

Skin exfoliation with herbal face creams: A review

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Abstract

Herbal cosmetics are beauty products containing herbal ingredients for physiological activities like healing, smoothing, and conditioning. The use of herbs in cosmetic production has grown, leading to a strong market for herbal cosmetics. Creams are semi-solid emulsions used for external use, providing a calming effect and shielding the skin from various conditions. Our research aims to develop a herbal moisturizer to reduce acne, treat skin conditions, and enhance facial brightness. Cosmetics are substances used to clean, beautify, or alter the appearance of the human body.

Herbal formulations have gained popularity as a result of the search for safe and effective skincare products because of their possible therapeutic advantages and low risk of side effects. The thinnest and most visible part of the body is the skin on the face. There are four types of skin: normal, dry, oily, and mixed. The skin of the face acts as an essential barrier against the external environment, just like other types of skin. Compared to other parts of the body, the skin on the face is far more delicate. It's critical to adhere to all recommended procedures and treatments in order to preserve beautiful, healthy skin. Skincare, usually referred to as skin integrity support, is a group of treatments intended to enhance skin health and attractiveness. These could include eating a healthy diet, limiting time spent in the sun, and using emollients as necessary.

Exfoliation, a process that removes dead skin cells, originated in Egypt, China, and Asia. Today, cosmetic products use scrubs and chemical peels, with some synthetic and botanical ingredients used as exfoliants.

Keywords: Tamarind seed extract; Bees wax; Glycerin; Anti-oxidant; Moisturizing

1. Introduction

A beauty product including herbal ingredients with desired physiological activities, like healing, smoothing appearance, enhancing, and conditioning qualities, is called herbal cosmetics.[1,2] In the personal care system, the use of herbs in cosmetic production has increased significantly in recent years, and there is a strong market for herbal cosmetics. Substances used on the human body for the purposes of cleaning, beautifying, enhancing attractiveness, and altering appearance without impairing the structure or functions of the body are known as cosmetics.[3,4,5]

Creams are defined as semi-solid emulsions intended for external use that are either water in oil (W/O) or oil in water (O/W). There are two types of cream: water-in-oil emulsion and oil-in-water. It can remain at the application site for a longer period of time and is applied to the skin's outer or superficial layer.[6] The goal of a skin cream is to provide a calming effect while shielding the skin from various weather conditions and environmental factors. Among these are massage, hand, body, cleaning, cold, foundation, vanishing, night, and more. Our research's main objectives are to

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develop a herbal moisturizer that may be used to reduce acne and skin irritation, treat skin conditions like eczema, psoriasis, dry skin, wrinkles, and rashes, and enhance facial brightness.[7,8]

"Articles intended to be rubbed, poured, sprinkled, sprayed, or introduced into or otherwise applied to the human body or any part there of for cleaning, beautifying, promoting attractiveness, or altering the appearance" is the definition of cosmetics under the Drugs and Cosmetics Act. The Greek word "kosmetikos" which means to have strength, organization, and decorating ability, is where the word "cosmetic" originates.[9,10] There is a greater need than ever for natural cosmetics. The use of natural extracts as active ingredients in cosmetics has been enhanced by new ideas. There is a high demand for herbal cosmetics, and the use of herbs in cosmetics production has grown significantly in the personnel care system in recent years.[11]

Exfoliation is a procedure that facilitates the removal of dead skin cells and leaves the skin feeling smooth and soft by clearing the surface of the skin of debris and excess oil.[12] Exfoliation originated in Egypt, where the ancient Egyptians utilized it with the aid of pumice and alabaster stone fragments. Some scrubs were created from herbs and sand. China and Asia also used the exfoliation method.[13,14] During the middle Ages, tartaric acid from wine was employed as a chemical exfoliant. Exfoliating the skin is done using scrubs and chemical peels, and cosmetic products have supplanted certain outdated methods. A few synthetic and botanical raw ingredients are utilized as exfoliants.[15,16]



Figure 1 Herbal Face Cream

2. Herbal face cream

Herbal face creams are significant because of their natural ingredients, efficacy, and rising customer demand for safer, greener substitutes for manufactured skincare products. The main ideas emphasizing the importance of herbal face creams are listed below:

2.1. Natural Ingredients

The plant-based substances used to make herbal face creams are frequently devoid of dangerous chemicals like parabens, and artificial perfumes that are included in traditional cosmetics. For many people, especially those with sensitive skin, this makes them a safer choice. These creams feed the skin without the dangers of synthetic ingredients by using botanical extracts which are high in antioxidants, vitamins, and vital fatty acids.

2.2. Nutrient rich for skin health

Essential nutrients that are good for the skin are abundant in herbal components, such as:

- **Antioxidants** - Help to protect the skin from external stressors including pollution and UV radiation.
- **Vitamins** - Vitamin C (brightening), Vitamin E (anti-aging), Vitamin A (skin regeneration).
- **Minerals** - Essential for skin hydration and repair.

2.3. Anti-Aging Properties

Many of the herbs used in herbal face creams have anti-aging qualities. The appearance of fine lines, wrinkles, and age spots can be lessened by these substances, which combat free radicals that hasten skin aging. The creation of collagen, which is essential for preserving the firmness and suppleness of skin, is also stimulated by certain herbal face creams.

2.4. Cultural and Traditional Relevance

Many cultures all around the world have been using herbal treatments for ages. Traditional skin care practices from civilizations like Ayurvedic, Chinese, and Native American medicine are included into several herbal face creams. By utilizing these tried-and-true herbs, herbal face creams continue to provide a solution that is both traditional and effective, bridging the gap between traditional wisdom and contemporary skincare requirements.

2.5. Increased Consumer Awareness

The demand for natural cosmetics is rising as more customers learn about the negative consequences of synthetic ingredients. Herbal face creams complement consumers preference for clean beauty products, which emphasize sustainability and ingredient transparency.

2.6. Ideal properties of a face cream

- Its colour and smell should be agreeable and palatable.
- It should spread quickly and feel good on the skin of the face both before and after application.
- A variety of environmental elements, such as wind, temperature, UV light, etc., should be protected by the cream.
- It should improve the dull appearance of the skin and lessen dryness.
- It need to be able to soften and smooth the skin.
- For a long time, the cream should remain steady.
- It must not be contaminated by microbes.
- It should not cause skin irritation or allergies.

3. Exfoliation

Skin exfoliation is the process of removing dead skin cells from the outermost layer of the skin, which helps to promote cell turnover, unclog pores, and improve skin texture. It is an essential step in many skincare routines to keep the skin looking fresh, smooth, and youthful. There are two main types of exfoliation **physical** and **chemical** exfoliation.

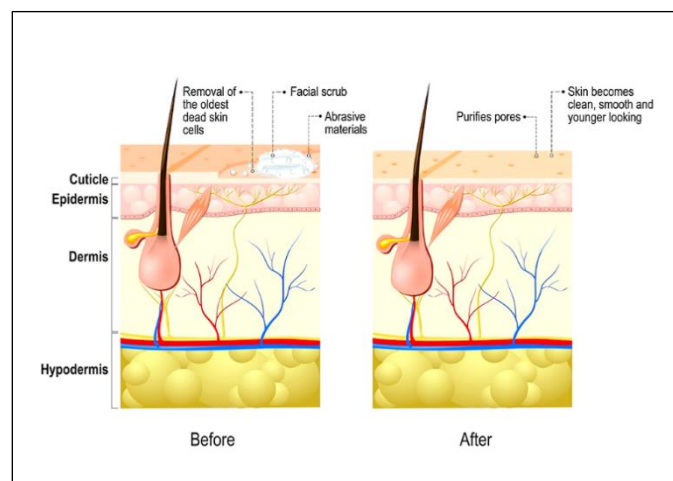


Figure 2 Skin Exfoliation

3.1. Physical Exfoliation

In physical exfoliation, dead cells are removed from the skin by hand scrubbing. This can be accomplished with exfoliating instruments or treatments that include abrasive particles.

Examples - Washcloths, scrubs, brushes, and sponges.

How it works - When applied to the skin, these instruments or products' tiny particles—such as sugar, salt, or microbeads—physically peel off dead skin.

Advantage - Effects immediately; after using the product, the skin feels smoother.

Disadvantage - Especially for delicate skin, excessive use might cause inflammation, irritation, or tiny rips in the skin.

3.2. Chemical Exfoliation

Chemical exfoliation breaks out dead skin cells and encourages cell turnover by using acids or enzymes. Those with sensitive or acne-prone skin can benefit from them as they are typically milder than physical exfoliants.

3.2.1. Types of Chemical Exfoliation

Alpha Hydroxy Acids (AHAs) - Acids that dissolve in water and act on the skin's surface to enhance texture and eliminate dead cells. Citric acid, lactic acid, and glycolic acid are examples of common AHAs.

Beta Hydroxy Acids (BHAs) - Oil-soluble acids that effectively cure acne and greasy skin by penetrating deeper into the pores. Salicylic acid is the most widely used BHA.

Enzymatic Exfoliation - These break down dead skin cells using natural enzymes, such as those found in fruits like pineapple and papaya. They are appropriate for sensitive skin and are often gentler.

How it works - These exfoliants function by dissolving oil and dirt in the pores or by rupturing the connections that hold dead skin cells together.

Advantage - Skin that is sensitive or prone to acne can benefit from more consistent exfoliation that is less harsh.

Disadvantage - Particularly when they are first included into their regimen, some people may feel irritated, tingly, or flushed.



Before

After

Figure 3 Effect of Skin Exfoliation

Dead skin cells can be removed and cell regeneration encouraged with both chemical and physical exfoliants. To prevent over-exfoliation, which can irritate and harm the skin, it's crucial to use exfoliants appropriately and sparingly. Selecting an exfoliator that is appropriate for your skin type and concerns is also crucial because certain exfoliants might aggravate specific skin disorders like acne or be too harsh for delicate skin.

3.3. Properties of Exfoliation

Exfoliation is helpful at enhancing the look and health of the skin because of a number of important characteristics. These characteristics aid exfoliation in achieving its objectives of clearing clogged pores, encouraging skin renewal, and eliminating dead skin cells. The primary characteristics of exfoliation are listed below:

- **Cell renewal** - Encourages a faster turnover of skin cells for a more youthful appearance by promoting the elimination of dead skin cells.
- **Improved Texture** - Softer, smoother skin with the removal of dry or rough skin.
- **Unclogs Pores** - Lowers the chance of acne and outbreaks by aiding in the removal of oil, debris, and dirt from pores.
- **Brightness Complexion** - Makes skin appear brighter and more vibrant by revealing fresher skin.
- **Enhanced Product Absorption** - Improves the skin's surface so that treatments and moisturizers can be absorbed more effectively.
- **Stimulates Collagen** - Promotes the synthesis of collagen for skin that is firmer and looks younger.
- **Reduce hyper Pigmentation** - Helps gradually lighten uneven skin tone and dark patches.
- **Prevent Acne** - Reduces the chance of acne by keeping pores free of obstructions.
- **Boost Circulation** - Improves blood flow, which supports skin health.

3.4. Objectives

The purpose of a herbal face cream is to leave the face feeling clean and refreshed by exfoliating and removing dead skin cells. Natural components with mild exfoliating qualities, like fruits, grains, and herbs, are used to make herbal face cream. They are intended to promote a healthy and glowing complexion by gently eliminating pollutants, clearing clogged pores, and increasing blood flow to the face. Herbal face cream can also assist to improve the texture and tone of the skin by hydrating and nourishing it. By eliminating dead skin cells and supplying vital nutrients, a herbal face cream aims to enhance the skin's overall health and beauty.

4. Composition of herbal face cream

A herbal face cream's composition usually consists of natural botanical ingredients along with additional auxiliary ingredients to produce a healthy and effective skincare solution. An overview of the main ingredients often present in herbal face creams can be seen below -

4.1. Active Herbal Ingredients

These are the substances derived from plants that provide the skin its healing properties. The particular herbs utilized can change based on the cream's intended application:

4.1.1. Tamarind seed

In the natural beauty trend, tamarind seed is one of the breakout (pun intended) stars. The anti-inflammatory and antioxidant properties of tamarinds help to tighten, cleanse, and smooth skin. Additionally, tamarind seed may revitalize your skin by enhancing its inherent radiance. The tree bears bean-shaped pods that are covered in fibrous pulp and contain seeds. This understated fruit can be used to cure uneven skin tone, address skin issues, and lessen aging symptoms.

An estimated 85% of people will have acne at some point in their lives, making it one of the most prevalent skin disorders worldwide. High antioxidant levels found in tamarind seed help prevent breakouts and slow down cell damage. Tamarind seed is a fantastic ingredient for homemade face packs that can help with a variety of skin issues.



Figure 4 Tamarind Seed

4.2. Tamarind seed benefits for skin

4.2.1. Anti-aging benefits

Tamarind seed possesses antioxidant, anti-inflammatory, and anti-microbial properties that can help the skin in a variety of ways. These antioxidants, like the herb star anise, shield the skin's cells from harm caused by free radicals and can even delay the appearance of wrinkles, fine lines, and dark spots.

4.2.2. Exfoliates skin

You are essentially unclogging your pores when you exfoliate your skin. The exfoliating qualities of the acid found in tamarind pulp, which is made from the fruit of the tamarind tree, have long been utilized.

Exfoliating that dry, dead skin and any other surface material that may still be on your skin after cleansing prevents it from entering your pores and creating recalcitrant blockages that manifest as blackheads and whiteheads.

4.2.3. Reduce Dry skin

The significance of hydrating your skin on a daily basis cannot be overstated. The normal process by which our skin eliminates dead skin cells slows down with age. More clogging, imperfections, black patches, and uneven texture may result from this. In fact, these accumulated dead cells may make it more difficult for the skin to get moisturized or hydrated.

5. Patents

Table 1 Patents available on skin exfoliation

S. No.	Authors	Title	Patent	Submission Date	Publication Date
1.	Dara Levy	Hand held dermaplaning device and dermaplaning process.	US2017265629A1	2017-05-03	2017-09-21
2.	Robert S. Anderson, Steve Young	Apparatus and method to apply substances to fabric.	ES2368345T3	2006-05-08	2011-11-16
3.	Julia Collier, Michael Frushour, Kim Wilson	Cosmetic composition and methods of use thereof	US11648194B2	2021-03-19	2023-05-16

4.	Lora COLVAN, Rahul Mehta, Sujatha Sonti	Compositions for skin exfoliation and use thereof.	AU2016202140B2	2016-04-06	2017-09-07
5.	Naito KANA, Tamai KATSUTO, Endo MAYUMI	Peptide for inducing regeneration of tissue and use thereof	AU2022201894B2	2022-03-18	2024-10-10
6.	Gerald Keith, Kenneth A. Pilcher, Robert E. Akridge	Exfoliating brush head for a personal care appliance	US9107486B2	2013-04-12	2015-08-18
7.	Roger Ignon, Ed F Nicolas, William Cohen	Devices, systems and methods for improving scalp health	US2022015861A1	2022-02-03	2022-05-19
8.	Gerald John Guskey, Denis Alfred Gonzales	Skin cleansing compositions comprising biodegradable abrasive particles	US9717674B1	2016-04-06	2017-08-01
9.	Eva Maria Perez-Prat Vinuesa, Anna Asmanidou	Liquid detergent composition with natural abrasive particles	US85463162B2	2011-09-20	2013-10-01
10.	Roger Ignon	Skin treatment systems and methods using needles	US20200016342A1	2019-03-25	2020-01-16

6. Conclusion

All things considered, tamarind is a plant that has many applications and significance in many businesses and cultures. Its strong wood, tasty fruit, medicinal qualities, and cultural significance make it an essential component of many communities worldwide. Tamarind is used in many different aspects of human existence, including cooking, traditional medicine, textile manufacturing, and more.

Additionally, research is still being conducted to learn more about the biochemical makeup and possible therapeutic uses of tamarind seed, especially in relation to antibacterial activity, antioxidant effects, and oral health. When paired with current scientific information, this traditional knowledge emphasizes the tamarind's worth as a resource for both traditional and modern uses.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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