

Review On Polyherbal Face Scrub

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Abstract: -

Herbal cosmetics are the preparations are used to beautify and enhance the human appearances. The aim of the present project was to formulate and evaluate the herbal face scrub containing plant extracts prepared Herbal face scrub was prepared using natural polyherbal ingredients. In this formulation of facial scrub Reetha, Amla, Neem, Sandalwood, Turmeric, and Orange Peel The prepared facial scrub was evaluated for various parameters such as appearance, pH, viscosity, spread ability, Foamability, washability, irritability and found to be contented with all required characterizations. Thus, this formulation can be used as an efficient facial scrub for using it for the maintenance of healthy and glowing skin The main objective of the present study is to prepare a multi-herbal facial scrub.

KEYWORDS: - Exfoliation, Natural skincare, Skin friendly, Herbal cosmetics.

Introduction: -

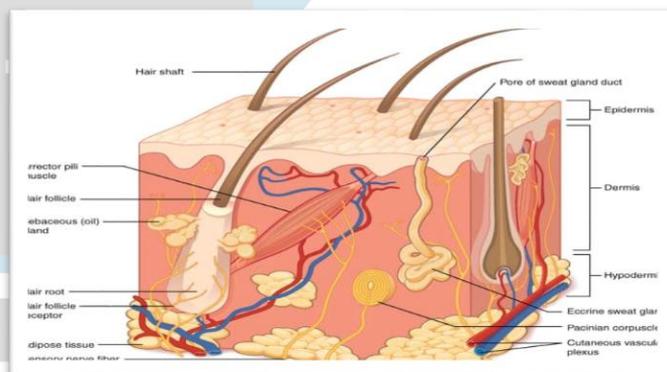
The skin, being the largest organ in the human body, envelops the entire external surface, providing protection against a multitude of factors. With a surface area ranging from 1.5 to 2m, the skin functions as the body's primary defense mechanism against pathogens, ultraviolet (UV) light, chemical substances, and physical trauma.

Cosmeceuticals are the future generations of skin care. The term cosmetic derived from Greek word 'Kosmeticos' which mean pertaining to cosmetics or beautifying substance or preparation. The word 'cosmesis' (Gr. Kosmesia) used for two things: the preservation restoration or bestowing of body beauty, the surgical correction of disfigured physical effect. Cosmetics are defined as the products used for the purposes of cleansing,

beautifying, promoting attractiveness or alternating the appearance. From ancient times, different herbs have been used for cleaning, beautifying and to manage them. Face skin is the major part of the body, which indicates the health of an individual. Skin becomes dull, non-glowing due to various causes and these can effectively be overcome with the application of scrubs.

Fig. 1 Structure of skin

Herbal scrub exfoliation alleviates age related changes and neutralizes environmental attack by removing skin cells on



the surface and stimulating cell growth in the sub-epidermal layer. Mild abrasive agent is one of the

key ingredients in facial scrub formulation as it helps the natural shedding process of skin and encourages

healthier, smoother, more even-toned skin. Gentle massage is recommended on application of the scrub gel which helps to improve blood circulation and increases oxygen supply to all surfaces of the skin. As you grow older, the rate of cell turnover slows down dramatically. Majorly dead cells found on facial skin

Functions of the skin

Skin is one of our most versatile organs. Some of the different functions of skin include:

- A waterproof wrapping for our entire body
- The first line of defense against bacteria and other organisms
- A cooling system via sweat
- A sense organ that gives us information about pain, pleasure, temperature and pressure.

The epidermis: -

The skin you can see is called the epidermis. This protects the more delicate inner layers. The epidermis is made up of several 'sheets' of cells. The bottom sheet is where new epidermal cells are made. As old, dead skin cells are sloughed off the surface, new ones are pushed up to replace them. The epidermis also contains melanin, the pigment that gives skin its color.

The dermis: -

Under the epidermis is the dermis. This is made up of elastic fibers (elastin) for suppleness and protein fibers (collagen) for strength. The dermis contains sweat glands, sebaceous glands, hair follicles, blood vessels and nerves.

The subcutis: -

The subcutis is a layer of fat that sits immediately under the dermis. It provides thermal insulation and mechanical protection. It gives smoothness and contour to our body. Adipose fat stored in the subcutis is a source of energy.

Hair and nails and the skin: -

[Hair and nails](#) are manufactured by cells in the epidermis. Our lack of a complete cover of body hair makes human skin very different from the skin of any other animal. Hair is made up of a protein called keratin. The amount of hair on our body varies from place to place.

Hairless sites include the lips, palms and soles of the feet. The hairiest sites include the scalp, pubis and underarms in both sexes, and the face and chest in men. Nails are made from skin cells, but the only live parts are the nail bed and the nail matrix underneath the cuticle. The nail itself is made of dead cells.

Nerves in the skin: -

Both the dermis and epidermis have nerve endings. These carry information about temperature, sensation (pleasure or pain) and pressure. Some areas have more of these nerves than others, such as the fingertips.

What is Exfoliant?

A facial scrub uses small particles, beads or chemicals to get rid of the old skin cells and make way for new once in a process known as exfoliation. The agents used for exfoliation are known as exfoliants. Exfoliating agents are those used to remove dead cells present on the skin and boost blood circulation, giving renewed and glowing skin. It keeps face free from dust, grime and oils which are also beneficial in keeping a skin pore clean. There are two ways to exfoliate the skin. exfoliation involves the removal of the oldest dead skin cells from the skin's surface. The word comes from the Latin word exfoliate (to strip off leaves). Exfoliation is involved in all facials and can be achieved by mechanical or chemical means, such as microdermabrasion or chemical peels. Exfoliants are often advertised as treatments that promote beauty, youthful appearance, or health

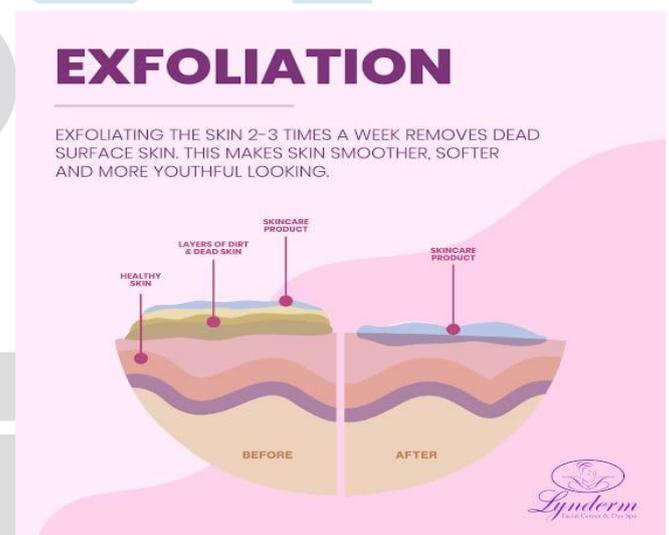


Fig. 2 Exfoliation

- Non irritating

- Non sticky

- Able to remove dead skin cells

Face scrub: -

Facial scrub is a cosmetic or beauty product, or a treatment designed to cleanse and exfoliate the skin of the face or body. The use of facial scrubs proves beneficial in the removal of dirt, dead skin cells, sebum or oil, blackheads, and whiteheads, thereby contributing to the maintenance of skin appearance.

It is essential to consider the three primary skin types: oily skin, sensitive skin, and dry skin. Individuals with dry skin should opt for a facial scrub that incorporates moisturizing and hydrating ingredients.

For individuals with oily skin, an exfoliation method is recommended to prevent pimples, dullness, breakouts, and regulate oiliness.

Depending on the specific skin type, the frequency of facial scrub usage is typically recommended to be either twice or thrice a week.

Face scrubs offer several benefits, primarily through exfoliation. They remove dead skin cells, unclog pores, and improve skin texture. This can lead to a brighter complexion, reduced appearance of fine lines and wrinkles, and can even help with issues like ingrown hairs. Additionally, face scrubs can help other skincare products penetrate the skin more effectively.



Fig. 3 Face scrub

Ideal Properties of Scrub: -

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

- No toxic
- Possess small gritty particles
- Mild abrasive

Precautions to be taken while applying a scrub: -

1. A scrub is selected based on the skin type.
2. Excessive scrub & rubbing can damage the skin
3. Do not scrub skin, if any open wounds, cut & sunburn present
4. Apply twice in a week
5. Apply with a rotating motion to face & neck for about 30 sec.
6. Thoroughly rinse with water.

Common skin problems

Some common skin problems include:

- [Acne](#) – caused by hormones
- [Dermatitis](#) – inflammation of the skin, with many different triggers
- [Fungal infections](#) – such as [tinea \(athlete's foot\)](#)
- [Skin cancer](#) – from long-term exposure to the sun's UV (ultraviolet) rays
- [Sunburn](#) – a radiation burn from the sun's UV rays
- [Warts](#) – caused by a virus.

Objective: -

❖ **Benefits of face scrub: -**

Assists in the Elimination of Dead Cells: -

Facial or body scrubs are skincare products that penetrate beyond the surface layer to eliminate dead skin cells and reveal the radiant, healthy skin underneath.

Profound Cleansing of the Skin: -

By exfoliating the skin, one can effectively rid it of dirt, oil, and sweat that may not be removed by regular cleansing methods such as face wash or facial cleansers.

Enhances the skin's radiance and texture: -

Scrubbing plays a vital role in imparting radiance and a smooth texture to the skin.

Enhances Skin Hydration: -

Facial scrubs contain moisturizing and hydrating agents. Exfoliating the skin facilitates better absorption of moisture, leaving the skin feeling soft and well-nourished.

Alleviates Stress: -

The act of exfoliating or scrubbing the skin provides a therapeutic massage that promotes relaxation and helps in reducing stress levels.

- To study and develop a stable and effective facial scrub using natural ingredients
- To study the physicochemical properties of the formulated facial scrub, including pH, viscosity, and texture
- To study the effect of Scrub on the face.
- To reduce the Anti-tanning, Anti-Acne, Anti-Ageing effect on face.



Fig. a) Anti-tanning



Fig. b) Anti-Acne



Fig. c) Anti-Aging

Aim & Objective: -

Aim: - Review on polyherbal face Scrub.

Plant Profile: -

1. Moringa Powder: -

- 1) **Synonym** - Drumstick tree, Ben oil tree.
- 2) **Organic source** - *Moringa oleifera*.
- 3) **Description color** - Green Odor - Wild Taste - Bitter.

4) **General information-** Moringa powder rich in antioxidants can help prevent the damage caused by free radicals and slow down premature ageing. The presence of vitamins in Moringa is beneficial for skin health. It contains Vitamin E in abundance, which provides moisturization to the skin.

5) **Family** - Moringaceae

6) **Chemical constituents** - Vitamins A, C, E, Calcium, Iron, Potassium, Antioxidants

7) **Uses** - Anti-inflammatory, Antioxidant, Anti-diabetic, Heart Health, Digestion



Fig. 4 Moringa powder

2. Neem Powder:

1) **Synonym** - Neem tree

2) **Organic source** - Consists of dried leaves of *Azadirachta indica* belonging to the family Meliaceae.

3) **Description color** - Green Odor - Wild Taste - Bitter.

4) **General information-** Neem powder is made by drying neem leaves and grinding them into a fine green powder. It is rich in bioactive compounds such as nimbin, nimandial, nimbinin and quercetin, which contribute to its antimicrobial, anti-inflammatory and antioxidant properties.

5) **Family** - Meliaceae

6) **Chemical constituents** - Azadirachtin, Triterpenoids, Tannis

7) **Uses** - Antifungal, antibacterial, antiseptic and anti-inflammatory, relieves wounds



Fig. 5 Neem

3. Walnut:

1) **Synonym** – English walnut

2) **Organic source** - *walnut trees*

3) **Description color** - Light brown to dark chocolate, with some blonde or yellow as well

4) **General information-** Walnut shell for scrubs is a natural exfoliant made from finely ground walnut shells that buffs away dead skin to reveal brighter, smoother skin, and it helps unclog pores, reduce acne, and improve overall skin texture. This all-natural ingredient, a common alternative to synthetic microbeads, can be found in various cosmetic products, including facial scrubs, body scrubs, and cleansers.

5) **Family** - Juglandaceae family.

6) **Chemical constituents** - Walnut's exfoliating properties in scrubs primarily come from its shell powder, which contains abrasive [lignin](#) and [cellulose](#).

7) **Uses** - Walnut shells are used as a natural, biodegradable abrasive for cleaning, polishing, and blasting, making them ideal for metal, wood, and stone surfaces.



Fig. 6 Sandalwood

4. Sandalwood: -

1) **Synonym** – East Indian sandalwood

2) **Organic source** - *Santalum album tree*

3) **Description color** - The powder from white sandalwood (*Santalum album*) is typically described as creamy white, beige, or pale yellow.

4) **General information**- Sandalwood powder is a fragrant powder made from the heartwood of the Indian Sandalwood tree (*Santalum album*), known for its use in sacred rituals and traditional Ayurvedic beauty and health practices.

5) **Family** – Santalaceae.

6) **Chemical constituents** - Santalol, Santalene, Antioxidants

7) **Uses:** - Anti-inflammatory, Antimicrobial, Antioxidant, Skin healing, Relaxing and calming effects sandalwood oil has been used for many years to treat skin issues.

Regular use of this anti-bacterial powder can minimize the appearance of wrinkles and dry skin, combat germs that cause acne, exfoliate the skin



Fig. 7 Walnut

Ingredient's: -

1. Charcoal: -

1) **Synonym:** - Activated charcoal

2) **Biological source:** - *Activated carbon from natural sources*

3) **Chemical constituents:** - Carbon, Minerals

4) **Description color** - Charcoal is a deep, dark, muted shade of gray with a hint of blue, resembling the color of burned wood.

5) **General information**- Charcoal is a light, black, porous residue primarily made of carbon, produced by heating organic materials like wood in a low-oxygen environment through a process called pyrolysis.

6) **Family** – Cannabaceae.

7) **Uses:** - Detoxifying, Anti-odor, Anti-acne, Skin



Fig. 8 Charcoal

5) Family – Apidae

6) Chemical constituents - Fructose, Glucose, Sucrose, Antioxidants

7) Uses: - Good for wrinkles and aging Prevent acne
Remove dirt from pores

2) Rose Water: -

1) Synonym: - Gulab Jal (in India)

2) Biological source: - The petals of rose plants

3) Description color - Rosewater is a light and airy pink with a soft, warm undertone.

4) General information- It has anti-inflammatory and antioxidant properties that help soothe irritated skin, reduce redness, and remove impurities.

5) Family – *Rosaceae*

6) Chemical constituents - A complex mixture of volatile organic compounds, primarily phenyl ethyl alcohol, along with citronellol, geraniol, and various alkanes

7) Uses: - Detoxifying, Anti-odor, Anti-acne, Skin



Fig. 9 Rose Water

3. Honey: -

1) Synonym: - Nectar, Bee nectar

2) Biological source: - *Apis mellifera bees*

3) Description color - The color of honey varies widely, ranging from a pale, almost water-white to dark amber or brown

4) General information- Honey is an excellent addition to scrubs due to its antibacterial, moisturizing, and antioxidant properties. By mixing it with an exfoliating agent like sugar or ground oats, you can create a gentle, hydrating scrub that promotes smoother, clearer, and more radiant skin.



Fig.10 Honey

Evaluation and methodology of scrub: -

A facial scrub evaluation test assesses its quality through various parameters. These include physical appearance (color, odor, consistency), pH, spread ability, washability, and foamability. Additional tests may evaluate grittiness, viscosity, and stability, including storage under different temperature conditions.

❖ **Physical Appearance:** -

Color: - Visual assessment of the scrub's color.

Odor: - Assessment of the scrub's smell, noting if it's characteristic or pleasant.

Consistency: - Visual examination to determine if the scrub is solid, semisolid, or liquid, and if it's smooth or gritty.

pH: - The pH of the scrub is measured using a pH meter or pH paper to ensure it falls within a suitable range for skin application (typically between 4-6).

Washability: - This test assesses how easily the scrub can be washed off the skin with water.

Spread ability: - This test determines how well the scrub spreads on the skin. It involves placing a small amount of scrub between two glass slides and measuring the area and time it takes to spread under a controlled weight.

Extrudability: - It is usual empirical test to measure the force required to extrude the material from tube. More quantity extruded, better the extrudability.

Skin Irritation: - Small quantity of the preparation was applied on the dorsal part of hand and kept for few minutes and found to be non-irritant, No redness and edema or any other adverse effect.

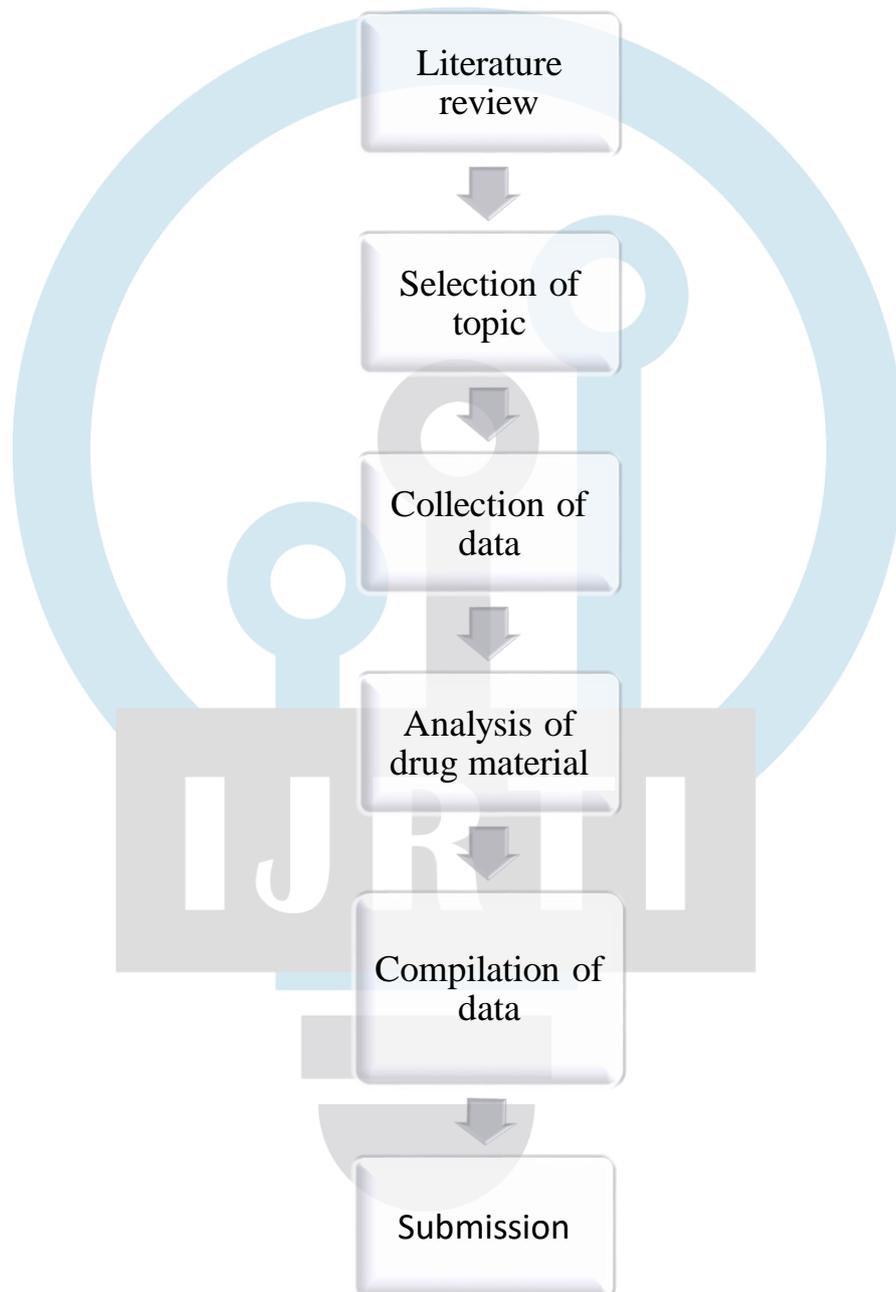
Foamability: - The first step was to apply a small amount of scrub to the skin and then add a minimal.

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Plan of Work: -



❖ Conclusion: -

It is concluded that the prepared herbal-based scrub formulation can be safe to Honey used as a cleansing agent shows good cleansing effect. As most of the ingredients used are natural ingredients, so chances for side effects/irritation are less. The prepared scrub was evaluated using various parameters and was found to be satisfied with the application on the skin to make it healthy and glowing without any side effects. Since, Amla is a natural anti-aging and antiwrinkle agent and neem which is an antibacterial, anti-inflammatory and antiseptic agent, they are both in corporate into the formulation which increases the efficiency of the product

In comparison to other cosmetic products available in the market, natural and herbal cosmetics are easy, safe and effective to use. One of the main reasons of herbal products use is that they can be used for all skin types. The major use of herbal products is for health promotion and therapy for serious skin conditions. However, usage of traditional remedies increases when conventional products is ineffective or may causes harmful effects. The use of polyherbal face scrub gives effectiveness and healthier skin type.

The antioxidant, antiseptic, anti-aging effect of Moringa powder, turmeric and amla enhance the importance of use of polyherbal face scrub. The prepared formulation was suitable to skin and was evaluated using various parameters. The formulation has passed all the tests included in evaluation.

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