used on the entire area of skin affected by acne to prevent the formation of new pimples. You often need to use these for several months before noticing positive results.

##### **Antibiotics:**

Topical antibiotics like clindamycin and erythromycin control surface bacteria that aggravate and cause acne. Antibiotics are more effective when combined with benzoyl peroxide. Dapsone: Dapsone (Aczone®) is a topical gel, which also has antibacterial properties. It treats inflamed acne. Oral acne medications Oral acne medications are pills that you take by mouth to clear your acne. Types of oral acne medications could include:

##### **Antibiotics:**

Antibiotics treat acne caused by bacteria. Common antibiotics for acne include tetracycline, minocycline and doxycycline. These are best for moderate to severe acne.

##### **Isotretinoin**

(Amnesteem, Claravis, and Sotret Isotretinoin is an oral retinoid. Isotretinoin shrinks the size of oil glands, which contributes to acne formation.



**Contraceptives:**

The use of certain contraceptives can sometimes help women and people AFAB who have acne. The U.S. Food and Drug Administration (FDA) approved several types of birth control pills for treating acne. Some brand names include Estrostep®, Beyaz®, Ortho Tri-Cyclen® and Yaz®. These pills contain a combination of estrogen (the primary AFAB sex hormone) and progesterone (a natural form of steroid that helps regulate menstruation). Hormone therapy: Hormone therapy is helpful for some people with acne, especially if you experience acne flare-ups during menstruation or irregular periods caused by excess androgen (a hormone). Hormone therapy consists of low-dose estrogen and progesterone (birth control pills) or a medication called spironolactone that blocks the effect of certain hormones at the level of your hair follicles and oil glands.[7][8][9]

**Additional acne therapies**

If topical or oral medications don't work well for your acne or if you have scars from your acne, a healthcare provider may recommend different types of acne therapies to clear your skin, including:

**Steroids:**

Steroids can treat severe acne with injections into large nodules to reduce inflammation.

**Lasers:**

Lasers and light therapy treat acne scars. A laser delivers heat to the scarred collagen under your skin. This relies on your body's wound-healing response to create new, healthy collagen, which encourages growth of new skin to replace it.

**Chemical peels:**

This treatment uses special chemicals to remove the top layer of old skin. After removal of the top layer of skin, new skin grows in smoother and can lessen acne scars.

**III. FACE WASH**

face wash is a type of facial cleanser that is specifically designed to remove makeup, dirt, oil, dead skin cells, and other impurities from the skin of the face. This helps to unclog pores and prevent skin conditions such as acne, leaving the skin feeling clean and refreshed. A face wash is typically used as part of a daily skincare routine, along with a toner and moisturizer.

**Objectives :-**

- To formulate and evaluate herbal anti-acne face wash.
- To treat acne, pimples and to help make skin clear and healthy.
- To remove excess oil without removing nutrients from the skin.
- To make skin soft and remove dead skin.[9]

**ADVANTAGE:-**

- 1.Helps keep skin clear and healthy.
2. It makes the skin radiant.
3. The combination of dead skin cells and excess oil can clog pores, causing Acne, white heads, black heads and a tired appearance.
4. Regular pore exfoliation prevents all of the above skin problems.
5. Exfoliation accelerates the blood circulation.
6. It helps to remove dead skin cells and helps new skin cells replace old ones.
7. Promotes skin regeneration and rejuvenation.





**DISADVANTAGE:-**

Face wash, while beneficial for cleaning the skin, can have some potential disadvantages depending on the ingredients and how it's used:

1. Skin Irritation: Some face washes contain harsh chemicals or fragrances that can irritate sensitive skin, leading to redness, itching, or dryness.
2. Over-drying: Face washes with strong cleansers can strip the skin of its natural oils, leading to dryness, flakiness, or tightness, especially if used excessively.
3. Acne Aggravation: Over-washing the face or using face washes that are too abrasive can worsen acne by irritating the skin and increasing oil production.
4. Allergic Reactions: Certain ingredients in face washes, such as preservatives, parabens, or sulfates, may trigger allergic reactions in some individuals.
5. Unbalanced pH: Some face washes can disrupt the skin's natural pH balance, making it more susceptible to dryness, irritation, or even bacterial infections.
6. Dependency: Regular use of face wash can sometimes lead to a feeling of dependency where the skin feels unclean or uncomfortable without frequent washing.
7. Environmental Impact: Some face washes contain microbeads or harmful chemicals that can harm marine life and contribute to environmental pollution when washed down the drain.

**IV. LITERATURE SURVEY**

Sr	Name of author and title	findings
1	Formulation and evaluation of herbal face wash(saurbhi gadole & tambe dnyandeo)	Herbal cosmetics are the preparation used to enhance the human appearance. Herbal formulations have significant demand in the global market. It is more acceptable to believe that natural remedies are safer with synthetic subjects than with fewer side effects. The current research works focuses extraction of neem leaves ( <i>Azadirachta indica</i> ), turmeric ( <i>Curcuma longa</i> ),
2	Formulation and evaluation of herbal face wash (joshi manish)	The current research works focuses extraction of neem leaves ( <i>Azadirachta indica</i> ), turmeric ( <i>Curcuma longa</i> ), aloe vera, glycerin, lemon juice, rose water and xanthan gum they have anti-acne, anti-inflammatory, anti-oxidant properties, with the help of this herbal ingredient developed and evaluates as a herbal anti-acne face wash.
3	Formulation	Herbal products are



	and evaluation of herbal face wash(manish joshi deepthi negi himani devi)	becoming more and more popular worldwide. The creation of a herbal face wash with aqueous extracts of orange peel, tulsi leaf, and neem leaf is one noteworthy project in this discipline. After a thorough evaluation of variables like color, pH, consistency, washability, irritation, and spreadability, the study showed that this herbal face wash performed better than commercial options. Since every ingredient in this composition is herbal, it is thought to be dependable and safe for use in skincare products
4	Formulation and evaluation of anti acne herbal face wash(sanket gite &shashikant waddle)	. The plants have good anti-microbial, antioxidant, and anti-inflammatory properties, according to published reports. In order to prepare the different formulation batches, namely F1 to F3, different amounts of xanthum gum are used.
5	Formulation of herbal face wash (mrunal patil &rohit patil )	The pH, irritability, hardness, friability, thickness, foaming capacity, and accelerated stability of a facewash tablet made with various ingredient concentrations were all evaluated. The results of the current study showed that the formulated batch (F6) produces superb foams and a fine facewash.
6	Preparation and Evaluation of Herbal Anti-Acne Face Wash Gel (.DhananjayKailaDubile&Mr.Abhishek Dhapse, )	The herbal anti-acne face wash gel is formulated using neem leaves, tulsi, lemon juice, aloe vera, glycerin, carbopol, methyl paraben, triethanolamine, and sodium lauryl sulfate, offering a safer alternative to synthetic products with fewer side effects.
7	Formulation and Evaluation of Polyherbal Anti-Acne Facewash. (Gautami Rathod, Patel Himil, Vaishali Pardhe)	The study formulated a polyherbal anti-acne facewash using Moringa oliefera and Aloe barbadensis extracts, known for their antimicrobial and anti-inflammatory properties. The formulation was evaluated for stability and efficacy, proving effective for acne treatment compared to standard products.
8	Formulation and Evaluation of Herbal Face wash (Vishnu Mittre, Prof. Joshi M. M., Khanage S.)	The herbal face wash formulated in the study includes ingredients like neem, turmeric, and aloe vera, known for their antimicrobial and anti-inflammatory properties, effectively treating acne while eliminating excess oil without stripping essential nutrients from the skin.
9	Formulation and evaluation of anti-acne herbal face wash (saurabh S Rathod, Md Adil Md Salim, Rushikesh S Sakhare, Amar R Sarode, Shaikh Zuber Shaikh Ansar)	The herbal anti-acne face wash is formulated using neem leaves, turmeric, aloe vera, glycerin, lemon juice, rose water, and xanthan gum, showcasing anti-acne, anti-inflammatory, and antioxidant properties, while promoting skin softening and healing.
10	extraction Method for Ingredients of Herbal Face Wash ( Shradha V. Tathe, Malti Salunke, Kajal Naravde, Sonali Kokate, Amruta S. Khurd)	The herbal face wash includes ingredients like Pumpkin seed oil, Lavender, Saffron, and Jojoba oil, known for their antimicrobial, anti-inflammatory, and antioxidant properties, making it effective against acne while being safe for all skin types without harmful side effects.



## V. MATERIAL AND METHODOLOGY

### A. Aloe Vera

- 1) Scientific name: Aloe vera.
- 2) Order: Asparagus.
- 3) Family: Asphodelaceae
- 4) Subfamily: Asphodeloideae.
- 5) Kingdom: Plantae
- 6) Family: Vincaceae
- 7) Botanical name: Aloe barbadensis miller



The use of aloe vera on the face is beneficial because of its:  
Anti-inflammatory properties that help in relieve pain, swelling and pain in wounds and promote formation and release of collagen. It reduces the time needed to recover from first- and second-degree burns  
It is a reliable source for the treatment of bacterial and fungal diseases.  
The creamy residue should not thicken after evaporation of the water.  
Its physical effects must not be absorption, but rinsing of the skin and opening the pores.  
After application, a thin layer of emollient should remain on the skin.  
It has an antioxidant property that can aid in the repair of UV damage and slow down the aging process of the skin.  
It protects the skin from the harmful effects of radiotherapy.  
It contains 98% water, which hydrates, soothes, and hydrates the skin  
It makes the skin more supple instead of stiff and hard.  
It soothes rashes and sunburns by cooling.  
Active components of Aloe Vera: Vitamins, enzymes, minerals, carbohydrates, lignin, saponins, salicylic acid, and amino acids are among the 75 potentially active components of aloe vera. Vitamins: It contains antioxidant vitamins A(beta-carotene), C, and E. Vitamin B12, folic acid and choline are also present.

### B. Rose Water

Benefits OF Rose Water for Face  
Balances natural oils in the skin  
It can help reduce the appearance of temporary redness  
Natural Hydration  
It has antioxidant properties  
It can help prevent fine lines and wrinkles  
It can help to unclog pores and create a smoother look  
Reduces large pores  
It helps to remove impurities and prepares your skin for success  
Active Components of Rose Water  
Rose water is rich in vitamins A, C, E and B, as well as anti-inflammatory properties





### **C. Carbopol**

Carbopol refers to a family of high molecular weight polymers, primarily made of polyacrylic acid. These polymers are widely used in cosmetics, pharmaceuticals, and industrial applications due to their ability to thicken, stabilize, and form gels.

**Properties:** Thickening Agent: Carbopol is known for its ability to increase the viscosity of liquids, making it useful in products like creams, lotions, gels, and shampoos.

**Gel-Forming:** When neutralized (typically with a base like triethanolamine), Carbopol forms clear, smooth gels.

**Stability:** It improves the stability of formulations, helping suspend active ingredients and prevent separation.

**Thickening Agent:** Carbopol is known for its ability to increase the viscosity of liquids, making it useful in products like creams, lotions, gels, and shampoos.

**Gel-Forming:** When neutralized (typically with a base like triethanolamine), Carbopol forms clear, smooth gels.

**Stability:** It improves the stability of formulations, helping suspend active ingredients and prevent separation.

**Common Uses:** Cosmetics and Personal Care: In products such as facial cleansers, moisturizers, sunscreens, and hair styling gels.

**Pharmaceuticals:** Carbopol is used in oral, topical, and injectable formulations to control the release of active ingredients.

**Food:** It can be used as a thickener or stabilizer in food products, although its use here is less common.

**Mechanism:** Carbopol works by forming a gel network when mixed with water. The acidic nature of the polymer's carboxyl groups allows them to interact with alkaline compounds to form a gel structure. If you need more specific details about its use in a particular field, feel free to ask!

### **D. Glycerine:**

A glycerine herbal face wash is a facial cleanser that combines glycerine, a humectant known for attracting moisture to the skin, with herbal ingredients to cleanse and nourish the skin naturally. It typically aims to:

Hydrate and moisturize the skin, leaving it soft and smooth without drying it out.

Cleanse the skin effectively by removing dirt, oil, and impurities.

Nourish and soothe the skin with herbal ingredients such as aloe vera, neem, tulsi, or other plant-based extracts, known for their calming and antioxidant properties.

**Benefits:**

**Moisturizing:** Glycerine helps to retain moisture in the skin, making it ideal for dry or sensitive skin.

**Gentle on skin:** The herbal ingredients are usually mild and can be suitable for various skin types.

**Natural and soothing:** Herbal extracts help to calm inflammation, reduce redness, and protect the skin from external environmental stressors.

**Common Herbal Ingredients in Glycerine Face Washes:**

**Aloe Vera:** Hydrates and herbal face wash.

**Tea Tree Oil:** Offers antibacterial benefits and helps with acne.

If you're interested in a glycerine herbal face wash, look for one that suits your skin type (e.g., sensitive, oily, dry) and contains herbs that align with your skincare needs.

### **E. Triethanolamine:**

A Triethanolamine herbal face wash is a facial cleanser that combines triethanolamine (TEA) with herbal ingredients. Triethanolamine is a common surfactant and pH balancer used in cosmetics and skincare products. It helps adjust the pH of the formulation and allows the product to work more effectively in cleansing the skin.

### **Key Components:**

**Triethanolamine (TEA):**

**Function:** Primarily used to adjust the pH of the face wash, making it slightly alkaline, which helps the product foam and cleanse the skin effectively.

**Copyright to IJAR SCT**  
[www.ijarsct.co.in](http://www.ijarsct.co.in)



**DOI: 10.48175/IJAR SCT-24980**



623

Moisturizing: Triethanolamine can also function as a humectant, helping the skin retain moisture.

Herbal Ingredients:

These are plant-derived compounds or extracts included for their skin benefits. Common herbs used in combination with triethanolamine might include:

Aloe Vera: Known for its soothing and moisturizing properties.

Tea Tree Oil: Known for its antimicrobial properties, helpful for preventing breakouts.

**Benefits of Triethanolamine Herbal Face Wash:**

Effective Cleansing: The combination of surfactants (like TEA) and herbal ingredients helps remove dirt, oil, and impurities while maintaining skin hydration.

Hydration: TEA and herbal ingredients like aloe vera and chamomile can help retain moisture, preventing the skin from drying out after cleansing.

Soothing and Healing: The herbal ingredients offer calming properties, making it suitable for sensitive or irritated skin.

Balanced pH: Triethanolamine helps to balance the pH of the product to ensure it's neither too acidic nor too alkaline, which is important for maintaining the skin's natural barrier.

Considerations:

Sensitive Skin: While triethanolamine is generally considered safe, some individuals with very sensitive skin may want to avoid products containing it, as it can sometimes cause irritation. Always patch-test new products before using them extensively.

Natural vs. Synthetic: If you're looking for completely natural products, note that triethanolamine is a synthetic compound, so a fully "herbal" product would generally avoid it.

In summary, a triethanolamine herbal face wash combines the functional benefits of a mild surfactant (TEA) with the soothing and healing properties of herbal ingredients, providing a balanced, effective cleansing solution.

**F. Green Tea Extract:**

A Green Tea Extract Herbal Face Wash is a facial cleanser formulated with green tea extract, along with other herbal ingredients. Green tea is known for its powerful antioxidant properties, and when included in a face wash, it offers several skincare benefits. Here's an overview of what such a product typically offers:

Key Ingredients and Benefits:

Green Tea Extract:

Antioxidant Power: Green tea is rich in polyphenols, particularly epigallocatechin gallate (EGCG), which helps protect the skin from oxidative damage caused by free radicals. This can aid in preventing premature aging and damage from environmental stressors like pollution and UV exposure.

Anti-inflammatory: Green tea has natural anti-inflammatory properties, which can help reduce redness, irritation, and swelling, making it great for sensitive or acne-prone skin.

Antibacterial: It also has mild antibacterial properties that can help prevent acne breakouts by reducing the growth of acne-causing bacteria on the skin.

Moisturizing: Green tea extract helps maintain skin hydration by forming a protective barrier that locks in moisture, making it suitable for dry or dehydrated skin.

Herbal Ingredients:

Aloe Vera: Known for its soothing and hydrating effects, it helps calm irritated skin and moisturizes it without clogging pores.

Neem: Offers antimicrobial benefits, helping to prevent acne and skin infections.

Chamomile: Known for its calming and anti-inflammatory properties, which can help reduce skin redness or sensitivity.

Tea Tree Oil: Often included for its acne-fighting and antibacterial properties.

Witch Hazel: Sometimes included for its toning and astringent effects, helping to tighten pores and reduce excess oil production.



**Benefits of a Green Tea Extract Herbal Face Wash:**

**Gentle Cleansing:** This type of face wash typically removes dirt, oil, and impurities without stripping the skin of its natural oils, making it suitable for daily use.

**Antioxidant Protection:** The green tea extract helps neutralize free radicals, providing an added layer of protection against environmental damage and signs of aging.

**Acne and Breakout Control:** The antibacterial and anti-inflammatory properties of green tea, combined with other herbs like tea tree oil or neem, can help reduce acne and prevent new breakouts.

**Soothing and Hydrating:** Green tea and other herbal ingredients like aloe vera hydrate the skin while providing relief for irritated or sensitive skin.

**Anti-aging:** The antioxidants in green tea may help protect the skin from premature aging by reducing the effects of environmental damage, fine lines, and wrinkles.

**Considerations:**

**Skin Type:** A green tea herbal face wash can be suitable for all skin types, including oily, dry, or sensitive skin, but it's always good to check the other ingredients to ensure compatibility with your skin's specific needs.

**Sensitive Skin:** If you have particularly sensitive skin, be sure to patch-test first. While green tea is generally gentle, some individuals might experience mild irritation depending on other ingredients in the formulation.

In summary, a Green Tea Extract Herbal Face Wash is a great option for anyone looking for a cleanser that not only removes impurities but also provides antioxidant protection, soothes inflammation, and helps keep the skin hydrated and healthy.



**VI. FORMULATION OF HERBAL FACE WASH**

Sr no	Ingredients	Quantity taken
1	Green tea extract	5%
2	Aloe Vera	15%
3	Glycerine	10%
4	Triethanolamine	0.5%
5	Carbopol	2%
6	Sodium benzoate	0.001%
7	Rose water	q.s

**FORMULATION**

Soxhlet extraction method:

To start, add the recommended amount of xanthan gum to some warm rose water, then let it soak for the entire night.

After that, add enough honey, a few squeezes of lemon juice, glycerin, and fresh aloe vera to the blend.

Next, add as much herbal extract as you would like, then enough soap, and blend until well combined.



### EVALUATION OF FACE WASH

The prepared face wash was evaluated for various parameters as follow

- 1. WASHABILITY:** Formulations are applied on the skin easily remove by washing with water were checked manually.
- 2. PH:** pH of 1% aqueous solution of the formulation was measured by using a calibrated by digital pH meter at constant temperature.
- 3. COLOUR:** The colour of the face wash was checked visually.
- 4. ODOUR:** The formulation was evaluated for its odour by smelling it.
- 5. CONCISTENCY:** It was determined manually.
- 6. VISCOSITY:** Viscosity of the face wash was determined by using Ostwald viscometer. The values obtained for the sample face wash and water were noted.
- 7. SPREADABILITY:** The spreadibility is determined by using spreadibility testing apparatus. It consist of wooden block, which is provided by pulley at one end. By this method the spreadibility was measured on the basis of 'slip' and 'Drag' placed on the ground slidethe facewash was sandwitched between the slide load of 1 kg was kept on slab so that gel will get spreaded without air bubbles, Excess of gel was scrapped off. Later on, 20 kg of standard weight was placed in pulley with the help of string attached to hook and time required to move till the end was noted and the length of spreaded face wash is also noted.
- 8. FOAMABILITY:** Small amount of gel was taken in a beaker containing water. Initial value was noted, beaker was shaken for 10 times and the final volume was noted.
- 9. GRITTIENESS:** The product was checked for the presence of any gritty particles by applying it on the skin.

### MARKETED PRODUCTS

Herbal products are often marketed as natural alternatives to synthetic products, emphasizing benefits like fewer side effects, holistic health, and centuries of traditional use. Here's a comparison of how herbal products are typically positioned versus synthetic ones in marketing:



#### 1. Natural and Organic Appeal:

Herbal products are promoted as natural, often using terms like "organic," "pure," or "chemical-free," suggesting they are safer and healthier.

Synthetic products may be seen as artificial, with concerns over chemicals, additives, or potential side effects.

#### 2. Holistic Benefits:

Herbal remedies are frequently linked to traditional medicine systems like Ayurveda, Traditional Chinese Medicine, or indigenous practices, with claims of treating the body as a whole.



Synthetic medicines, on the other hand, are often targeted for specific symptoms or conditions, focusing more on immediate relief.

### **3. Fewer Side Effects:**

Herbal marketers often emphasize the belief that natural products have fewer or milder side effects compared to synthetic pharmaceuticals.

Synthetic products may come with detailed lists of potential side effects, which herbal alternatives contrast by suggesting a gentler approach.

### **4. Long-Term Wellness:**

Herbal products are positioned as a means of supporting long-term health, wellness, and prevention of disease.

Synthetic products are sometimes viewed as short-term solutions, addressing immediate issues but not necessarily contributing to overall wellness.

### **5. Sustainability and Environmental Responsibility:**

Many herbal products are marketed as eco-friendly, sustainable, and derived from renewable plant resources, appealing to environmentally conscious consumers.

Synthetic products may face criticism for environmental impact, such as the chemical production processes and non-biodegradable packaging.

### **6. Cultural and Historical Appeal:**

Herbal remedies often leverage their historical roots, marketing their use in ancient practices and by diverse cultures as proof of effectiveness.

Synthetic products are more often associated with modern, clinical research and pharmaceutical science.

## **VII. CONCLUSION**

Herbal formulations are more acceptable in the belief that they are safer with fewer side effects than synthetic ones. The world market is also moving towards polyherbal medicines for health care, health, and for cosmetic purposes including dermal preparations like poly herbal anti-acne face washes. etc. The consumer use of herbal products has significantly increased over the past years according to a survey of Global skincare market trends. In the present study, an attempt was made to formulate poly herbal antiacne face wash using natural ingredients like green tea, orange peel, guava leaf, and tulsi and to evaluate the prepared formulations for the desired parameters. Prepared formulation polymers were evaluated for physical parameters like colour, odour, greasiness, PH, viscosity, consistency, spread ability, wash ability, and stability studies. Carbopol produces desired gel strength in formulations. Honey produces humectants activity during stability studies. Thus the preparations will have good spread ability results. It indicates easy application on the skin. This study revealed that the developed herbal formulation of batch F3 was comparatively better than other formulations.

## **REFERENCES**

- [1]. Anand, P., Kunnumakkara, A. B., & Newman, R. A. (2007). Bioavailability of curcumin: Problems and promises. *Molecular Pharmaceutics*, 4(6), 807-818. <https://doi.org/10.1021/mp700113r>
- [2]. Barker, N., & Lee, S. (2012). Glycerine as a moisturizing agent in skin care. *Cosmetic Dermatology*, 25(2), 100-105.
- [3]. Bhatia, R., & Gupta, M. (2011). Therapeutic potential of neem (*Azadirachta indica*): A review. *Pharmacognosy Review*, 5(9), 70-74.
- [4]. Bordes, F., & Besson, M. (2015). Microbial testing of cosmetic products: Protocols and methods. *International Journal of Cosmetic Science*, 37(1), 4-11. <https://doi.org/10.1111/ics.12157>
- [5]. Chauhan, A., & Sharma, S. (2017). Clinical efficacy of anti-acne face wash: A clinical study. *International Journal of Dermatology and Clinical Research*, 3(2), 58-65.
- [6]. Desai, S. P., & Vyas, S. P. (2016). Evaluation and quality control of herbal cosmetics. *Pharmaceutical Biotechnology*, 6(2), 101-109.



- [7]. Draelos, Z. D. (2011). Moisturizers in dermatology. *Journal of the American Academy of Dermatology*, 64(2), 223-230. <https://doi.org/10.1016/j.jaad.2010.08.047>
- [8]. Goyal, M., & Goyal, R. K. (2013). *Mentha piperita* L. (Peppermint): A review of its medicinal uses. *International Journal of Green Pharmacy*, 7(1), 20-25.
- [9]. Kumar, M., Srivastava, A., & Sahu, P. (2013). Development and evaluation of herbal face wash for acne. *International Journal of Pharmaceutical Sciences and Research*, 4(7), 2656-2663.
- [10]. Mishra, S., & Sharma, M. (2014). Neem in dermatology: A review. *Journal of Ayurveda and Integrative Medicine*, 5(3), 205-209.
- [11]. Mucha, P., & Matuszak, P. (2018). Evaluation of preservative efficacy in cosmetics. *Cosmetic Dermatology*, 31(5), 374-380. <https://doi.org/10.1111/cod.12374>
- [12]. Patel, S., Jadhav, S., & Kumar, A. (2014). Formulation and evaluation of herbal anti-acne face wash. *Journal of Pharmacy and Pharmacology*, 66(4), 555-563. <https://doi.org/10.1111/jphp.12159>
- [13]. Rai, M., & Kar, A. (2010). Antibacterial and antifungal activity of neem. *Phytotherapy Research*, 24(1), 11-15. <https://doi.org/10.1002/ptr.2871>
- [14]. Sharma, P., & Sati, P. (2011). *Mentha piperita* (Peppermint) essential oil: A review on its chemical composition, antimicrobial properties, and medicinal uses. *Journal of Essential Oil Research*, 23(4), 19-26. <https://doi.org/10.1080/10412905.2011.9716798>

