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FORMULATION AND EVALUATION OF POLY HERBAL FACIAL SCRUB

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ABSTRACT

Natural beauty is a blessing, and cosmetics aid in displaying and enhancing human attractiveness and individuality. Cosmetics are described as items used for beautifying, washing, boosting attractiveness, or changing one's look. The purpose of this study is to create and assess a Poly herbal face scrub that may be used as an alternative to chemical products. Natural ingredients are used in herbal cosmetics because they have the ability to work against wrinkles, acne, and to regulate the flow of oil from the skin's open pores.

The main objective of the present study was to prepare poly herbal scrub. Nowadays cosmetic have become an important part in the day to day life for both men & women to lead a happy & confident life.

Natural elements are the safest and greatest products to use in everyday life since they have no negative effects, and these cosmetics also benefit the environment. In this formulation of facial scrub Aloe-vera, Turmeric, Coconut oil, Carrot powder, Rice flour, orange peel powder, Rose water are used as active ingredients. Except beautification this cosmetic product helps in many pharmaceutical ways like Skin Exfoliating agent, Antioxidant, Antitanning, Anti-inflammatory, Moisturizer, Antiageing, and Acne Removing agent. The prepared facial scrub was evaluated for various parameters such as Appearance, State, Consistency, pH, viscosity, Spreadability, Foamability, Washability, Irritability, Homogeneity, Grittiness and all needed characterizations were judged to be satisfactory. As a result, this composition may be used as an effective face scrub to maintain healthy and beautiful skin. Herbal cosmetics are fast expanding since most women choose natural alternatives over artificial items for personal care.

INTRODUCTION

Cosmetics are defined as the products used for the purposes of cleansing, beautifying, promoting attractiveness or alternating the appearance[1]. From the ancient time, different herbs are used for cleaning, beautifying and to manage them. Face skin is the major part of the body, which indicates the health of an individual[l2, 3].

It removes the dead skin cell and exfoliates the skin, remove dirt, skin cells and sebum or oil, blackheads and Whiteheads. It helps to maintain skin appearance. Scrub can be used on any type of skin. Only the essential oil used in scrub as ingredient will vary with the type of skin. Skin is classified into three types such as dry skin, oily skin, sensitive skin[4].

The demand for herbal cosmetics is high nowadays due to its ability to act as cosmetics and drugs. Skin care products are important factor to improve the confidence in individuals. Women were thought to be the larger consumer of skin care products but in the present scenario men are equally concern about their look[5]. This concept about the beauty, look and attractiveness leads to the boom in this field. The cosmeceutical companies produce their product based on the skin texture like men require special type of products due to the roughness of their skin than women[6].

For a person with dry skin must use the facial scrub, which contains the moisturizing and hydrating ingredients. If the person is having sensitive skin, he or she should use gentle scrub. And the person with oily skin should be using an exfoliation which prevents pimples dullness and breakouts and helps to control oiliness.[7]

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Depending on the skin types facial scrubs are advised to use twice or thrice a week. But for the newbies, facial scrubs are recommended to use weekly. People with dry or sensitive skin types should only exfoliate one or two times a week. In some conditions, peoples with acne prone skin are recommended to use products containing salicylic acid and dermatologist-grade 4% glycolic and polyhydroxy acid complex. This helps to exfoliate skin and clear acne with giving smoother appearance.[8]

SKIN

The skin, also known as the cutaneous membrane, is the body's largest organ in terms of weight and surface area. The skin's functions include regulating body temperature, serving as a blood reservoir, providing protection from the outside world, cutaneous sensations, excretion and absorption, and the creation of vitamin D. The immune system on the outside stops microbial microbes from entering the body. The largest exterior defense system is the skin.

In addition to serving as the body's outermost layer of defense, skin serves other purposes. It acts as a mechanical wall dividing the body's interior from the outside environment. The temperature of the skin can vary from 30 to 40°C, depending on the surrounding circumstances. One of the human body's easiest organs to administer topically is the skin, which serves as the primary route for topical medication delivery systems. The goal of topical penetration, a reasonable approach to topical formulation, and the fundamental elements of topical drug delivery systems are all covered in detail by this research. Ointment absorption via the skin is dependent on several parameters, the most significant of which are concentration, duration of contact, drug solubility, and physical state of exposed skin layer and body part[9].

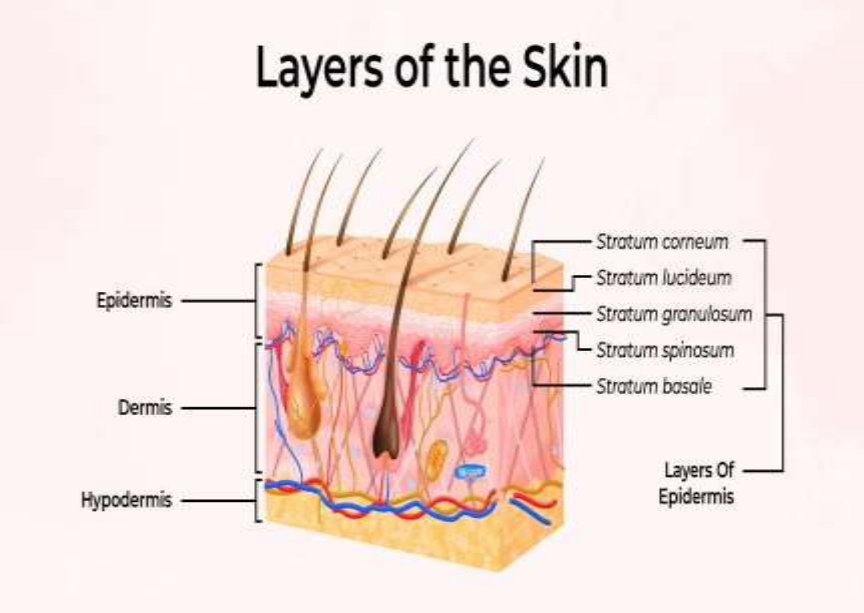


Fig.1

Benefits of Scrubbing Skin

1. Helps in removing dead cells: Facial or body scrubs are the cosmetic which goes beyond surface level to remove dead skin and reveal the healthy glowing skin below.
2. Free the skin form flakes: Loss of upper layer of skin (epidermis) is called as flaky skin. It gives rise to dry patches. Scrubbing your skin can help you to deal with flaky skin effectively.
3. Deep cleaning of skin: Scrubbing your skin helps skin to get free from dirt, oil and sweat. Other cleansing like face wash facial cleansers cannot clean the skin.
4. Thoroughly removing dust accumulated in the course of the skin, scrubbing does this work effectively.
5. Clears blemishes: Accumulation of dead skin, can block the pores of skin and causes blemishes. Scrubbing frequently helps to remove dead skin and clears blemishes.
6. Gives glow to Skin and Smooth texture: Scrubbing actually helps to give glow and smooth texture to skin.
7. Remove the acne scars: As scrubbing used to remove dead skin cells, it also remove the acnes scars from skin.
8. Promotes hydration of skin: Facial scrubs contents moisturizing agents and hydrating agents. Exfoliation of skin helps to absorb moisture and it leaves our skin with filling soft and.

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9. Reduces stress: Exfoliation or scrubbing the skin gives good massage, which gives relaxing feeling and reduces stress[10].

- **Ideal Properties of Scrub**

An ideal scrub is accepted to possess the following properties.[11]It should be

- Non toxic
- Possess small gritty particles
- Mild abrasive
- Non irritating
- Non sticky
- Able to remove dead skin cells

- **Choosing Scrub Depending on skin[12]**

1.For Greasy Skin

People with oily skin frequently battle with acne problems because their skin pores become blocked by extra sebum oil. Thus, a face scrub that not only removes the skin's dead cells but also has anti-pimple properties is necessary. The Salicylic acid's anti- acne abilities are widely known. If you have oily skin, you should get a face cleanser with salicylic acid or other anti-acne ingredients.

2. For Dry Skin

Anyone with dry skin can use any facial cleanser that has ingredients meant to eliminate dead skin cells. Glycolic acid is one such chemical that swiftly gets rid of flaky skin and dead skin cells. It is a renowned and effective exfoliator. Look for a face scrub with glycolic acid that hydrates the skin while also improving it.

3. For Sensitive Skin

Those who have sensitive skin should use greater caution while selecting skincare products. The ideal facial cleanser for sensitive skin is one that is both antibacterial and anti-Inflammatory. Propylene glycol possesses both bacterial and fungal resistance. Organic foods with anti- inflammatory effects include yoghurt and turmeric. For sensitive skin, sugar scrubs are regarded as good. With the use of sugar, a natural exfoliant, dead skin cells may be readily removed.

4. For Combination Skin

Because combination skin is a mix of dry and greasy skin, selecting a face scrub may be difficult. However, advise those with mix skin to use a face scrub to eliminate surplus oil without drying out skin surface.

Why Scrub

- In a nutshell, lipids are skin's natural fats.
- They are essential components of skin and play a crucial role in maintaining the strength of the skin's protective barrier, which holds moisture, protects the skin from damage and Keeps dirt and impurities out.
- The epidermal lipids of keratinocyte origin play an essential role in the skin's barrier function.
- These lipids provide a barrier against the movement of water and electrolytes as well as a barrier against microorganism invasion.
- The epidermis has a very active synthesis of cholesterol, fatty acids and ceramides.

OBJECTIVES

The main objective of present study was to prepare a herbal facial scrub. In this formulation of herbal facial scrub, we used rice flour and carrot powder as a active ingredient and orange powder, rose water, aloevera, turmeric etc are other ingredients used in this facial scrub formulation. Different evaluations tests are carried out for the prepared herbal facial scrub formulation, such as appearance, spreadability, irritability, PH, washability, etc.

Prepared formulation passes all the given evaluation tests. Thus, the prepared formulation of herbal facial scrub was effective for healthy, clear and glowing skin.

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Ingredients and Their uses

1.Rice flour



Fig.2

- **Synonym**- Orzya sativa.
- **Biological source-** It is the seed of the grass speciesorzya sativa or orzya glaberrima.
- **Family**- Gramineae (Poaceae).

•**Description**

Colour- It is white, long graine **Odour** - Characterstic.
Taste- Bland.

- **Chief chemical constituents**-Rice is composed of amylose and amylopectin.
- **Uses**- oil- retaining properties, potent skin clearing agent, reduce UV damage, prevent skinaging, Anti-inflammatory agent

2. Carrot powder



Fig.3

- **Synonym-** Gajor, Daucus carota sativa.
- **Biological source-** Carrot paucus carota is a rootvegetable, usually Orange in colour.
- **Family**- Apiaceae.
- **Description Colour**- Orange.
  Odour – Spring.
  Taste- Bitter or soapy
- **Chief chemical constituents-** Carotens, especially alpha and beta carotenes, vit. A and C and dietry fiber. Red carrots contains lycopene.
- **Uses**- To produce a natural color, reduce inflammation, brighten skin.

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3. Orange Peel Powder



Fig.4

- **Synonyms**: Orange zest
- **Biological source -** fresh or dried outer part of the pericarp of Citrus aurantium Linn
- **Family**- Rutaceae
- **Plant part used-** Peel
- **Discription**:
- **Colour**-orange colour.

- **Uses**: primarily used for skincare, including brightening skin, exfoliating, and controlling oil production.
- **Odour**- The characteristic odor of orange peels is often described as a fresh, citrusy, and sweet fragrance
- **Taste-**bitter taste
- **Chemical constituents:** Carotenoids (beta-carotene, lutein and betacryptoxanthin), flavonoids, alcohols, ketones. aldehydes, esters and terpenes.

4.Aloe vera



Fig.5

- **Synonym-** Aloe; Ghritakumari.
- **Biological source-** Dried juice collected from incision from the bases of the leaves of Aloe Barbadensis or aloe officinalis.
- **Family**- Liliaceae.

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- **Description**
- **Colour**- The leaves are grey to green.
- **Odour**- Penetrating odour.
- **Taste-** Nauseous and bitter.
- **Uses:** Moisturize skin, treat various skin conditions, including acne, eczema, and sunburn,
- anti-cancer, anti- oxidant, anti-diabetic.
- **Chief chemical constituent-** Aloe-emodin is main constituent. It also contains vitamins, enzymes, minerals, sugars, lignin, saponins, salicylic acids and amino acids.

5.Turmeric



Fig.6

- **Synonym**- Haldi, Haridra, Curcumin.
- **Biological source-** Turmeric consist of dried as well as fresh rhizomes of the plant Curcumalonga.
- **Family**- Zingiberaceae.
- **Description**
  - **Colour**- Brilliant yellow.
  - **Odour**- mildly aromatic.
  - **Taste-** Pleasantly bitter and earthy.
- **Chief chemical constituents-** Non-volatile curcuminoids and the volatile oil; Curcuminoidscontainscurcumin, ademethoxycurcumin, bisdemethoxycurcumin.
- **Uses**- Anti-septic; traditionally used for disorders of skin; anti-Inflammatory; fights freeradicaldamages.

6.Coconut Oil



Fig.7

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- **Synonym-** Coconut butter, Copra oil.
- **Biological source-** Coconut oil is the oil expressed from the dried solid part of endosperm of coconut, Cocos nucifera L.
- **Family-** Palmae**.**
- **Description**
  - **Colour-** White or pearl white.
  - **Odour-** with peculiar coconut odour.
  - **Taste-** Bland**.**
- **Chief chemical constituent-** Mix. of triglyceride of saturated fatty acid, caprylic acid, capricacid, lauric acidmyristic acid.
- **Uses**- Nourish dry and cracked skin, replenishing lost moisture and strengthening the skinbarrier to retain it.

7.Rose Water



Fig.8

- **Synonym**- Attar of rose, lavender water, scented liquid.
- **Biological source-** Rose water is obtained from sepals and petals of Rosa damscena through steam distillation.
- **Family**- Rosaceae.
- **Description**
  - **Colour**- a light pink-blush color.
  - **Odour**- exactly like fresh petals.
  - **Taste**- Predominantly floral flavor that is not quitesavory, and not quite sweet.
- **Chief chemical constituent**- The volatiles mainly consist of 2 phenylehanol, linalool, citronellol, nerol, geraniol, etc.
- **Uses**- Smoothens skin irritation, reduce skin redness, heals cuts and scars, treat burns.

Formulation

Constituents	Quantity	Category
1.Rice Flour	15 gm	Scrubbing agent
2.Carrot powder	3 gm	Anti-aging and Skin whitening
3.Orange peel powder	3 gm	It prevents the skin from free radical damage, skin hydration and oxidative stress
4. Aloe vera	3 ml	Anti-oxidant, Soothing and cooling action

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5.Turmeric	0.15 gm	Anti-septic, Antibacterial and Antiinflammatory
6.Coconut oil	0.6 ml	Moisturizer
7.Rose water	QS	Perfume

Table no 1

- **Method of preparation**

- Weighed carefully all the herbal powders, such as carrot powder, rice flour, orange peel powder, sieved through 120, and mixed them together with mortar and pestle to produce a homogenous mixture.
- Weighed fuller's earth, turmeric powder triturated them to produce a homogenous mixture.
- In a mortar and pestle, combine coconut oil, glycerin, and aloe vera gel (As a basis), then triturate all of the herbal powder to achieve a paste-like consistency.
- Rose water was used to provide aroma.



Fig.9

How to use?

- Make the paste by mixing final mixture of herbs with rose water or butter milk.
- Apply paste locally on face for 10-15 mins.
- Rub the face for 2-3 mins and wash with fresh water.

Evaluation parameter

- **Colour** – Visual inspection revealed a yellowish brown face scrub.
- **Odour** – Sweet and simple syrup like odour is obtained.
- **State** -Semisolid state of scrub.
- **Consistency** – Consistency was found to be smooth with visual observation.
- **pH** – pH was to be 4-6.
- **Spreadability** – It determines the spreadability of the gelon the skin. A small amount of material was placed on a glass slide, followed by another slide placed over them. Amount of weight placed on slide, spread on slide, and time taken for spread are all measured.
- **Homogeneity** – Smooth consistence.
- **Irritability** – Small amount of gel applied on skin and kept for few minutes and found to be non-irritable.
- **Grittiness –** Few gritty particles observed in formulation**.**
- **Washability**- Small quantity of gel applied on skin and wash with water after few minutes found to be washable with water.

RESULT

- Polyherbal facial scrub was successfully formulated and evaluated.

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- The formulation prepared is very effective and having no side effects.
- The result of evaluated parameters are mentioned in following table:

Parameter	Result
Colour	Yellowish brown
Odour	Maple syrup like, sweet
State	Semisolid
Consistency	Smooth
pH	4-6
Spreadability	Uniform
Irritability	Non-irritant
Homogeneity	Smooth consistence
Grittiness	Small gritty particles
Foamability	Foam volume 85 ml at 5 minute
Washability	Easily washable

Table no 2

CONCLUSION

In the current study, a herbal face scrub was developed and tested for several evaluation parameter. The results shown that the formulation complies the tests. The formulation was discovered to be suitable for application on the skin in order to make it healthy and brighten it without causing any negative effects. Natural and herbal cosmetics are simpler, safer, and more effective to use than other cosmeceutics on the market. The fact that herbal treatments can be used on all skin type is one of their primary selling points.

Effectiveness and healthuier skin type are provided by polyherbal face scrub. The antioxidant, antiseptic, antiaging effect of rice flour, orange peel powder, turmeric, carrot powder and aloe vera enhance the importance of use of polyherbal face scrub.

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