

FORMULATION AND EVALUATION OF SKIN CARE PRODUCT BY POLYHERBAL EXFOLIANTS

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Abstract- This study explores the formulation and evaluation of a herbal face scrub designed to promote healthy skin through natural exfoliation. Utilizing ingredients such as multani mitti, poppy seeds, turmeric powder, and neem powder, this scrub aims to remove dead skin cells, unclog pores, and enhance skin complexion. Aloe vera gel, rosewater, and glycerine are included to hydrate and soothe the skin, making the product suitable for various skin types, including sensitive skin. The scrub was prepared by mixing specific proportions of dry and wet ingredients to achieve a paste-like consistency, followed by evaluations including pH, texture, and grittiness tests. The results indicated satisfactory performance in terms of exfoliation, spreadability, and skin compatibility, with no significant irritancy observed. The scrub's organoleptic properties were also found appealing. This herbal face scrub represents a beneficial addition to skincare routines, emphasizing the use of natural ingredients for skin health and vitality.

Keywords: Herbal Face Scrub, Natural Exfoliation, Skin Health.

1.INTRODUCTION:

The ancient Egyptians are credited with pioneering exfoliation, while in the Middle Ages, wine containing tartaric acid was used as a chemical exfoliant. Asia has a long history of practicing exfoliation. The term "exfoliate" traces its roots to the Latin word "exfoliare," meaning to strip off leaves [1]. Cosmetics, including facial scrubs, play a crucial role in enhancing facial and body appearance. Facial scrubs, typically cream-based, contain exfoliating particles that, when massaged onto the skin, lift off dry, dead cells for a smoother complexion. These scrubs are particularly effective for neck care, offering deep cleansing and exfoliation, making them beneficial for various skin types, especially oily skin [2,3]. Remember to exfoliate with an upward motion for optimal result. The aging process of human skin results from both intrinsic factors, influenced by genetics and chronological age, and extrinsic factors, driven by environmental exposures. Intrinsic aging involves genetic components, while environmental aging, such as photoaging, is caused by exposure to adverse conditions throughout life. To counteract age-related changes and protect the skin, supportive care is essential.

Herbal exfoliants (HEs) play a crucial role in mitigating these effects. By removing dead skin cells, HEs expose newly formed skin cells, stimulate cell growth in the subepidermal layer, and neutralize environmental damage. This process helps unclog pores, preventing skin congestion. The natural exfoliation process, crucial for maintaining healthy skin, can be influenced by internal factors like health and age, as well as external factors such as protective coverings and weather conditions [4,5].

In essence, the use of herbal exfoliants becomes a valuable strategy in promoting skin health, facilitating natural exfoliation, and countering the impact of both intrinsic and extrinsic aging factors.




Polyherbal scrubs offer a range of benefits:

- Eliminate dead skin cells, enhancing a smoother complexion.
- Boost your skin's health with vitamins and antioxidants for nourishment and protection.
- Cleans pores without harsh chemicals, suitable for sensitive skin [6].
- Some herbs can help reduce inflammation and soothe irritated skin.
- Enhances blood flow, contributing to a healthier skin appearance.
- Pleasant scents from herbs can offer aromatherapy benefits during use.
- Certain herbs contribute to skin hydration, preventing dryness.
- Ingredients may help reduce the signs of aging, like fine lines [7]

Benefits of Ingredients Used In Facial Scrub

1. **Aloe Vera Gel (Base):** Its soothing properties can help calm and hydrate the skin, reducing irritation caused by exfoliation. Aloe Vera also contains antioxidants that may promote skin healing and provide anti-inflammatory effects. Additionally, its moisturizing qualities contribute to maintaining skin hydration, leaving it feeling refreshed and revitalized after scrubbing. Overall, incorporating Aloe Vera gel into cosmetic scrubs enhances the exfoliation experience while supporting skin health [8].
2. **Neem Powder:** Neem is known for its antibacterial and antifungal properties, making it effective against acne and skin infections. The powder acts as a natural exfoliant, helping to remove dead skin cells and unclog pores, resulting in a clearer complexion. Neem also contains antioxidants that may protect the skin from environmental damage. Its anti-inflammatory properties can soothe irritated skin, making it suitable for those with sensitive or acne-prone skin. Including neem powder in cosmetics scrubs contributes to a gentle yet potent exfoliation with added skin-clearing benefits [9].
3. **Poppy Seeds:** Poppy seeds in cosmetics scrubs offer gentle exfoliation, helping to slough off dead skin cells and promote smoother skin. Their fine texture makes them suitable for sensitive areas. Additionally, poppy seeds can stimulate blood circulation, contributing to a healthy and radiant complexion. The seeds may also contain essential fatty acids, providing moisturizing benefits during exfoliation. Including poppy seeds in cosmetics scrubs can enhance the overall texture and appearance of the skin.
4. **Turmeric Powder:** Turmeric powder has natural anti-inflammatory and antioxidant properties. Turmeric is also known for its skin-brightening effects and reducing the appearance of dark spots. Its antibacterial properties can be beneficial for those with acne-prone skin. Turmeric has been traditionally used to improve skin conditions such as eczema and psoriasis. When incorporated into cosmetics scrubs, turmeric can contribute to a rejuvenating and clarifying skincare routine, leaving the skin looking refreshed and radiant [10].
5. **Multani Mitti (Fuller's Earth):** It has natural absorbent properties, making it effective in drawing out excess oil and impurities from the skin, which can be particularly beneficial for individuals with oily or acne-prone skin. Additionally, Multani mitti helps in exfoliation by removing dead skin cells, unclogging pores, and promoting a smoother complexion. Its natural cooling effect can soothe irritated skin, making it suitable for those with inflammation or redness. The clay is also known for its ability to improve skin elasticity and tighten pores.
6. **Vitamin E Oil:** the inclusion of Vitamin E in cosmetics scrubs supports antioxidant protection, moisturization, and overall skin health [11].

2.MATERIAL AND METHOD:

Ingredients	Category	Quantity	Quantity
Aloe Vera Gel (Base) 	Soothing, hydrating, and nourishing properties. Aloe vera gel can help to moisturize and protect the skin, reducing dryness, redness, and irritation.	10 g	8 g
Neem Powder 	Anti-inflammatory , Anti-septic, antibacterial, antifungal, and skin purifying properties.	2g	3 g
Poppy Seeds 	Natural exfoliant that can be incorporated into facial scrubs to help promote smoother, softer, and rejuvenated skin.	2g	2.5g



<p>Turmeric Powder</p> 	Anti-aging, Rejuvenator and Brightening the skin	1 g	0.5 g
<p>Multani mitti (fuller's earth)</p> 	Absorbent, remove excess oil, dirt, and impurities from skin	3g	3 g
Rose Water	Fragrance and soothing property	15 g	20 g
Glycerine	Hydration	1g	1.5 g
Vitamin E Oil	Anti-oxidant	0.5g (around 5 drops)	0.5g (around 5 drops)
Phenoxyethanol	Preservative	0.15g	0.15g

TABLE 1 : MATERIAL

3.PROCEDURE:

In order to formulate the face scrub [9] :

First, we cleaned all the ingredients to get rid of any dirt or impurities.

- Then all components were dried in the shade.
- Then used a grinder to crush the ingredients into a fine powder, and then sieved.
- The ingredients were measured according to the specific formula outlined in the formulation.
- The weighed powder and other ingredients were mixed together to form formulations
- Add aloe vera and then glycerine to the dry mixture.
- Gradually add rose water to the mixture while stirring continuously. Add enough rose water to form a paste with a scrub-like consistency.

4.EVALUATION:

The prepared face scrub was evaluated for various parameters such as organoleptic properties, pH, Irritability, washability, grittiness, extrudability, foamability, spreadability and was found to be Satisfactory. The formulated product performs satisfactorily as a cleansing scrub that promotes healthy and luminous skin.

1. Colour: The Colour of formulation was checked manually and observed as Creamish Yellow.
2. Odour: The fragrance of the formulation was assessed by applying it to the hand and evaluating the scent of the perfume [15].
3. Texture Evaluation: Assess the texture and consistency of the face scrub. The scrub should be easy to apply and spread on the skin without being too harsh or abrasive. It should have a balanced texture that allows for gentle exfoliation.
4. Consistency: The consistency of the Formulation and particles were used to check the texture and homogeneity of preparation on the skin such as stiffness, grittiness, Greasiness effect. Formulation found solid in Nature [16].
5. pH: pH of formulation was measured by using a calibrated digital pH meter and result was found to be 7.3.
6. Grittiness: To ensure the exfoliant has the right abrasive property, lentil pulses were ground into a powder and sifted through a No. 60 sieve, resulting in a formulation with a few gritty particles[17].
7. Spreadability: Spreadability of the Formulations was determined by measuring the spreading diameter by keeping 1 g of Sample between two horizontal glass plates (10 cm × 20 cm). The standard weight 20 gm Applied on the upper glass plate. The spreading Quality checked by visual inspection.
8. Washability: The washability test involved applying the formulation directly to the skin, washing it with normal water, and then observing the skin to assess how clean and clear it appeared afterward [18].

9. The formulated face scrub was evaluated and then packed into a container & labelled.

5.RESULT AND DISCUSSION:

The different formulations of face scrub was prepared and evaluated for physical parameters.

Parameters	F1	F2
Colour	Yellow	Creamish yellow
Odour	Pleasant	Pleasant
Texture	Good	Good
Consistency	Good	Good
Spreadibility	Easily Spreadable	Easily Spreadable
Foamability	No	No
pH	7.2	6.8
Grittiness	Yes	Yes
Washability	Easily washable	Easily washable

Table.2. Evaluation Test

Formulation F1, F2 was tested for evaluation parameters such as colour, odour, texture, consistency, Spreadability, foamability, washability, pH and grittiness. All the ingredients are herbal in nature therefore There is no side-effect. The formulation F2 was found to be very effective as compared to the F1. The colour of the product was observed to be creamish yellow with no indication of an unpleasant smell. No foam was produced. The product's consistency was suitable for applying to the skin. The texture was pleasant and satisfactory, featuring small gritty particles. Additionally, the scrub was easily washed off with regular water, and its pH of 6.7 indicated that it's suitable for the skin. The formulation can be applied for all skin types.

6.CONCLUSION:

In simpler terms, the study focused on developing a natural face scrub using herbal medicinal compounds as active ingredients. The herbal face scrub was found to have exfoliating properties, effectively removing dirt and giving the skin a healthy glow. The active ingredients, such as poppy seeds, neem powder, turmeric act as antibacterial and antimicrobial agents. It was recommended to avoid using scrubs containing sulfates or parabens on all skin types, as herbal scrubs were found to be more beneficial. Additionally, the herbal scrubs had fewer side effects when made with natural ingredients. They are suitable for all ages, less irritating to the skin, and provide immediate skin radiance. Overall, this research presents a promising formulation of a herbal face scrub that effectively exfoliates the skin

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