

## A Review on Formulation and Evaluation of Herbal Face wash for skin care

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**ABSTRACT**-The hydro-alcoholic herbal face wash, which contains turmeric, orange peels, and coffee extract, is a safe and effective solution for skin care without any side effects. These ingredients are known for their antioxidant, antimicrobial, and anti-inflammatory properties, making them beneficial for skin health. The herbal ingredients used in this formulation are easily available in the local market. Skin is an essential part of the body, and facial skin is particularly sensitive and vital for one's appearance. The plants used in this face wash formulation provide both cosmetic and medicinal properties. For instance, aloe vera and turmeric can help soften the skin, remove acne, and promote healing. The formulation underwent various evaluations, including assessment of appearance, color, pH, viscosity, odor, and solubility. Such evaluations are crucial to measure the safety and efficacy of a formulated product, as it can otherwise cause various harmful effects.

**Keywords**-Herbal Facewash, Turmeric, Aloe vera, Orange peels.

### I. INTRODUCTION-

The Indian herbal drug industry has a rich history and is considered one of the world's oldest systems of medical care. The use of herbs for medicinal purposes can be traced back to ancient India, as evidenced in the Vedas, an ancient religious text. Traditional healing methods such as Ayurveda and Unani relied on natural products to address various health conditions. Despite being considered a recent trend by Western medical practitioners, plant extracts continue to be commonly used in most prescribed medicines today.

In recent years, there has been a surge in demand for Indian herbal drugs, as the global community recognizes the benefits of this

traditional form of medicine. The sector has grown at an annual rate of nearly thirty percent, with an increase in demand for herbal cures, skincare products, and cosmetics. This trend reflects the rising demand for natural products.

### Skin:

The skin is often overlooked as an organ, but it is actually made up of tissues that work together as a single structure to perform crucial functions. Along with its accessory structures, the skin comprises the integumentary system, which provides overall protection to the body. It consists of multiple layers of cells and tissues that are held to underlying structures by connective tissue. The deeper layer of skin is richly vascularized, meaning it has a large number of blood vessels. The skin also contains many sensory, autonomic, and sympathetic nerve fibers that enable communication to and from the brain.

Skin is made up of following three layers-

1. Epidermis
2. Dermis
3. Subcutaneous (hypodermis)

### Face Wash:-

**Definition:**A face wash is a specialized type of facial cleanser that is intended to eliminate makeup, dirt, oil, dead skin cells, and other contaminants from the skin on the face. By doing so, it helps to unclog pores and prevent skin conditions such as acne, resulting in clean and rejuvenated skin. As part of a daily skincare regimen, a face wash is usually used in conjunction with a toner and moisturizer to maintain healthy skin.

**Advantages of Face Wash:**Incorporating a face wash into your daily skincare regimen offers various benefits, such as:-

- 1) Regular use of a face wash helps eliminate dead skin cells from the skin's surface,

allowing new skin cells to take their place. This promotes healthy skin cell turnover, resulting in a glowing complexion.

- 2) A face wash eliminates dirt, oil, and other impurities that can leave the skin looking tired and lifeless. Consistent use of a face wash can help keep the skin looking fresh and healthy.
- 3) Excess oil and dirt can clog pores, leading to the development of acne. Incorporating a face wash in your routine can help unclog pores and prevent acne whiteheads, blackheads, and other skin problems.
- 4) By removing dead skin cells and promoting healthy skin cell turnover, a face wash can help reduce the appearance of wrinkles and slow down their development.
- 5) The exfoliating properties of a face wash enhance blood circulation in the skin, promoting regeneration.

**Properties of Face Wash:-**When selecting a face wash, it is crucial to consider the following characteristics:

- 1) The face wash should have a stable formulation and an appealing appearance.
- 2) It should soften upon contact with the skin, making it easy to apply.
- 3) The face wash should spread effortlessly over the skin without feeling oily, greasy, or dragging.
- 4) After rinsing, the face wash should not leave behind a thick or sticky residue.
- 5) The face wash should act by cleansing the skin and opening pores, rather than being absorbed into the skin.
- 6) A thin layer of emollient should remain on the skin post-use, creating a protective barrier and keeping the skin moisturized.

## II. MATERIAL AND METHOD:-

### Herbal drugs-

#### Aloevera-



Fig no:-1 Alovera

**Synonyms-** Aloe Africana, Aloe arborescens, Aloe barbadensis.

**Biological source-** Aloe is obtained from the dried juice of the leaves of Aloe barbadensis.

**Family-** Liliaceae

**Chemical constituents-** Aloin, Aloe-emodin

**Uses-** It is used as moisturizing agents.

#### Turmeric-



Fig no:-2 Turmeric

**Synonyms-** Haldi, Indian Saffron

**Biological Source-** Curcuma longa

**Family-** Zingiberaceae

**Uses-** The anti-inflammatory qualities can target your pores and calm the skin. Turmeric is also known to reduce scarring.

**Orange Peel-**



**Fig no-3 Orange Peel**

**Synonym-**Orange cortex

**Biological Source-** Citrus Aurantium Linn

**Family-**Rutaceae

**Chemical constituent-Uses-**Pectin, Volatile oil, Hesperidin, Iso-hesperidin, Neohesperidin, Aldehydes, Citral.

**Uses-**Orange peel are used as carminative, aromatic, Flavoring agent, stimulant

**Various Additives used in Fashwash:-**

**Humectants-** Humectants possess a natural ability to attract and hold moisture, making them ideal components for face wash products. These molecules are typically hygroscopic and contain

hydrophilic groups, such as hydroxyl groups, which enable them to absorb water vapor from the air and retain it in the skin. By maintaining the skin's moisture balance, humectants can prevent common skin issues like dryness and flakiness.

**Gelling agents-**Gelling agents can convert a liquid phase, whether it's water or oil, into a gel-like consistency that is thick but not rigid. When added to emulsions, gelling agents can create a more fluid and mobile texture, as opposed to a stiff one. Additionally, gels produced using gelling agents exhibit a thixotropic quality, which means they become less viscous or more fluid when subjected to force or pressure.

**Preservatives-** Preservatives are substances used to inhibit the growth of microorganisms in various products, such as cosmetics, food, and pharmaceuticals. Harmful toxins can be produced by certain microorganisms, posing a significant risk to human health, and, in extreme cases, even causing death. Methyl paraben and propyl paraben are preservatives that have been linked to this potential danger.

**Foaming agents-**Foaming agents are substances added to liquids to create a foam or froth. These agents work by reducing the surface tension of the liquid, permitting air to be trapped in the mixture and forming bubbles. These bubbles then expand, creating a foam or froth on the liquid's surface.

**Method of Formulation-**

S.No	Name of ingredients	Quantity	Uses
1	Aloevera extract	2.5gm	Antibacterial
2	Ethanolic extracts of Orange peels	0.5gm	Antioxidant
3	Ethanolic extracts of Turmeric powder	0.5gm	Antiinflammatory
4	Propyl paraben	1gm	Preservative
5	Propylene glycol	1ml	Humectant
6	Sodium lauryl sulphate	1gm	Surfactant
7	Distilled water	Qs	Vehicle
8	Sandalwoods	Qs	Flavour

#### Procedure-

1. Ethanolic extract of Turmeric, Orange peels and extract of aloe verawas prepared by hot extraction method using water condenser.
2. Required quantity of Propyl paraben dissolve in distilled water by heating on water bath.
3. Then the solution should be cooled and required amount of sodium lauryl sulphate should be added.
4. Further sufficient extracts quantity of Turmeric, Orange peels, Aloe vera should be mixed and add Propylene glycol with continuous stirring.
5. Then add Sandalwoods oilsdrop wise for fragrance and made the gel with required quantity of water.

#### Evaluation-

##### Physical evaluation:

Physical parameters, such as color, appearance and consistency, are examined for people with visual impairment.

##### Washability:

The formulation has been used on the skin and then easily verified after washing with water.

**pH:**Using a digital pH meter calibrated at constant temperature, the pH of 1% of the hydro transpiration is calculated..

**Spreadability:**The limit of the gel's spreadability on the skin or the afflicted area is indicated by the term "spredability." The biological viability of the ability to make a gel is also influenced by the extension's worth. By using two-second slides with spelabiliti, add the second slide to slide out of jail when the weight is below a specific level. Cut down on the separation time between the two slides, improving spreadability. Glasses of two common sizes were taken. One of the slides had a herbal gel design. The other slide on the 6-centimeter slide on the slide was positioned on top of the slide gel, creating a gel sandwich. The upper slide was loaded with 100 g of weight.

Spreadability was calculated by using the following formula-

$$S=M \times L / T$$

Where,

S-Spreadability

M-Weight tied to the upper slide (20gm).

L-Length of the glass (6.5cm).

T-Time in sec.

### III. CONCLUSION

Using carbapol as a gelling agent, a herbal face wash gel formulation incorporating turmeric powder extract, aloe vera extract, and orange peel extract was successfully created. The formulation was evaluated for colour, smell, consistency, pH, spreadability, washability, grittiness, and foam ability, and the findings were satisfactory. These results indicate that the created formulation may be efficient for its intended use, but additional research may be required before it can be applied in real-world settings

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