



Preparation And Evaluation Of Facial Scrub Using Natural Ingredients

Yogini Shete¹, Pooja Birade²

Shree Sainath College of Pharmacy, Dawalamethi, Nagpur

Abstract: The present work involves Development and assessment of Facial scrub using natural ingredients. Cosmetic products available in the market, natural and herbal cosmetics are easy, safe, and effective to use. One of the main reasons herbal products are used is that they can be used for all skin types. The main purposes of herbal products are to promote good health and treat severe skin diseases. The present study attempted to prepare a polyherbal scrub. The formulated scrub was assessed using various parameters. The facial scrub was developed using Turmeric Powder, Honey, Amla, licorice, agar, and rose water at the lab-scale method. The formulated scrub was assessed for appearance, pH, consistency, extrudability, irritability, Spreadability, washability, grittiness, viscosity, and formability.

Keywords – Polyherbal, Cosmeceutical, Stability, Herbal product

I. INTRODUCTION

Cosmetics are products that are used to clean, beautify, encourage beauty, or change one's look. [1] Different herbs have been utilized for controlling, cleansing, and adorning them since ancient times. The largest portion of the body that reflects one's health is the skin on the face. [2,3] There are many different sorts of cosmetics, and each one affects the skin in a different way. [4] Cosmetics are referred as articles designed to be rubbed, poured, sprinkled, sprayed, inserted into, or otherwise applied to the human body for cleaning, beautifying, boosting attractiveness, or altering the look without harming structure or function by the Food, Drug, and Cosmetic Act. [5,6,7] Because they can function both as cosmetics and medications in a significant way, herbal cosmetics are currently in somewhat high demand. Skincare products are actually a significant component in helping people feel more confident, or so they believe. In general, men are just as worried about their looks as women are, despite the fact that it was previously assumed that women were for the most part larger consumers of skin care products. [8] The idea of beauty, overall appearance, and attractiveness has caused a rise in this industry. Men undoubtedly need more specialized solutions than women do because of the rougher texture of their skin. For all intents and purposes, cosmeceutical companies develop their products depending on the skin texture. [9] The skin, which is undoubtedly the largest and most important portion of the body, serves as the primary indicator of an individual's overall health. The composition of skin is mostly made up of lipids, amino acids, and carbohydrates, which is actually rather significant. Environmental, hormonal, and biological factors, most of which are rather substantial, can have an impact on the skin. They largely believed that a balanced diet should be used to nourish the skin in order to keep it healthy and lustrous. Environmental elements including UV rays, pollution, dust, and climate changes will mostly worsen skin-related problems to a significant degree. Skin damage from environmental factors can be avoided by applying topical cosmetics made of synthetic or natural ingredients. Cosmetic, for all intents and purposes, is a Greek word that refers especially to something that is applied to the skin in order to primarily enhance its appearance and health. [10] It can be used for a variety of things, but it's especially good for cleaning, glowing, protecting, moisturizing, softening, and whitening. They essentially believed that the reason herbal cosmetics are currently in such high demand is because they can nourish the skin with everything it needs without having any negative side effects. There are many different kinds of herbal topical cosmetics on the market, including facial masks,

peel-offs, sunscreen gel, facial scrubs, and others, which are very important. The oil is less abrasive because it is frequently used as a face cleanser. It exfoliates the skin and eliminates dead skin cells. Any skin type can use peeling cream. The only substance utilized in exfoliation that differs by skin type is essential oil. With regular use of a scrub, the skin becomes brighter and due to the excision of skin cells that have died, are eliminated, allowing for the growth of new skin cells. Skin is classified into three types, for instance, such as dry, oily and sensitive skin. One of the most crucial components in skin exfoliating is a mild abrasive. You have two options for applying the peeling cream: either straight to the skin or with a little cosmetic pad. Applying an exfoliating gel gently is advised to help with circulation and boost oxygenation, which nourishes the entire surface of the skin. [11]

The Scrub should have the following ideal qualities:

1. It should not be harmful.
2. Contain microscopic grit.
3. A slight abrasive.
4. Not bothersome.
5. Not adhesive.
6. Capable of removing skin debris. [12]

How does a scrub affect the skin?

Scrubbing encourages the largely natural process of skin renewal. When you scrub your face, you eliminate the kinds of dead and damaged skin cells that prevent the skin from gradually rejuvenating. Thus, dark scars and patches actually tend to lighten in color. It is widely known that facial washes with naturally occurring skin-brightening components actually produce superior results.

In general, facial scrubs contain coarse particles that significantly aid in exfoliating the skin. When you generally apply a face scrub, the particles essentially brush against your skin and eliminate all the dirt from your skin pores, which is extremely important. Additionally, it removes dead skin cells, essentially making your skin much softer and smoother.

Face scrub and face wash have different purposes.

1. Face wash: The face wash is often smooth and creamy. If you have sensitive skin, the majority of doctors advise using just a face wash and not a scrub. A face wash cleans your skin of oil and filth by using chemicals, such as soap.
2. Face scrub: To exfoliate dead skin cells, face scrub often contains some sort of grit. Face scrubs may exacerbate skin irritation and make it easier to itch. To remove oil and filth from your face, face scrubs employ exfoliants like walnut shells or microbeads as abrasives. [22]

Uses:

1. Exfoliates away dead skin cells.
2. Enhances the texture overall.
3. Prevents new outbreaks.
4. Remove stains.
5. Aids in treating ingrown hairs.
6. Makes it possible for other skincare products to absorb more readily.
7. Stops aging.

Advantages:

1. Restoring youth to the skin Regular exfoliation removes dirt, dead skin cells, and other impurities from your skin in a subtle way. Contrary to popular opinion, it also effectively unclogs your pores while making your skin feel refreshed and renewed.
2. Addresses flaky skin the accumulation of truly dead skin cells causes flaky skin, which over time also develops extremely dry spots. Scrubbing, it was believed, would also help you get rid of flaky skin in a fairly effective manner.
3. Definitely removes dead skin The beads or granules of the scrub, when used after cleansing and massaging, remove the type of dead cells of the skin in a generally significant way because scrubbing is an exfoliating procedure. The removal of dead skin also aids in skin restoration. [13]

Dis-Advantages:

1. Using harsh washing motions or harsh scrubbing chemicals might seriously irritate the skin, leading to redness and inflammation. Contrary to popular assumption, if you tend to have sensitive skin, you could also potentially experience allergic reactions to the chemicals found in the majority of synthetic scrubs.
2. Excessive cleaning can actually cause pores to open, exposing skin to both UV radiation and pollution. Contrary to what is generally believed, it also effectively makes your skin much more vulnerable to infections and damage. [14]

Herbal scrubs have several Benefits, including:

1. For a perfectly fresh skin exfoliating leaves your skin comparatively clean, essentially devoid of sweat, oil, and filth. Actually, a considerable amount of the dust that gathers in the pores of your skin generally cannot be removed by bottles of cleansing milk, face wash, and facial cleansers. This task is successfully completed by scrubbing in a sizable fashion. Frees your Skin from Flakes: Flaky skin is mostly responsible for the development of extremely dry spots. It permits the majority of dead cells to accumulate over time. Scrubbing your skin can actually really assist you deal with flaky skin efficiently and in a significant way.
2. Assists in Removing Dead Cells: Dead cells actually cause your skin to look dull and worn out, which is rather important. They mainly believed that you should scrub them off gently.
3. Removes Dark Patches: Contrary to popular opinion, using scrub twice a week can actually produce effects. It basically has a very significant positive impact on the knees, elbows, and knuckles.
4. Removes Acne Scars: Exfoliation actually contributes significantly to the removal of acne scars.
5. Prevents Ingrown Hair: Contrary to common opinion, ingrown hair is typically a perennial issue and cleaning can help to mostly prevent this issue.
6. Smooth Skin: It is undeniably true that having smooth skin will make you appear more attractive. Contrary to popular perception, the scrub will not only generally make your skin appear flawlessly smooth in all respects, but will also generally make it soft and well-nourished. [15]

II. REVIEW OF LITERATURE

a. Shweta Ghode *et al.*, (2022)

For both men and women to live happy and confident lives, cosmetics have become an integral component of daily living. We decided to prepare and test an herbal facial scrub to specifically prevent acne, scars, tanning, wrinkles, aging, and redness with the idea that cosmetics should be devoid of synthetic chemicals and drugs. The prepared scrub was assessed for a number of parameters, including Color, Odor, Consistency, pH, Viscosity, Spreadability, Washability, and Irritability, and it was discovered to generally satisfy all characterization requirements. The prepared polyherbal face cleanser can therefore be used to achieve a healthy, radiant complexion that is truly natural. [9]

b. Ashpak Rapik Maner *et al.*, (2022)

For everyone to live a happy and contented life, in particular, cosmetics are essential. Herbal cosmeceuticals are more in demand right now because they genuinely don't have any significant adverse effects. Scrubbing is especially crucial for people with oily skin because they typically have acne, whiteheads, and blackheads. Generally speaking, the scrub has great results on oily skin and acceptable effects on normal and dry skin. Literally, every component of the herbal face scrub is a food component. [11]

c. Esha Vatsa *et al.*, (2020)

The primary goal of the current study was to create an herbal facial scrub that used Amla (*Phyllanthus emblica*) as the primary form of the active ingredient. The use of primarily natural ingredients to potentially combat wrinkles, and acne, and to specifically aid in the regulation of the oil discharge from open skin pores is the main reason they are, in all actuality, a component of herbal cosmetics. The produced reasonably poly-herbal composition literally protects the skin from premature aging, acne, and pimples while nourishing, moisturizing, and cleansing it. [12]

d. Rutuja Prashant Nangare *et al.*, (2022)

The major goal of the current investigation was to create a scrub that was truly polyherbal and mixed with gel. Natural or herbal cosmetics are generally understood to refer to products that use natural substances to combat acne, wrinkles, and oil production. Herbal cosmeceuticals typically contain plant parts with antibacterial, antioxidant, and anti-aging qualities in particular. Contrary to common assumption, the use of primarily natural components to combat acne, and wrinkles, and to reduce oil secretion is known as primarily natural or herbal cosmetics. [13]

III. OBJECTIVES

Nowadays, various cosmeceutical companies formulate scrubs by using lots of chemicals that cause skin irritation and pigmentation of the skin. Therefore, to reduce those side effects we have formulated a facial scrub using some natural ingredients. The aim of the present study is to prepare and evaluate facial scrub by using various natural ingredients to reduce skin pigmentation and skin irritation and also reduces skin dullness. Also, this facial scrub is useful to enhance the appearance of the skin, study the effect of natural ingredients on the skin, promote attractiveness or alter the appearance, prevent ingrown hair, remove dead cells, and provide smoother skin.

IV. MATERIAL AND METHODS

4.1 Materials

The following items were bought from MANAS AYURVEDA, which is situated at PLOT NO.09, "GOKUL" GHATATE CHOWK VIP ROAD, CIVIL LINE, NAGPUR: Honey, Amla Powder, Liquorice, and Turmeric Powder. Triethanolamine and propylene glycol were acquired from LOBA CHEM, Mumbai, and Aloe Vera, cinnamon powder, and rose water were purchased from Amazon.com.

4.2 Plant profile

4.2.1 Honey

Acne, eczema, and puffy eyes can all be treated with honey, which is normally rather substantial. Usually, sugar is a calming component of anybody's scrub. The grainy nature of sugar acts like an exfoliator to gently brush off dead skin cells as well as for the majority part, gives the entire face a mild healthy glow.

4.2.2 Amla

Amla has a moderate exfoliating effect on the appearance of the skin while applied directly to the skin, which is essentially very important. Applying a face mask containing powdered amla or paste will gently exfoliate the skin to eliminate impurities and, for the most part, dead skin cells.

4.2.3 Aloe vera gel

Aloe Vera gel physically scrubs the outer layer of skin, thoroughly eliminating debris, pollutants, and dead tissue while leaving it soft, supple, and noticeably rejuvenated. This is quite significant. Contrary to common opinion, exfoliating the skin is generally necessary for eliminating mostly dead skin cells and cleaning out the pore space of debris.

4.2.4 Licorice

Licorice also is thought by many to have a calming impact on the skin and type of aid in reducing inflammation. Licorice contains glycyrrhizin, which is typically used to treat skin problems such as atopic dermatitis and psoriasis. It can normally reduce inflammation, irritation, and stiffness.

4.2.5 Turmeric powder

A turmeric scrub, in especially, thoroughly exfoliates the skin, gets rid of cellular debris along with other dirt from the outer layer of the skin, stimulates lymph and surface blood circulation, and, perhaps because of its anti-inflammatory effects, reduces acne. It also improves the appearance of skin glow and overall natural PH, which is particularly important.

4.2.6 Rose oil

Rose oil is unquestionably the best facial oil for dry skin in a significant way. It generally acts as a very effective humectant, which means that it essentially keeps the skin moisturized. It accomplishes this by securing moisture in the skin by removing it out of the air. As it will primarily assist with keeping the skin moisturized and preventing flakiness, which is obviously extremely substantial, this is certainly ideal for those with highly sensitive, extremely dry, or cracked skin.

4.3 Method of Preparation

Carbapol was weighed and dissolved in water. To this add methylparaben and propylene glycol and stir continuously to form a uniform gel. Add sodium lauryl sulfate to the gel by dissolving separately with water. To this gel add all the active ingredients and stir continuously to form a uniform gel face scrub. [16]

Table 1: Formulation table

Sr. No	Ingredients	Category	F1
1	Aloe vera	Anti-inflammatory	Q.S
2	Amla powder	Anti-aging	10%
3	Cinnamon powder	Anti-bacterial	7%
4	Liquorice	Brighten skin	10%
5	Turmeric	Antiseptic	20%
6	Honey	Anti-septic	3%
7	Rose water	Vehicle or fragrance	Q.S.
8	Triethanolamine	Neutralizer	20%
9	Propylene glycol	Moisturizer	20%
10	Methylparaben	Preservative	0.1%
11	Carbapol	Gelling agent	2%



Fig no 1: Formulated Herbal Scrub

V. EVALUATION PARAMETERS

The prepared gel was evaluated for appearance, pH, consistency, Spread ability, viscosity, irritability, washability, grittiness, and formability. [18,19,20,21,16]

5.1 Appearance

The smell and color of the scrub after preparation were assessed. The consistency of the product had been chosen to be gritty, the color to be brown, as well as the scent to be distinctive.

5.2 pH

The produced gel's pH was measured. On the pH paper, a small amount of the gel was put, and the reading was 7.0.

5.3 Consistency

With visual inspection, it was discovered to be semi-solid.

5.4 Spreadability

A thin layer of sample was deposited on a glass slide, followed by another glass slide positioned on top of the sample. On top of it was something heavy made of wood. It was estimated how long the gel took to spread out and how much space was covered. The area and volume of gel on the glass slide show how effectively it spreads.

5.5 Viscosity

The viscosity of the gel was measured using a Brookfield viscometer.

5.6 Irritability

After being left on the surface of the skin for a short while, a small amount of the gel was administered and discovered to be non-irritating.

5.7 Washability

The area of the skin was covered with a small amount of gel before being rinsed with water. It was simple to clean.

5.8 Grittiness

A few grittier pieces were discovered in the gel.

VI. RESULT AND DISCUSSION

The critical information was obtained from the examination of the nature, composition, flavor, aroma, texture, and pH of the combined dry powders under research.

Table 2: Different evaluation parameter

SR.NO.	PARAMETERS	OBSERVATION
1	Colour	Brown
2	Odour	Pleasant
3	Texture	Gritty
4	pH	5
5	Irritability	Non-irritant
6	Consistency	Good
7	Grittiness	Small gritty particles
8	Viscosity	18880Cp
9	Wash ability	Easily washable
10	Spreadability	Easily Spreadability

VII. CONCLUSION

In this work, we tried to make a multi-herbal scrub. The created scrub was examined utilizing a number of factors, and ultimately it was determined as being satisfactory for use on the surface of the skin to promote health and radiance without causing any negative effects. Natural as well as herbal cosmetics, which are readily available on the market, are simple, secure, and efficient to use. The fact that herbal treatments work for all skin types is one of the key justifications for their use. The main purposes of herbal products are to promote good health and treat severe skin diseases. However, the use of traditional medicines rises when standard products fail frequently or have unfavorable side effects. A straightforward procedure and little equipment are needed to create the polyherbal face scrub, which contains active substances with the best qualities and therapeutic value. An herbal face scrub was created for the current investigation and assessed for a number of factors. The test findings showed that the composition was successful. The formulated polyherbal composition hydrates remove impurities nurtures, as well as shields the skin from early aging, breakouts, and acne. Natural components were used to create the facial scrub. The created scrub was examined using a number of criteria and determined to be suitable for use on the skin to promote overall wellness and radiance while avoiding any undesirable side effects.

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