

Preparation and Evaluation of Herbo- Mineral Scrub using Banana Peel Powder

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Abstract: *The objective of this study to prepare good and e effective Herbo-Mineral scrub for face. This research article includes formulation and evaluation of a face scrub for lightening using banana peel powder. our face skin comes in direct contact of environmental factors like pollutant, dust particles etc. and having number of dead cells .to remove the dead skin and make face skin lightening, healthy, cleaned some facial prepration required . This scrub prepration contain banana peel powder which are safer for use it also they possess antioxidant, anti-ageing, lightening, and emollient properties , this scrub is prepared using simple mixing method . The scrub contain the vitamins, minerals, nutrients for the skin. The prepared scrub was evaluated for evaluating various parameters including physical appearance, colour, texture, odour, pH, viscosity, irritability, washability, homogeneity, extrudability, and spreadability, successful outcomes were achieved across all tested parameters and uatedd fruitful results for all the parameter tested. Thus the prepared formulation can be used effectively as it shows good scrubbing properties and it can be used to make a healthy, clean, lightening and glowing skin,*

Keywords: Banana peel powder , face scrub, antioxidant.

I. INTRODUCTION

Exfoliation is crucial for maintaining healthy skin, providing numerous benefits. Herbal cosmetics serve to cleanse and enhance the skin's appearance, contributing to its purification and beauty. The main advantage of using herbal cosmetic is that it is pure and does not have any side effects on the human body. this skincare product removes dead cells ,hydrates your skin, refreshes your skin tone it is the important part of cosmetics its used to soften, cleanse, beautify and beautify. Facial skin is an important part of the body, it shows people's health. banana peel powder are contain full of essential vitamins that are important for the health and shine of the skin. Natural face is easy to use. They make the skin smooth and good by increasing blood circulation in the facial muscles. It is a easy prepration and stored for a long period. People have dark or black spot on face and are exposed to sunlight, other pollutants etc if not taken care of properly. may darken with exposure. In this article, we have created face scrub that naturally whiten, brighten, glowen and brighten the skin of men and women. scrub with natural banana peel powder are full of essential vitamins that are important for the health and shine of the skin. scrub is easy to use. They make the skin stronger by increasing blood circulation in the facial muscles. scrub are used to make the skin white and smooth. It reduces the appearance of wrinkles, acne, pimples and dark circles on the skin. Scrub are now widely used as skin care . They are non-toxic, non-allergenic and habit-forming. almond oil, milk powder ,citric acid it also provides the beautifying and nourishment for the skin. These substances have been proven to be beneficial for skin in many ways.

Benefits of using banana peel powder

- Having a face beautiful and healthy
- It has a soothing effect on the face.
- Regular use of a scrub can improve skin texture and firmness, making skin radiant.
- This scrub can control wrinkles, fine lines and sagging skin.
- Scrub can protect against the dangers of bad weather and pollution.
- It helps to remove uneven skin tone and hyperpigmentation.
- It nourishes the skin and provides the skin with the necessary nutrients.
- It can decreases scars and blemishes on the skin.
- Remove dead skin cells.

- It purifies and exfoliates by cleansing dead skin that causes blackheads and whiteheads

II. MATERIAL AND METHODS

Banana purchased from the local fruit market and Seoul the banana ,the peels of banana are wash in clean water and dried in sunlight. after the drying peels are grind in a mixer.grind powder are dissolved in alcohol to avoid get swallow and stikyness in formulation. fresh aloe vera leaves collected for gel prepration from herbal garden of college.other ingredient were potassium alum, carbopol 934,milk powder, glycerine , isopropyl alcohol.

Formulation Table

Ingredients	Use	Quantity
Banana peel	Scrubbing agent and exfoliant	4
Potassium alum	Preservatives,Lightning skin	1
Almond oil	Emollient, stimulate the smooth fine lines	1.5
Glycrina	Humectant	1.5
Citric acid	Preservatives	0.025
Aloe vera	Antioxidant	3
Milk powder	Skin glow	1
Carbopol 934	Thickening agent, gelling agent	1
Isopropyl alcohol	Fragrance	1
Titanium dioxide	Sunscreen	1
Sodium lauryl sulphate	Surfactant	1
Alcohol	Moisturizing	q.s
Purified water	Vehicle	q.s

Table no 1

Method of preparation and Collection of Plant Material

- Identified fresh leaves of plants were collected from herbal garden of Nootan college of pharmacy,Kavathe Mahankal Preparation of Aloe-vera Gel:
- Fresh aloe vera leaves collected and get the gel manually. Gel was grinded into mixer to get a homogeneous form. Preparation of carbopol base
- Required quantity of carbapol 934 taken in a separate beaker. Add rest of ingredient one by one into it with continuous and homogeneous stirring.

Step 1 -

Mixed potassium alum, glycerine, almond oil, isopropyl alcohol mix well in beaker

Step 2

Take mortar pestale and triturate citric acid, titanium dioxide again add milk powder, sodium laurylsulphate mix well

Step 3-

Take banana peel powder (with pre alcohol) add aloe Vera gel mix well, add small quantity ofcarbopol934 triturate pestle morater

Add the step to step content with continuous stirring, add maintain semisolid consistency usingpurifiedwater

Evaluation parameter of facial scrub

Formulation was tested for physical appearance colour,texture,Odour,PH, irritability,viscosity,washability,extrudability and spreadability etc .

Organoleptic properties

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- **Colour :-** The colour of scrub was checked manually and observed creamish
- **Odour:** The fragrance of the formulation was assessed by applying it to the hand and observing the scent.
- **Consistency:** The texture and uniformity of the formulation were evaluated by examining its consistency and the presence of particles on the skin, considering factors such as stiffness, grittiness, and greasiness. The preparation was determined to be semi-solid.
- **Homogeneity and texture:** To assess homogeneity and texture, a small amount of the formulated scrub was pressed between the thumb and index finger.
- **Washability-** This test was performed directly on skin, preparation applied on face and wash with normal water, after washing clean and clear face skin observed
- **pH-** pH of 1% aqueous solution of formulation was measured by using a calibrated digital pHmeter and result found 7.3
- **Viscosity:-** For viscosity measurement For Viscosity measurement, Brookfield viscometer “Helepath Spindle A-91 used, and result observed as 6890-7180cps at 10 rpm
- **Extrudability-** It is usual empirical test to measure the force required to extrude the material from tube More quantity extruded, better the extrudability. The formulation under study was filled in a clean, aluminum collapsible tube with nozzle tube of 5mm opening and applies pressure on tube by the help of finger. Tube extrudability was assessed by measuring the quantity of formulation extruded through the tip of the tube when pressure was applied.
- **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.
- **Skin irritation** - was evaluated by applying a small amount of the scrub to the dorsal part of the hand and allowing it to remain for several minutes. No signs of irritation such as redness, swelling, or other adverse effects.

III. RESULT AND DISCUSSION

The formulated herbo-mineral banana peel scrub was evaluated at different parameters. All the organoleptic properties were checked visually such as colour, odour, consistency, homogeneity and texture. As a result, colour observed as creamish, no bad smell occurred from formulation. The consistency of the formulation found suitable as required to apply on face. Particles were used to check for the texture and homogeneity of preparation on skin found good and satisfactorily as the preparation show grittiness, greasiness properties on face. Washability properties show good, as it is easily washed by washing with normal water. pH of the formulation checked and found 7.3 means suitable for skin. Extrudability test performed with the help of empty collapsible tube filled with scrub, checked for quantity extruded from the nozzle of 5 mm and found satisfactory. Spreadability quality also tested with the help of glass plates and found that preparation having good consistency and easily spreadable. No irritation, redness, edema and any dermatological effects observed on skin. Viscosity checked and result found as 6890-7180 cps 10 rpm

Colour	Creamish
Odour	Characteristics or almond like Smell
Consistency	Good
Homogeneity and texture	Good
Washability	Easily washable
pH	7.3
Extrudability	Easily extruded
Spreadability	Easily spread
Viscosity	6890- 7180 cps 10 rpm
Skin irritation	No irritation

Table No 2

IV. CONCLUSION

From the above results it is concluded that new formulation herbo-mineral scrub can be safe to use and the banana peel powder used as a scrubbing/cleansing agent showing good effects and no any side effects of scrub. This research article show formulation and evaluation of a face scrub for lightening using banana peel powder. it provide the vitamins and nutrients for the skin. It can be used for any type of skin i.e. normal, oily and dry. It gives best results and make the face glowing and healthy.

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