



“FORMULATION AND DEVELOPMENT OF ANTI-AGEING AND ANTI-BLEMISH HERBL SCRUB”

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ABSTRACT :

After being used for an extended period of time, many marketed products leave the skin feeling dry, which shortens the duration of acne and redness. Using a scrub made entirely of herbal substances is the solution to this issue, since it increases skin fairness, cleaning, softening, and moisturizing. utilizing organic components to combat natural or herbal remedies for controlling oil secretion, wrinkles, and acne makeup. The plant components used in herbal cosmeceuticals often have qualities that are antibacterial, antioxidant, and anti-aging. Natural cosmetics are the most secure. cosmetics are the product that may be used regularly and doesn't have any negative effects. affects how the skinfunctions biologically.

KEYWORDS :Exfoliants, anti-aging, and anti-blemish herbal scrubs;

INTRODUCTION :

The largest organ in the body, the skin shields the entire outside area from viruses, chemicals, UV rays, and mechanical injury. Daily contact to this environment can lead to a buildup of dead skin on the stratum corneum, giving the appearance of an older, thicker layer of skin. In two weeks or more, this dead skin will naturally peel off. The ability of herbal cosmetics to function as both medications and cosmetics has increased demand for them in recent times.

The Greek term "kosmos," which meaning to embellish, is where the word "cosmetics" originates.

The Drugs & Cosmetics Act 1940 and the Rules 1945 define cosmetics as articles that are meant to be applied, rubbed, poured, sprinkled, sprayed, or otherwise introduced into the human body for the purpose of cleaning, beautifying, enhancing attractiveness, or alerting the appearance.

Cosmeceuticals are cosmetic products designed to improve the health and appearance of the skin. They can also be combination products of cosmetics and pharmaceuticals that contain biologically active principles or substances derived from plants that have an effect on consumers.

Long-term, successful outcomes can be achieved by using herbal cosmetics to shield skin from environmental exposure and prevent skin damage. The skin can be exfoliated using herbal scrubs.2.

EXFOLIANTS:

Also referred to as scrubs, exfoliants are products that work to improve the appearance of the skin by removing dead skin cells. Hydration and frequent exfoliation are essential for good skin. A skincare product called a scrub is used to exfoliate the skin. 3.

NEED OF SCRUB

Exfoliating the skin daily with a mild, creamy herbal scrub promotes the production of new cells, may help prevent skin cancer, prevents photodamage and hyperpigmentation, nourishes the skin, and leaves it clear of imperfections.

Regular use of scrubs leaves skin smoother and more radiant as new skin cells are revealed as dead skin cells are removed.

IDEAL PROPERTIES OF SCRUB

- i. It needs to be painless.
- ii. Its character should be rough.
- iii. It shouldn't cause cancer.
- iv. It ought not to be sticky

TYPES OF SCRUB

- i. Chemical exfoliation
- ii. Physical exfoliation

MECHANISM OF ACTION

The epidermis is where skin cell renewal and exfoliation occur. It is thought that cells are programmed when they are young and living in the bottom layers of the epidermis, though the precise method is unknown.

The formation of a new daughter cell in the basal cell layer (stratum germinativum) marks the beginning of the intricate process known as keratinization, which continues upward until it becomes a stratum corneum corneocyte.

Younger skin naturally performs better than older skin at this desquamation process, which promotes the formation of new cells at a deeper level as we age. The intercellular cement that holds our cells together thickens and builds up in the layers of cells, making it harder for cells to slough off, giving us dull, thick, and less toned skin.

Removing this accumulation of damaged, dead skin cells encourages the growth of new cells, enhancing the look, feel, and texture of the skin.

Exfoliating the skin manually or mechanically Any topical exfoliation that is physically applied to the skin using the fingers or an applicator is referred to as manual skin exfoliation. It works well on skin that is normal.

There is agreement that exfoliating the outermost layers of the stratum corneum, or the stratum disjunct, improves skin texture and reduces fine wrinkles and hyperpigmentation, even though the exact mechanism of action of hydroxy acids is still up for discussion.

BENEFITS OF POWDER SCRUB

Simple to use and preserve over time. You can use a new formulation.

Fewer safety measures are required.

The rounded, tiny granules remove dead cells without causing any harm to the skin.

These minuscule particles have been used for ages by ubertans to hydrate, smooth, and brighten skin.

For a radiant complexion, exfoliate skin and eliminate impurities gently.

SELECTION OF THE SCRUB OVER THE FORMULATION

Compared to other formulations, the powdered scrub formulation is easier to prepare.

Excipients such as thickeners, preservatives, and emulsifying agents are needed in large quantities in gel and cream scrub formulations, but not in powdered scrub.

The benefits of a herbal scrub for skin care are numerous; it eliminates dead skin cells, blackheads, whiteheads, and excess oil from the skin while softening it with very little adverse effects.

Compared to wet scrub, which has spillage risks, the powdered form of scrub is easier to handle and more convenient to use.

Finally, a major factor in the choice of herbal scrub is a dearth of research. efforts in this domain compared to the alternative formulations




PLAN OF WORK

1. 1 Topic Alignment
2. 2 Review of Literature
3. 3 Presentation Preparation
4. 4 Topic presentation
5. 5 Choosing the Scrub Parts
6. 6 Purchasing ingredients
7. 7 Working on the trail batch developmentformulas.
8. 8 Assessment of the trail batch that was prepared compositions
9. 9 Creating and assessing the final batch.
10. 10 Writing the review paper draft.
11. 11 Paper correction and revision.
12. 12 Review paper submission
13. 13 Report document drafting



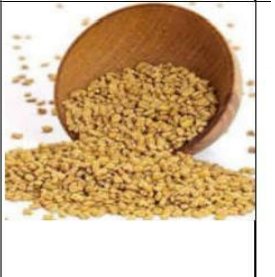


OBJECTIVES




1. To choose and gather the various herbal herbs for making the scrub.
2. To create various herbal scrub combinations.
3. To assess the scrub's formulation.
4. To research the impact of accelerated stability on scrub.
5. Choose a suitable and effective scrub formula and assess it.
6. To research the effects of accelerated stability on scrub for a set amount of time.

HERBS PROFILE:

SYNONYM	BIOLOGICAL SOURCE ,FAMILY	CHEMICAL CONSTITUENTS	USES	FIGURE
Rose water	Rosa damascene Family- rosaceae	Phenylethanol ,linalool,citronello,rose oxide	Reduce skin redness, treat infection ,	
Sunflower seeds	Helianthus annuus , Family – compositae	High concentration of niacin vit.A,C,B	Anti-inflammatory property	
Papaya seeds	Carica papaya Family- caricaceae	Monosaturated fatty ,vitamins,minerals	It has good antioxidant property	

Neem	Azadirachta indica Family- meliaceae	Beta sitosterol, stigmasteral , nimbiol	Insect repellent , insecticide, nematic	
Turmeric	Curcuma Family- zingiberacea	Curcumin, curcuminoid , cymene	Anti antiarthric agent	
Orange peel	Citrus aurantium Family -rutaceae	Aldehydes, amorphous bitter	Protective skin from free radical damage.	
Honey	Bees apis mellifera Family-apidae	Glucose, fructose, dextrin, formic acid, enzymes .	Demulcent ,sweetening agent	

Nutmeg	Myristica fragrans Family- lauraceae	Terpinol ,geraniol,linalool	Reduces pigmentation ..	
Cinnamon	Cinnamomum Family - lauraceae	Cinnamaldehyde, cinnamic acid ,eugenol	Aromatic,carminative,f lavouring agent ,	
Fenu-greek	Trigonellafoenum Family- santalaceae	Trgunellinegentia ninr .carpine	Helps in diabetes.	
Sandalwood	Santalum album Family-santalaceae	Santalol,b-santalol,b- santalot	Treatment of dysuria. In perfum,in cosmetic.	
Coconut oil	Endosperm ofcocos ,family -palmae	Caprylic acid ,myristic acid ,palmitic acid	Protects your skin from uvrays.	

Raw banana powder	Musa acuminata family- musaceae	Campesterol, stigmaterol	Banana powder used to give the skin a warm highlight,	
Rice	Oryza sativa Family -poaceae	Lipids carbohydrates ,starch	Skin protects	
Masoor dal	Lens culinaris, family – fabaceae	Vit.E, flavonoids ,lectins ,phytosterols.	Gets rid of blackheads and acne spots .	

MATERIAL AND METHOD :

COLLECTION

- Powdered sandalwood, orange peel, nutmeg, turmeric, and neem were gathered from the nearby market.
- We gathered rice, cinnamon, sunflower seeds, and Masoor dal from the neighborhood market. Ground and sorted in a mixer.

PURIFICATION

A raw banana was gathered, cut into small pieces, and dried for two hours at 135°C in a tray drier.

After being physically crushed in a mortar at a laboratory size to create a coarse powder, it was then ground in a mixer. In order to get a consistent particle size, this powder is run through a #60 mesh sieve

b) Papaya seeds were removed from the fruit and sun-dried for 48 hours.

The seeds were dried and then roasted for 20 minutes at 50° C in a hot air oven. The seeds were taken out of sieve #60 and smashed using a mortar and pestle. The powder was stored in a zip-lock bag.

METHODS OF PREPARATION OF POWDER SCRUB:

- Weigh each component separately.
- Move the components via sieve #60.
- Gather the sieved powder and thoroughly combine them.
- Keep in an appropriate, tightly sealed, airtight container.

METHODS OF APPLICATION OF THE SCRUB ON SKIN :

1. Using rose water, buttermilk, or milk cream, combine the necessary amount of scrub to create a paste of the herb mixture.

- i. Massage the skin gently for ten to fifteen minutes after applying the paste.
- ii. Use cold water to rinse the scrape off.



EVALUATION PARAMETERS :

A. Possibility of washing:

A small amount of scrub was used on the skin, and it was easily washable with water.

B. Rigidity: There are a few coarse particles in scrub.

C. Calculating the Tap and Bulk Densities:

1. Carefully weigh 25 grams of powder (you can use any amount of powder from 5 to 50 grams, depending on the chemical requirement).
2. Put it in a dried graduated measuring cylinder and record the volume in milliliters, or V.
3. Inside the bulk density device, insert the sample cylinder. As soon as the device reaches 100 taps, begin tapping. V, ml is the volume of powder

D. Relative angle

1. Fasten a dry, clean funnel to the stand that has a flat tip and a circular stem diameter of 20 to 30 mm. Under the funnel, place a sheet of graph paper on a dry, clean surface.
 2. Adjust the distance to 2.5 cm between the sheet and the lower tip of the funnel. From top to bottom, slowly pour sample into funnel until a mound of
- 3.34 out of 42

At the bottom of the funnel, a powder develops. Using a pencil, draw a circle that encompasses around Ninety percent of the entire powder. Repeat the to obtain an average reading. process four times. Determine the mean diameter and radius of every drawn circle.

E. Imitating Skin:

The five volunteers had no skin conditions or illnesses.

who participated in the research. A week prior to and throughout the trial, It was instructed to all subjects not to use any skin care or cleaning products. For every sample applied once, four modified formulation samples are used. a few days.

Spread:

The ability to disseminate is crucial to the behavior of powdered scrub. It was employed to determine the skin scrub's maximum travel distance. a small sample size. One glass slide was covered with another slide after 100g of weight was added to it. The formula used to calculate it was as follows: $S = \frac{m}{t}$ Spreadability m -Weight applied to slide -Glass slide length l Time measured in seconds

PHThe pH of each created face scrub formulation was measured with a digital pH meter. 5g of scrub mix should dissolve in 45 ml of water. Topical formulations should have a pH that is compatible with the skin because they are placed directly onto the skin. The produced formulation's pH range was verified as appropriate and in harmony with the skin's pH, the pH of The scrub that had been prepared was assessed. The pH was measured using a glass electrode that is uniform. A tiny amount of scrub was used. reached a pH of 6.7 on the pH paper. Its nature is a little neutral.

H. Analysis of Stability:

Four distinct formulations' stability was investigated in the room.

both in refrigerator conditions and at temperature (40 $^{\circ}$ C/75% RH).

(44 $^{\circ}$ C/25 % RH) for a month in the sealed containers time span. The samples were taken out at various intervals of time. within a month's duration. The outward characteristics, such as color, Every sample passed the homogeneity test. Original scrub is unchanged. form. After the test, it was discovered that the odor (F2, F3) had changed.

I. Liquidity

A small quantity of scrub was placed in a graduated measuring cylinder. Measuring foam that had been stirred with water.

DISCUSSION :

The herbal scrub was created and tested in order to assess its effectiveness. The herbal face scrub that was developed in the lab passed all of the standards when it came to appearance, pH, organoleptic qualities, general powder characteristics, spreadability, and irritation. The resulting combination can therefore be used as a scrub for cleaning. necessary for having radiant, healthy skin.

The proposed formulation includes natural exfoliating agents, such as rice powder, banana powder, and masoor dal powder, which remove debris and provide an exfoliating action.

Because sandalwood powder has a strong cooling impact, it doesn't



SUMMARY AND CONCLUSION :

Making a herbal scrub with herbs that are beneficial to skin was the aim of this project. The scrub was found to have satisfactory color, fragrance, general powder properties, pH, spreadability, irritability, washability, grittiness, and foamability. The produced formulation meets all the standards for characterization, making it suitable for use as a decent scrub for maintaining bright, healthy skin.

Daily hydration and exfoliation are necessary for healthy skin. Daily exfoliation with a gentle, creamy herbal scrub reduces the accumulation of dead skin cells on the skin's surface and encourages the formation of new cells.

Herbal exfoliation is a crucial component of overall skin care. In addition to stimulating new cell growth, unclogging pores, and soothing and chemically balancing the skin, it also reduces wrinkles, discolouration, and blemishes while maintaining the skin's health, hydration, and lack of imperfections.

After putting the scrub through a battery of tests, it was found to be safe to use on skin to leave it glowing and clean without having any negative side effects.

Physical examination, claim evaluation, sensory evaluation, and herbal scrub analysis are all methods that can be used to assess this body scrub. The prepared scrub was tested in vivo to assess its irritancy; no serious irritation was observed.

A reliable study will expand on and investigate far more in-depth research on the plants that are utilized and could be included in the formulation of herbal scrubs.

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