

## PREPARATION AND EVALUATION OF HERBAL FACE WASH BY USING MICHELIA CHAMPACA

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### **ABSTRACT:-**

Herbal cosmetics have gained significant popularity due to their natural origin, safety, and minimal side effects compared to synthetic products. There is increasing interest in herbal cosmetic products because they are considered safer and more skin-friendly than synthetic ones. The aim of this study was to prepare and evaluate a herbal face wash using *Michelia champaca* flower extract. The flowers are known for their natural antibacterial and soothing properties, which make them useful in skin care. In this work, the extract of *Michelia champaca* flowers was incorporated into a face wash formulation along with ingredients like aloe vera gel, glycerine, and mild cleansing agents. The prepared formulation was evaluated for parameters such as pH, foam formation, spread ability, and stability. It was also checked for any possible skin irritation. The results showed that the face wash had a suitable pH for skin, good foaming ability, and smooth application. No irritation was observed during testing. Based on these observations, it can be concluded that the herbal face wash prepared using *Michelia champaca* flowers is safe and effective for regular use.

### **KEYWORD :-**

Herbal face wash, turmeric, aloe, neem, vit-e, washability, anti-inflammatory.

### **INTRODUCTION: -**

A 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. A face wash can also be used to get rid of them, but its effectiveness might not be 100%. The term cosmetic derived from Greek word 'Cosmetics' which mean pertaining to cosmetics or Beautifying substance or preparation. The word 'cosmesis' (Gr. Kosmesia) used for two things: the preservation Restoration or bestowing of body beauty, the surgical Correction of disfigured physical effect. Acne, or acne vulgaris, is a skin problem that starts when oil and dead skin cells clog skin pores. It is also Blackheads, blemishes, whiteheads, pimples, or zits. Severe Acne can mean pimple that cover the face, neck, chest, and back. Or it can be

bigger, solid, red lumps that are painful (cysts). Lower rates are reported in some rural societies. It usually gets better after the teen years.

The Indian herbal drug industry is considered to be one of the oldest systems of medical care in the world. The use of herbs for medicinal purposes was mentioned in the Vedas, an ancient religious text. Ayurveda and Unani are two ancient healing methods that utilized herbs and natural products to address various health conditions. The global community now recognizes the benefits of the traditional form of medicine, resulting in a significant rise in demand for Indian herbal drugs. The demand for herbal cures, skincare products, and cosmetics in recent years. The skin is a vital and extensive organ of the body, and it plays a significant role in defining human personality, especially the skin on the face, which is sensitive. The condition of an individual's skin can also be an indicator of their overall health. Cosmetics have been developed to address various skin concerns, such as reducing wrinkles, fighting acne, and controlling oil secretion. These products aim to improve the appearance and texture of the skin, leading to a more youthful and healthier-looking complexion. It performs many vital functions, including protection against external physical, chemical, and biological assailants, as well as prevention of excess water loss from the body and a role in thermoregulation. To keep skin healthy, clear, and glossy, a balanced nutrition is required. Apart from balanced nutrition, hormonal changes especially during puberty in both sexes cause many changes in the body. Among various changes, Acne vulgaris is the most common. Acne vulgaris is a common skin condition with a substantial cutaneous and psychological disease burden. To overcome the problem of acne vulgaris and to get rid of the use of synthetic drugs such as clindamycin, a synergistic antiacne face wash gel has been formulated. Herbal healing has been mentioned from the ancient era, from Vedas, and even from ancient religious work. Probably it is the oldest medical care system in the world.

*Michelia champaca* commonly known as is a traditional medicinal plant. It is also known for its aromatic flower therapeutic properties. The plant contains various bioactive as alkaloid flavonoids tannin and essential oils, which anti-inflammatory and antioxidant activities. The properties make it promising natural ingredient for skin care formulation. Incorporating *Michelia champaca* flower extract into a face wash formulation. Herbal face wash prepared from such natural ingredient from are less likely to side effect *champaca* to synthetic product. Making then suitable for regular use. The formulation aim to develop effective, safe and stable product by utilizing the therapeutic properties of the plant.

## **Skin is made up of following**

Face wash is a skincare product used to clean the skin of the face by removing dirt, oil, sweat, makeup, and impurities. It helps keep the skin fresh, healthy, and free from acne or infections. Face wash is available in different formulations for oily, dry, normal, and sensitive skin types.

Three layers

1. Epidermis
2. Dermis
3. Subcutaneous (hypodermis)
4. The skin and its Accessory structures make up integumentary System, which provides the body with overall Protection. The deeper layer of skin is a well vascularized (has numerous blood vessels).

## **Types of face wash**

1. Oily skin face wash
2. Dry skin face wash
3. Normal skin face wash

## **Function of the face wash:**

Oily skin requires cleansers with herbs and botanicals, which will clean the pores and reduce oil buildup.

It should be stable and have a good appearance.

During application, it should not have an oily or greasy feel.

After the evaporation of water, the cream residue should not become viscous.

It should spread easily without dragging. Properties of Face wash: -

It should soften when applied to the skin.

It should be stable and look good appearance.

It should spread easily without dragging.

After evaporation of the water, the creamy residue must not become viscous.

There must be no greasy feeling during application.

## **BENEFIT MICHELIA CHAMPACA FLOWER FACW WASH**

Natural Skin Cleanser

Removes dirt, oil, and impurities gently without damaging the skin.

Antibacterial Property

Helps reduce acne and pimples by controlling bacterial growth on the skin.

Antioxidant Activity

Protects the skin from free radicals and environmental damage.

Skin Soothing Effect

Reduces irritation, redness, and inflammation of the skin.

Maintains Skin Moisture

Keeps the skin soft and hydrated due to the presence of natural ingredients.

Controls Excess Oil

Useful for oily skin and helps prevent blocked pores.

Improves Skin Freshness

Gives a refreshing and cooling effect after washing.

Herbal and Safe

Contains fewer chemicals, so it has minimal side effects compared to synthetic face washes.

Pleasant Fragrance

Michelia champaca flowers provide a natural aromatic smell.

Eco-Friendly Product

Herbal ingredients are biodegradable and environmentally safe.

## PLANT PROFILE

Michelia Champaca	
Alove Vera	
Tulsi	
Neem	
Turmeric	

### **Michelia champaca**

**Botanical name:**-magnolia champaca

**Family:**- Magnoliaceae

**Uses:**- anti-inflammatory reduces swelling and pain Flower are high fragrant Used to extract essential oil are perfumes and attars.



**Aloe vera gel**

**Botanical name:** Aloe barbadensis Linn (Aloe Vera)

**Biological source:** -aloes is obtained from the dried juice of the leaves aloe barbadensis

**Family:** - Liliaceae

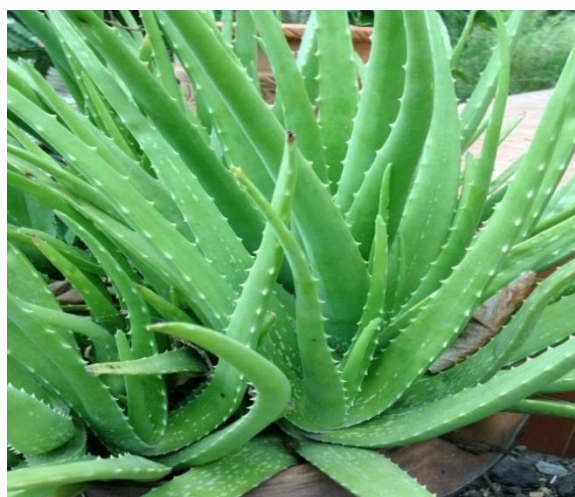
**Chemical constituents** Aloins, Barbaloin,  $\beta$ -barboloin and Isobarbaloin, which constitute the so-called 'crystalline' Aloin, present in the drug at from 10 to 30%

**Uses:** It is used as a moisturizing agent.

Recently, the anti-fungal properties of aloe Vera leaves were investigated by Casian.

Aloe Vera is a stemless or very short-stemmed succulent plant growing to 60–100 cm (24– 39in) tall, spreading by offsets.

Vitamins, enzymes, minerals, sugars, lignin, saponin, salicylic acid, and amino acids are chemical constituents.



**Tulsi leaves powder**

**Synonym-**Tulsi

**Biological source** It mainly consists of dried leaves of *Ocimum sanctum* L

**Belonging to family** Lamiaceae.

**Description**

Colour – Green

Odour – aromatic

Taste – Pungent

**Chief Chemical constituents-**

Oleanolic acid, ursolic acid, rosmarinic acid

**Uses** It helps to Prevent acne and pimples, Improve skin texture, Cleanser



**Neem**

**Botanical Name:** - *Azadirachta indica*

**Biological source-** It consists of dried leaves of *Azadirachta indica*

**Family :** Meliaceae.

**Description**

Colour – Green

Odour– Pungent

Taste – Bitter

**Chemical constituents :-** Nimbinin, Quercetin

**Uses:** - Antibacterial, anti-fungal, anti inflammatory, antiseptic,

Antihistamine as well as germ-killing qualities and highly beneficial for oily and acne prone skin.

Antihistamine as well as germ-killing qualities.

Treatment on Eczema, Ringworm infection, scabies, psoriasis. Constituents are flavonoids, Alkaloids, Azadirone, nimbin, terpenoid, steroids.

A moderate sized to fairly large evergreen tree, attaining a height of 12-15m with stout trunk and spreading branches, occurring Throughout the country up to an elevation of 900m. Its fruits and seeds are the source of Neem oil.



### **Turmeric powder**

**Botanical name:** - *Curcuma Longa*

**Family:** Zingiberaceae

**Biological source:-** Turmeric consists of dried ,as well as fresh rhizomes of plant is known as *curcuma longa* linn.

#### **Description**

Colour – Yellow

Odour – Aromatic Taste

Taste- Bitter

**Chemical constituents** Curcumin, Curcuminoids

**Uses:** - Antibacterial, antifungal and it protects the skin from Many skin infections and also adds glow to the face.

Turmeric is also Known to reduce scarring. Vitamin, enzyme, minerals, sugars, lignin, saponin, salicylic acid and amino acid are the chemical constituents.

The rhizomes are used fresh or boiled in water and dried, after which they are ground into a deep orange-yellow powder commonly Used as a coloring and flavoring agent in many Asian cuisines, especially for curries, as well as for dyeing, characteristics imparted by the principal Turmeric constituent, curcuminin.



## **Material used in formulation**

### **Rose water**

(Rosa damascene mill L)

**Common name:-** gulabjal

**Chemical constituent:** geraniol and citernellol

**Uses:** remove excess oil and impurities and reduced blackheads acne scars and black spots.

### **Sodium lauryl sulphate**

**IUPAC Name :** Sodium lauryl sulphate

**Other Names :** Sodium monododecyl sulphate

**Chemical Formula :**  $\text{NaC}_{12}\text{H}_{25}\text{SO}_4$

**Molar Mass :** 288.372 g/mol

**Density :** 1.01 g/ cm<sup>3</sup> **Melting point :** 206 °C (403 °F; 479 K)

**Use :** SLS is mainly used in detergents for laundry with many cleaning applications.

### **Triethanolamine**

**IUPAC Name :** Tris (2hydroxyethyl) Amine

**Other Names :** Triethanolamine

**Chemical Formula :**  $\text{C}_6\text{H}_{15}\text{NO}_3$

**Molar Mass** : 149.19 g·mol<sup>-1</sup>

**Density** : 1.124 g mL<sup>-1</sup>

### **Ingredient used with their properties**

SR.NO	INGREDIENT	QUANTITY
1	Michelia extract	10ml
2	Aloe vera gel	20ml
3	glycerine	5ml
4	Neem powder	2g
5	Turmeric	1g
6	Liquid soap	50ml
7	Rose water	10ml
8	Vitamin c	2-3 drops

### **Preparation of herbal face wash**

#### **1. collecting and drying**

Collect fresh Michelia champaca flower and tulsi, and neem

Wash with distilled water to remove dirt

#### **2. Powder preparation**

Grind the dried flower into fine powder

Sieve to get uniform size

Store airtight container Preparation extract

Take 10 gm powder • Add 100 ml distilled water

Heat and water bath 15 min • Coll and filter

### **Collect extract Preparation method**

1. Take surfactant a clean beaker
2. Add glycerine slowly with continuous

3. Add measured quantity of flower extract
4. Add rose water and optional ingredient
5. Make up the volume with distilled water
6. Stir gently to avoid excess foam formation
7. Transfer into suitable container and label

### **Evaluation of herbal face wash measure**

1, Organoleptic properties

Colour: - yellowish / transparent

Odour: - floral / characteristics

Texture: - smooth

2. PH determination Use a digital PH meter.

The ideal range for face wash is 5.5 to 6.5.

3. Foaming index Shake 1g of face wash with 10 ml of water in a cylinder. Measure the foam height after 5 min to check cleansing power.

4. Spread ability Apply small amount on skin. Check ease of spreading.

5. Washability Apply to skin and check if it can be easily removed with plain water without leaving a greasy residue.

6. Stability

Keep the product at diff temp.

For 1-2 weeks to see if it separates or change colour.

### **Uses of face wash: -**

1. To remove impurities, germs and makeup for every day.
2. Anti-aging.
3. It helps other product to penetrate properly into the skin.
4. For cleansing the skin. Es of face wash:

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### **Conclusion: -**

The study concludes that a stable and effective herbal face wash can be successfully prepared using *Michelia champaca* flower extract. The formulation exhibited desirable properties such as appropriate pH, good cleansing ability, adequate foam formation, and stability under normal conditions. The natural constituents present in the flower extract contribute to skin-friendly effects, making the formulation mild and non-irritating. This, the developed herbal face wash offers a safe, economical, and natural alternative to synthetic formulations, with potential for further development and wider application.

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