

# Formulation and Evaluation of Herbal Face Scrub

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## Abstract

Healthy and healthy skin requires regular cleansing to remove dirt, dead skin, sebum and other secretions, revealing the cosmetic use of the skin and its products. This is beneficial to make the skin attractive and beautiful. Cosmetics play an important role in making skin happy in everyone's life. Nowadays, herbal cosmetics are gaining popularity because they have little or no side effects. Herbal cosmetics often contain herbs with antibacterial, anti-aging, anti-acne, antioxidant and other effects. The benefits of rice, a nutritious food, against high blood pressure have been examined in many studies. Nowadays, blackheads, whiteheads, acne, etc. Problems can be annoying and that's when brushing can be useful. For a healthy skin, it must be cleaned and removed from dirt and residue. The current study is based on the design and evaluation of herbal facial treatments using medicinal plants and examinations using various parameters. The resulting milk effectively cleanses and rejuvenates the skin. We created four different recipes using rice flour, lemon juice, Multani mitti, neem powder, haldi, tulsi, mint, Carbopol 940, gram powder, sodium benzoate, sodium lauryl sulfate and water. Formulations are then tested for many parameters such as physical appearance, uniformity, extrudability, spreading, irritation, cleaning speed, sandiness, foaming, viscosity, stability, consistency.

**Keywords :** Exfoliation, Scrub, Cosmetic, Skin

## Introduction

The largest organ of the body is the skin. It serves as the body's defense mechanism. The skin acts as a protective barrier. Store everything below. Skin is an organ that shows human health.

**Cosmetics Definition:** Cosmetics are defined as products that are poured, rubbed, sprayed, sprayed or injected into the body. To cleanse, beautify, increase attractiveness or change the human body without harming working standards in accordance with the provisions of the Food, Drug and Cosmetic Law.1[1]

Cosmetics are defined as products used to cleanse, beautify, beautify or change appearance. Different chemicals have been used since ancient times to clean, beautify and maintain them. Facial skin is the largest part of the body and reflects human health.

Cosmeceuticals are a marketer's dream, where many active ingredients from natural and synthetic ingredients are included in skin care products. Different ingredients such as vitamins, antioxidants, minerals, herbs, hormones, anti-inflammatory, antidepressants, mood-altering aromatics (aromatherapy), and even placenta and amniotic fluid. >> in cosmeceuticals.[2]

Natural beauty blessings and cosmetics help teach and enhance beauty and personality. Nowadays, people are choosing foods, herbs and naturopathic methods to achieve better health. Herbal cosmetics are formulas that contain phytochemicals derived from various plant sources that regulate skin function and provide essential nutrients for healthy skin. Cosmetics are natural plants and their products used in cosmetics prepared taking into account their aromatic values. Due to the widespread belief that cosmetics are harmful, herbal products have given rise to an interest in natural products and natural ingredients in pharmaceutical makeup. [3]

**Anatomy of the skin:** The integumentary system is the largest organ and consists of skin, hair, nails and glands. The epidermis regenerates new cells every 28 days. The thickness of this layer is 0.05 to 0.1 mm.

- A) Epidermis
- B) Dermis
- c) Subcutaneous tissue.

Cosmetic products called facial masks are used to moisturize, exfoliate and clean the skin on the face. Skin is divided into three types: dry skin, oily skin and dry skin. People with dry skin should wash their face with a cleanser containing moisturizing ingredients and then apply moisturizing ingredients. Recommended for sensitive skin. Oily skin needs a deep exfoliating treatment to prevent clogged pores and control your skin's oil production. [4]]

Benefits of brushing the skin:

1. FOR THE DAY:

Brushing leaves your skin clean and free of dirt, oil and sweat. In fact, cleansing milk, cleansing milk and face wash bottle cannot remove all the dust from the pores of the skin. Brushing gets the job done.

2. Prevent your skin from exfoliating:

Exfoliating your skin can cause the area to dry out. It causes cells to die from time to time.

Rubbing the skin can help solve the problem of sagging skin.

3. Help remove dead cells:

Dead cells make your skin smooth and tired. Use a small brush to scrub them.

4. Add shine to skin: Exfoliating can cause your skin to shine.

5. Remove Dark Spots:

Use the brush twice a week to see results. It is especially good for joints, elbows and knees.

6. Remove Acne Scars: Peeling helps remove acne scars.[5]

## Drug Profile

### 1.Sapollida

Botanical name : Manilkara zapota

Family : Sapotaceae

Biological source : It consists of The small pinkish white flowers produce an edible fruit that has a rusty brown peel, is rather spherical, and measures about 5–10 cm (2–4 inches) in diameter.

Chemical constituent : vitamins, antioxidants, minerals

Plant part used : fruit



### Benefits

The presence of multiple vitamins, antioxidants, minerals, and dietary fibers makes sapota one of the great fruit for healthy and glowing skin. The Vitamin E in this fruit moisturizes your skin, thus giving you healthy and glowing skin. It is also rich in antioxidants that act as an anti-aging compound by eradicating free radicals in the body that are responsible for enhancing the aging process.

Sapota seeds contain kernel oil that helps to reduce the inflammation of the skin and painful conditions of the skin. You can apply this oil as a poultice on painful skin afflictions.[10]

### 2.Neem

Botanical name : margosa, indian Lilac and Azadirachta indica.

Family : Meliaceae

Biological source : It consists of almost all the part of the plant which are used as drug of Azadirachta indica.

Chemical constituent : Nimbin, nimbidin, azadirachtin

Plant part used : leaves



#### Benefits

Vitamin C is abundant in neem, which aids in the natural creation of collagen and infuses the skin with antioxidants to reduce fine wrinkles.

Neem is often used as a toner to cleanse your skin when using it for acne. Neem's antimicrobial qualities remove excess oil from the skin pores

Neem products are often recommended with skincare and beautification routines to address dry skin and wrinkles. The antioxidants reduce the formation of melanin in your skin, which helps to cure your skin tone. It also helps to minimise your dark spots, dry skin and redness on the skin.[11]

#### **3.Aloe vera:**

Synonym: Aloe, Ghritkumari.

Family: Liliaceae.

Biological Source: Dried juice collected by Incision from the bases of leaves from the aloe

Chemical constituents: aloe emodin

Plant part use : leaves



**Benefits:**

First- and second-degree sunburns have both been successfully treated with it. It has been discovered that aloe vera gel shields human skin from all negative effects of Radiation. Aloe vera has long been used to treat skin injuries (burns, wounds, insect Bites, and eczemas) as well as stomach problems because of its anti-inflammatory, Antibacterial, and wound-healing properties and properties.

It avoids a prolonged kind of hypersensitivity when exposed to UV radiation and Reduces the production and secretion of immunosuppressive cytokines like interleukin-10, which are secreted by epidermis keratinocytes (IL-10)[12]

**4.Honey**

Synonym- Shahad

Biological source -It consists of saccharine liquid prepared from the nectar of the flowers by the Honey-bee *Apis mellifica* belonging to family Apidae.

Description Colour- Yellow brown coloured

Liquid Odour – Sweet Taste – Sweet

Chief chemical constituents Dextrose and Laevulose (70-80%) Dextrin (0.06-1.25%) Proteins

**Benefits**

People commonly use honey for burns, wound healing. It is also used for many other conditions but there is no good scientific evidence to support most of these other uses.

A skin condition that causes redness on the face. Applying a topical honey product to the skin might improve symptoms of rosacea. Good for wrinkles and aging Prevent acne

Wound healing applying honey preparations directly to wounds or using dressings containing honey seems to improve healing. Honey seems to reduce odors and pus, help clean the wound, reduce infection, reduce pain, and decrease time to healing and also used as humectant.[13]

**5.Apple cider vinegar**

Biological source: It is made by crushing apples, then squeezing out the juice. The apple juice is then fermented by yeast which converts the sugars in the juice to acetic acid

Chemical constituents: Pectin, vitamins B and C, and trace amounts of sodium, potassium, calcium, iron, phosphorus, and magnesium acetic acid and polyphenolic chemicals. Succinic, ascorbic, formic, citric, and oxalic acids.



**Benefits:**

Apple Cider Vinegar is a natural source of AHA, which helps in the gentle exfoliation of your skin, eliminating dead skin cells sitting at the top of your skin's surface. This will keep the signs of aging away, ensuring glowing and youthful skin.

Breakouts, blemishes, and clogged pores, our Apple Cider Vinegar-based moisturizer can help. It can quickly stop them by regulating the skin's pH levels and dissolving dead skin cells and also used as hyperpigmentation [14]

**6.Turmeric powder**

Synonym- Curcuma longa

Biological source – It consists of dried rhizomes of Curcuma longa

Family: Zingiberaceae.

Description – Colour – Yellow Odour – Aromatic

Taste – Bitter

Chief chemical constituents – Curcumin, Curcuminoids

**Benefits**

Anti-inflammatory properties decrease the skin's inflammation; and speed up the skin's ability to form new tissue. Besides the fact that turmeric is naturally gold, it can help bring out your natural glow. By reducing dark spots and hyperpigmentation, your skin looks naturally even and radiant.[15]

## 7. Sandalwood Powder

Botanical Name: Santalum Alba

Family : Santalaceae

Biological source: Sandalwood consists of the heartwood of the stems and roots of Santalum Album Linn.

Plant part used: wood

Benefits:

Sandalwood has an anti-tanning and anti-aging property. It also helps skin in many ways like Toning effect, emollient, antibacterial properties, cooling astringent property, soothing and Healing property. Majorly contains  $\alpha$ -santalol and  $\beta$ -santalol. It also contains characteristic Odour.[9]

## 8. Rosewater

Biological Source: Rose petals are regularly mixed into water to create Rose water.

Description: Colour: light pinky-blush

Odour- Aromatic

Benefits

The skincare benefits of using rose water include hydration, nourishment, calming irritation and Redness, reducing dark circles and puffiness under the eyes, controlling excess oil, minimizing Pores, and reducing the appearance of fine lines and wrinkles[8]

## Material and method

Sr. No.	Ingredients	F1	F2	F3
1	Neem powder	3g	2g	1g
2	Aloevera gel	2g	3g	2g
3	Turmeric powder	2g	4g	2g
4	Sapollida	5g	6g	7g
5	Apple cider vinegar	3ml	2ml	4ml
6	Honey	3ml	2ml	4ml
7	Sandalwood powder	3g	2g	1g
8	Carbapol	2g	2g	2g
9	Sodium lauryl sulphate	1	1g	1g
10	Methyl paraben	1g	1g	1g
11	Rose water	Q.S	Q.S	Q.S

## Method of preparation

### 1. Formation of gel

In a container, dose the required sum of carbapol 940 with sufficient water. Employing a petri plate, near the Beaker. Set aside the container for 24 hours. Triethanolamine was included at the conclusion to adjust the pH.

2. Start by washing all ingredients to remove any dirt or foreign matter. Then all the materials are dried in the shade as we wish. Grind the ingredients into a fine powder using a grinder and sieve. Measure the ingredients specified in the recipe.

3. Add the herbal ingredients into carbapol base and then add methyl paraben as preservative.

## Evaluation Parameters

### 1. Spreadability

The behavior of the gel when it comes out of the tube is greatly affected by its spreadability. It is used to determine how the gel will spread on the skin. A glass slide weighing 100 g is placed on it and a small amount of sample is placed on the slide. Place a small piece of sample on one slide and place another slide on top of it; The time required for the gel to spread on the slide was measured and it was determined that 3 cm spread in 40 seconds.[16]

## 2. Organoleptic property

Colour: Visual inspection revealed that the face scrub was light brown in colour.

Odour: The smell of formulation was checked by application of preparation on hand and feels the fragrance of perfume.

Consistency: The consistency of face scrub was found to be semi-solid and smooth by visual examination.

## 3. Homogeneity and Texture:

A tiny amount of the prepared scrub was tested by pressing it between the thumb and index finger

pH

pH of the produced gel was assessed using pH paper. Scrub is lightly applied on pH paper. The pH was discovered to be between 5-6.

## 4. Irritability

A small amount of the preparation was applied to the dorsal area of the hand, left on for a short time, and was discovered to be non-irritating. There is no oedema or redness occurs.

## 5. Washability

This test was carried out directly on the skin. After applying the preparation and rinsing the skin with ordinary water, the skin was found to be clear and clean.

## 6. Grittiness

Few gritty particles were found in the face scrub.

## 7. Extrudability

A small amount of gel was placed in a foldable ointment tube. One end was sealed off, while the other was left uncovered. On the closed side, a little pressure was applied. Both the length of time required for extrusion and the volume of gel extruded were recorded.

## 8. Foamability

In a graduated measuring cylinder, a small amount of scrub was agitated with water to quantify the foam.

## Result

Sr.No.	Parameter	F1	F2	F3
1	Sperdability	Easily spreadible	Spreadible	Spreadible
2	Colour	Brown	Mustard yellow	Mustard yellow
3	Odour	Characteristic	Characteristic	Characteristic
4	Nature	Semisolid	Semisolid	Semisolid
5	Foambility	Good	Good	Good
6	Washability	Easily washable	Washable	Washable
7	Irritability	No itrritaion	No itrritaion	No itrritaion
8	pH	6.2	6	6.5

## Conclusion

In this study, we aim to create an effective and permanent face mask by using medicinal herbs as active ingredients. We have found that herbal facials contain exfoliants that exfoliate your skin, remove dirt, and give your skin an instant glow. The active ingredients of herbal facial care contain antibacterial and antifungal properties. We don't recommend toothpastes containing sulfates or parabens for all skin types, but we have found toothpastes to be better than synthetic ones. We have also found that herbal toothpastes with natural ingredients have minimal side effects, are suitable for everyone, are less irritating to the skin and instantly give a brighter shine. Based on the results of this research, we believe this Is a promising herbal facial that can improve skin quality.

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