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Research article

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Formulation and evaluation of natural scrub of pomelo peel and sponge gourd loofha

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ABSTRACT

A facial scrub is a skin care product used to exfoliate the skin which removes dead skin cells from the surface of the skin and reduces tanning of skin. The possibility of clogged pores and the appearance of acne. In the face scrub, powdered form is pomelo peel, rice flour, multani mitti, black sesame seed, turmeric powder, sandalwood powder, oat powder, orange peeler in liquid phase aloe Vera, rose water and honey is mixture of both and keep it on the surface of the sponge gourd bunch and roll it in circular motions on the skin. accordingly, evaluation of the scrub is particle size, ash content, pH test, solubility test, loss during drying. This formulation has the potential to increase consumer acceptance through the use of alternative natural ingredients and safe used.

Keywords: Sponge gourd bunch, pomelo peel, rice flour, aloe Vera, Rose water, honey natural scrub

INTRODUCTION

The chief purpose of the research was to develop a herbal scrub with natural ingredients^[1] The demand for cosmetics has been increasing day by day not only by women but also by men as they are equivalently concerned about skincare routines.^[2]

Herbal cosmetics are natural and free from all the harmful synthetic chemicals which otherwise may prove to be toxic to the skin. There are various herbal products that people like and use for beauty. In Ayurveda, the herbal paste is called "Mukha Lepa" Which is used as a facial treatment.^[3]It is a well-known fact that unusual drug flows have always played an important role in meeting global healthcare needs. the World Health Organization(WHO) defined these streams as traditional medicine as "health practices, approaches, knowledge and beliefs in herbal, animal and mineral medicines, spiritual therapies, manual techniques and expertise, used singly or in combination to treat. Diagnose and prevent disease or maintain well-being." In India, these systems of medicine are called AYUSH, which is an umbrella term for Ayurveda, yoga and naturopathy, unani, siddha and Historically, these systems were considered traditional or of

Indian origin or systems of medicine that came to India from outside and assimilated into Indian culture are known as Indian Systems of Medicine(ISM). This herbal paste is applied on the face to treat acne, blemishes, freckles and pigmentation ^[4]. These products are considered as healthy skin care because the herbal products used in the composition are less toxic.^[5] Herbal cosmetics, here in after referred as products, are formulated, using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetic benefits only shall be called as "Herbal cosmetics" Beginning 1990's cosmetic manufacturer adapted a term 'cosmeceuticals' to describe the OTC skin care products that claims therapeutic benefit by addition of plant based active ingredients such as alpha-hydroxyl acid and coenzyme Q10. Cosmetics come in many varieties that have their benefits when it comes to signs of dullness, dead skin cells, etc. this can be removed by using an exfoliate^[6]. these active ingredients serves many purposes VIZ. Increase in skin aging by reducing the wrinkles, protection against UV radiation by antioxidant property and to check degradation of collagen respectively. The skin beauty of individuals depends on the health, habits, routine job, climatic conditions and maintenance. The only factor

they had utilized many herbs and floras to make cosmetics for beautification and protection from external affects. the natural botanical composition does not have a negative effect on the human body; instead, they fill the body with nutrients and other beneficial minerals. The growing demand for natural products has created new avenues in the cosmeceutical market. The law on cosmetics stipulates that herbs and essential oils used in cosmetics must not claim to have therapeutic effects beyond the upper layers of the skin. A gentle massage is needed, which improves blood circulation and oxygen supply on the surface of the skin.^[7] Thanks to herbal products, our skin is also healthy and does not cause any damage. Herbal peeling provides soft, smooth and regenerated skin and prevents premature skin aging. It cleanses the skin without drying it. It contains essential oils to nourish and cleanse the skin. Facial scrubs help exfoliate the skin and can be used on all skin types depending on the essential oil used in them.^[8]

MATERIAL AND METHOD

The ingredients of natural scrub in a powder form is a pomelo peel, rice flour, multani mitti, sponge gourd, turmeric powder, sandalwood powder, black sesame seed and liquid form is a aloe Vera ,Rose water, honey. Sponge gourd bunch this all products purchased from local market. The below mentioned information on the botanicals used in our natural exfoliating formulations.^[9]

POMELO PEEL (*Citrus maxima*)

pomelo peel contain vitamin A and vitamin C, which keep the skin hydrated and prevent dryness, acne, wrinkles and psoriasis.

Sponge gourd loofah

Mix the powder form and liquid form and keep it on the surface of sponge gourd loofah. After that, this loofah is rolled round on skin surface. swirling on the skin removes dead cells from the skin, removes blackheads and whiteheads and helps keep the skin clear.

MULTANI MITTI (*Calcium bentonite*)

Multani mitti helps skin in many ways. Reduce pore size and clears blackheads and whiteheads. Lightens freckles, soothes sunburn, purifies skin, and improves circulation and complexion. Reduce acne and blemishes and gives skin a radiant glow. Because it contains healthy ingredients. Multani mitti is rich in magnesium chloride.^[10]

Rice floure

Rice flour Sunscreen Helps Protect against the sun because it contains several compounds: folic acid and PABA. PABA has been shown to protect the skin from UV rays. Folic acid is an organic compound with antioxidant, anti-inflammatory and antibacterial properties. It is extracted from rice bran. Folic acid protects the skin from UV damage Absorbs oil the main benefit of rice flour is its ability to absorb excess oil from the skin.

OTS powder

Moisturizes dry skin to improve its appearance and reduce irritation. By creating a protective barrier on the surface of

the skin, known as the skin microbiome, which protects against harmful bacteria and UV rays. Helps the skin achieve an optimal pH level, especially if it is elevated. Soothes sensitive skin and reduces itching and other irritations.

Black sesame seed

Black sesame seeds are small, flat, oily seeds that grow in the pods of the *Sesamum indicum* plant, which has been cultivated for thousands of years. Black sesame seeds are found mainly in Asia, although they are quickly gaining popularity around the world.

It promotes skin glow and helps the skin heal. Sesame seeds help the skin stay warm and moist. They are rich in anti-inflammatory properties that are important in treating redness and other facial skin problems by eliminating pathogens and other agents that cause skin infections

Sandalwood

Sandalwood help in Scarring, Wrinkles, acne, Blackhead removal. Antibacterial sandalwood powder helps fight acne-causing bacteria, exfoliates the skin, soothes sunburn, removes tan, and also reduces signs of aging like skin dryness and wrinkles.

Termeric

The benefits of turmeric for skin are numerous: skin tone irregularities, like blotchiness, redness and unevenness. Remove dark spots and discolorations.

It gently exfoliate blackheads, soften skin and tighten pores. It also reduces sebum secretion from the sebaceous glands.^[11]

1. Ads natural glow in skin
2. Treats acne breakouts
3. Helps with atopic dermatitis
4. Slows down skin ageing
5. Helps with psoriasis
6. Reduces dark circles
7. Moisturizes dry skin

ALOE VERA: Helps relieve sunburn. Helps moisturize the skin. Boosts healing of wounds. Fights skin aging.

ROSE WATER: Cleanses and brightens the skin. Soothes irritated skin. Balances natural oils. Clears skin pores. Tightens the skin. Moisturizes the skin. Slows down many signs of aging. Reduces puffiness and dark circles under the eyes.

HONEY: Honey deeply hydrates and moisturizes the skin. Honey reduces signs of premature aging. Honey is an effective pore cleanser and gentle exfoliate. Honey lightens scars and hyperpigmentation. Honey Fights acne and rashes. Honey soothes sunburn.

Method

Step 1: Let the Sponge gourd dry first.

Step 2: Then the powder and liquid form of the materials.

Step 3: After that, the powder and liquid are prepared and mixed into a paste according to the condition of the skin.

Step 4: After that spread this paste on the dried sponge gourd.

Step 5: After that, keep them on the skin in circular motions for 5-10 minutes.

Step 6: By exfoliating 2-3 times a week, the skin stays healthy.

The prepared face scrub was then packed in a self-sealing polythene bag, labeled and used for further studies.^[12]

Table 1: Powder Material Used In Formulation

S. No.	Name of Ingredients	Quantity in	Percentage	Scientific name
1.	Pomelo peel		1.0%	Citrus grandis osbeck
2.	Multani mitti		1.0%	Calcium Bentonite
3.	Rice flour		0.5%	Oryza sativa
4.	Oats powder		1.0%	Avena sativa
5.	Black sesame seed		0.5%	Sesamum indicium
6.	Sandalwood		0.5%	Santorum
7.	Turmeric		0.5%	Curcuma

LIQUID FORM : Honey 0.5%, Rose water 1.0%, aloe Vera 0.5%

SPONGE GOURD LOOFAH: the mixture of this powder and liquid form on the Sponge gourd loofah.

Table 2: Irritation test

S.No	EVALUATION	FORMULATIONS			OBSERVATION
		1	2	3	
1.	Irritant	+	NIL	+	No Irritation
2.	Reddness	NIL	NIL	NIL	No Irritation
3.	Puffiness	NIL	NIL	+	No Irritation

Table 3: Physical Parameter And Physicochemical Evaluation

S.No	Parameters	Observation		
		1	2	3
1.	Particle Size (μm)	26.4 \pm 5.56	24.6 \pm 3.46	22.8 \pm 5.67
2.	PH	7.01	6.98	6.87
3.	Loss on Drying	3.67	3	4
4.	Ash Content	93 \pm 0.675	91 \pm 0.834	83 \pm 0.466

Table 4: Evaluation parameters of scrub

Sr. No	Parameter	Observation
1.	Odor	Characteristics
2.	Consistency	Good
3.	Color	Brownish-yellow
4.	Grittiness	Tiny gritty particles
5.	Skin sensitivity	No rashes were seen on the application
6.	Washability	Easily washable
7.	Extrudability	Easily Extruded

Evaluation of scrub

APPEARANCE: The scrubs produced were evaluated for color and odor. The color of the scrub is yellowish brown and the scent is characteristic.^[13]

pH: the pH of the scrub was determined by recording a small portion of it on pH paper and was found to be 7.0.

WASHABILITY: A little exfoliating agent was applied to the skin and washed off after some time. It was found to be easily washable.

Irritation test: Mark an area (1 square cm) on the back of the left hand. Quantities of prepared face shields were applied to a selected area and the time noted. Irritation, redness, swelling were monitored at regular intervals up to 24 hours and reported. Packed glass bottles containing the formulation were stored at different temperatures such as room temperature, 35 °C and 40 °C and physical parameters such as color, odor, pH, consistency and feel were evaluated.



Fig 1: powder form



Fig 2: scrub

Stability studies

The scrub was kept in a container for 30 days and observations were made at regular intervals. The scrub was found to be very stable and did not show any signs of phase separation other than a very slight color change.^[10] Detergent stability studies are still being monitored.

Physical assessment

Particle size was tested using a microscope. The flow properties of the powder dried in the combined form were evaluated by determining the angle of repose by the funnel

method, and by determining the bulk density and tap density by the tap method.

CONCLUSION

The study tried to make a multi-herb scrub. The prepared formulation was evaluated based on various physical parameters and after application, satisfactory results were obtained such as removal of dead skin cells and resulted in smooth skin without side effects. This can be considered a healthy skin care routine.

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