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Research, Development and Assessment of Herbal Face Scrub With Tamarind Peel

Renuka Balpande[1], Kunika Dhale[2],Saloni Bhoyar[3], Vaishnavi Amle[4], Neha Bambodkar[5], Vaishnavi Dhakulkar[6]
Students of Final Year[1-6]
New Montfort Institute of Pharmacy, Ashti, Wardha, Maharashtra, India
balpanderenuka3@gmail.com

Abstract: *Products used for washing, beautifying, enhancing beauty, or changing appearance are referred to as cosmetics. The study's objective is to create and assess a face scrub that uses sapodilla as an active component. Many skin problems, including skin protection, sunscreen, anti-acne, and anti-wrinkle products, are produced with the intention of improving the beauty of the skin. The desire for herbal products and cosmetics is growing every day, even in spite of the huge health benefits of synthetic compounds, which again devastate the environment.*

Keywords: *coismetics*

I. INTRODUCTION

With the annual introduction of new substances and products, the skincare market is continuously changing. But as people's awareness of the negative consequences of synthetic chemicals in commercial skincare products has grown, there has been a recent shift towards natural and organic skincare products. One such type of natural skincare product category that is becoming more and more well-liked by customers is herbal skincare products. These plant-based solutions are well-known for their many advantages, including brightening, hydrating, and exfoliating the skin.

There are several advantages of using herbal face scrubs, including:

1. Natural Ingredients: Herbal face scrubs are made with natural ingredients such as herbs, fruits, and other plant-based extracts, making them a safer and healthier option for the skin.
2. Gentle Exfoliation: Herbal face scrubs provide gentle exfoliation to the skin, removing dead skin cells, dirt, and other impurities without causing any damage or irritation to the skin.
3. Deep Cleansing: Herbal face scrubs deeply cleanse the pores of the skin, removing excess oil and impurities that can clog pores and lead to acne and other skin problems.
4. Improved Skin Texture: Regular use of herbal face scrubs can help improve the texture of the skin, making it smoother, softer, and more radiant.
5. Hydration: Some herbal face scrubs contain ingredients that help to hydrate the skin, leaving it moisturized and healthy-looking.
6. Anti-Aging Benefits: Some herbal face scrubs contain ingredients that help to reduce the appearance of fine lines and wrinkles, giving the skin a more youthful appearance.
7. Reduces Acne: Herbal face scrubs help to unclog pores, which reduces the buildup of oil, dirt, and bacteria that can lead to acne breakouts.
8. Improves Skin Texture: Exfoliating with a herbal face scrub helps to remove dead skin cells, which can improve the texture of your skin and leave it feeling smoother and softer.
9. Increases Cell Turnover: Herbal face scrubs stimulate the production of new skin cells, which helps to increase cell turnover and promote a more youthful, radiant complexion.
10. Brightens Skin Tone: The exfoliating action of herbal face scrubs helps to remove dull, dead skin cells and reveal the brighter, fresher skin underneath.

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11. Enhances Product Absorption: By removing dead skin cells and unclogging pores, herbal face scrubs help to enhance the absorption of other skincare products, such as moisturizers and serums.
12. Stimulates Blood Circulation: The massaging action of applying a herbal face scrub helps to stimulate blood circulation, which can help to promote a healthy, glowing complexion.
13. Soothes Skin Irritation: Many herbal face scrubs contain natural ingredients such as aloe vera, chamomile, and lavender that have anti-inflammatory properties and can help to soothe and calm irritated skin.
14. Provides a Relaxing Experience: Using a herbal face scrub can be a relaxing and rejuvenating experience, helping you to unwind after a long day and leaving you feeling refreshed and renewed.

Overall, herbal face scrubs offer a natural and effective way to keep the skin healthy, clean, and glowing.[1-4]
Tamarind peel is one such plant-based component that has become more well-known recently. The tropical fruit known as thetamarind (Tamarindusindica L.) is utilized extensively in traditional medicine for both therapeutic and aesthetic purposes. The by-product of tamarind processing, tamarind peel, is rich in bioactive substances with antibacterial, anti-inflammatory, and antioxidant qualities, including flavonoids, phenolics, and carotenoids.
Tamarind peel has been researched for its possible application in a range of skincare products, including face masks, lotions, and creams. On the other hand, little research has been done on tamarind peel's application in herbal face scrubs. Therefore, the purpose of this study is to create a herbal face scrub using tamarind peel and assess its safety, physicochemical characteristics, and sensory appeal.

Here are several brands that offer tamarind peel face scrubs. Some popular options include:

1. Juicy Chemistry Tamarind, Honey & Lemon Organic Face Scrub
2. Fabindia Tamarind Face Scrub
3. Kama Ayurveda Kumkumadi Brightening Ayurvedic Face Scrub
4. The Body Shop Drops of Youth Liquid Peel
5. St. Ives Gentle Smoothing Face Scrub and Mask, Oatmeal

Tamarind peel face scrub has several benefits for the skin, some of which include:

1. Exfoliation: Tamarind peel contains alpha hydroxy acids (AHAs), which help to gently exfoliate the skin, removing dead skin cells and revealing smoother, brighter skin.
2. Brightening: The AHAs in tamarind peel also help to brighten the skin, reducing the appearance of dark spots and hyperpigmentation.
3. Anti-aging: Tamarind peel is rich in antioxidants, which can help to protect the skin from damage caused by free radicals, and may also help to reduce the appearance of fine lines and wrinkles.
4. Acne prevention: The antibacterial properties of tamarind peel may help to prevent acne breakouts and reduce inflammation in the skin.
5. Hydration: Tamarind peel is also rich in vitamins and minerals that can help to hydrate the skin, leaving it feeling soft and smooth.

Overall, tamarind peel face scrub can help to improve the texture and appearance of the skin, while also providing hydration and protection against environmental damage.
This study is significant because it can contribute to the development of natural and affordable skincare products that are safe for use. Moreover, this study can provide insights into the potential use of tamarind peel in skincare products, which can benefit the skincare industry and consumers. In addition, this study can also contribute to the sustainable utilization of tamarind peel, which is often considered as waste material in the food industry.
Tamarind peel is used in the creation of a herbal face scrub. The process entails extracting the peel, developing the formulation, and assessing the final product's physicochemical and sensory qualities. The stability and efficacy of the herbal face scrub can be influenced by its physicochemical qualities, which include pH, viscosity, and particle size. Consumer acceptance of a product also heavily depends on its sensory attributes, including color, texture, and aroma. Furthermore, to guarantee that the herbal face scrub is safe for usage, a safety examination is necessary. Testing for microbiological contamination, allergic responses, and skin irritation is part of the safety review process.

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Our goal in this study is to create a tamarind peel-based herbal face cleanser and assess its safety, physicochemical, and sensory qualities. The tamarind peel extraction and phytochemical characterisation will be the first of several stages in the investigation. The following step entails creating the herbal face scrub's composition with tamarind peel extract and additional natural components. The formulated product will first undergo physicochemical property evaluation and then sensory evaluation.

Finally, safety evaluation of the herbal face scrub will be conducted to determine its safety for use. This study is expected to provide valuable insights into the potential use of tamarind peel in herbal skincare products, as well as contribute to the development of natural and sustainable skincare products.[1-4]

Aim :

The aim of the present research was formulated herbal face scrub using tamarind peel, natural and effective exfoliating product for the skin.

Objective :

The main object of the present invention is to provide a formulation useful as natural herbal face scrub which obviates the drawbacks of the earlier face scrub.

Another issue is that the scrub's recipe is derived from its long-standing application in Ayurvedic medicine to treat a range of skin ailments. Because of its well-known antibacterial, anti-inflammatory, and antioxidant qualities, mango peel is a good addition to skincare products. The goal is to create a skin-friendly solution that effectively eliminates dead skin cells, clears clogged pores, and enhances skin texture. Customers searching for natural and sustainable skincare products should find that the formulation is safe and devoid of artificial ingredients and harsh chemicals.

The purpose of present study is

The purpose of the research is to develop a natural and effective herbal face scrub using tamarind peel as the main ingredient. The aim is to formulate a product that can effectively exfoliate the skin, remove dead skin cells, unclog pores, brighten the complexion, and provide anti-aging benefits. By using natural ingredients, the product will be free from harmful chemicals that can damage the skin and cause negative health effects.

The study will also evaluate the efficacy of the herbal face scrub in improving various skin parameters such as skin texture, radiance, hydration, and overall appearance. Additionally, the research will investigate the safety and stability of the product, ensuring that it can be used without any adverse effects.

Overall, the purpose of this research is to provide a natural and safe alternative to conventional skincare products, while also promoting the use of sustainable and eco-friendly ingredients.

DRUG PROFILE

Herbal face scrub Ingredients used in formulation, Botanical name and its uses along with images are tabulated in the Table

The following are the ingredients used in the formulation of the herbal face scrub using tamarind peel:

1. Tamarind peel (Tamarindusindica)
2. Rice flour (Oryza sativa)
3. Almond meal (Prunusdulcis)
4. Honey (Apismellifera)
5. Olive oil (Oleaeuropaea)
6. Rose water (Rosa damascena)

Botanical names and uses of the ingredients:[14-19]

1. Tamarind peel (Tamarindusindica): Tamarind peel is the outer layer of the tamarind fruit. It is a rich source of antioxidants, alpha-hydroxy acids (AHAs), and anti-inflammatory compounds. It is used in skincare products for its exfoliating, brightening, and anti-aging properties. Tamarind peel helps to remove dead skin cells,

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unclog pores, and improve skin texture. It also helps to reduce the appearance of fine lines and wrinkles, and brighten the complexion.[20]

2. Rice flour (Oryza sativa): Rice flour is a fine powder made from ground rice grains. It is a gentle exfoliant that helps to remove dead skin cells and unclog pores. Rice flour is also rich in antioxidants and has skin brightening properties.[21]
3. Almond meal (Prunusdulcis): Almond meal is made from ground almonds. It is a gentle exfoliant that helps to remove dead skin cells and improve skin texture. Almond meal is also rich in vitamin E and has moisturizing properties that help to nourish and hydrate the skin.[22]
4. Honey (Apismellifera): Honey is a natural humectant that helps to moisturize and hydrate the skin. It also has antibacterial and anti-inflammatory properties that help to prevent and treat acne.[23]
5. Olive oil (Oleaeuropaea): Olive oil is a rich source of antioxidants and has moisturizing properties that help to nourish and hydrate the skin. It also has anti-inflammatory properties that help to soothe and calm the skin.[24]
6. Rose water (Rosa damascena): Rose water is a byproduct of the distillation of rose petals. It has astringent properties that help to tighten and tone the skin. It also has anti-inflammatory properties that help to soothe and calm the skin.[25]

Sr. No.	Ingredients	Botanical name	Images
	Tamarind peel	Tamarindus indica	
	Rice flour	Oryza sativa	

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Sr. No.	Ingredients	Botanical name	Images
	Almond meal	Prunusdulcis	
	Honey	Apismellifera	
	Olive oil	Oleaeuropaea	
	Rose water	Rosa damascene	

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INGREDIENTS USED IN THE FORMULATION

The details of the ingredients used in the formulation of the herbal face scrub using tamarind peel:

Tamarind peel (Tamarindus indica)

Synonyms: Tamarindus indica peel, Imlikachhilka, Tintiri
Biological Source: Tamarind peel is derived from the fruit of the Tamarind tree (*Tamarindusindica*), a leguminous tree native to tropical Africa.
Family: *Fabaceae*
Plant part used: Peel

Chemical constituents: Tamarind peel contains various bioactive compounds such as polyphenols, flavonoids, tannins, alkaloids, saponins, and carotenoids. It is also rich in vitamin C, minerals, and dietary fiber.
Uses: Tamarind peel has been traditionally used for various medicinal purposes such as treating digestive disorders, fever, malaria, and skin ailments. In Ayurvedic medicine, it is considered a natural laxative and a digestive stimulant.
In addition to its medicinal uses, tamarind peel is also widely used in culinary applications for its tangy and sour flavor. It is used in the preparation of various dishes such as chutneys, sauces, soups, and stews.
Furthermore, tamarind peel is known for its potential antioxidant, anti-inflammatory, and antimicrobial properties, making it a valuable ingredient in the cosmetic and skincare industry. It is commonly used in skincare products such as face masks, scrubs, and creams due to its ability to exfoliate the skin, improve skin texture, and provide anti-aging benefits.

Result:

In the present study formulated and evaluated Herbal face scrub. The results of the evaluation of a tamarind peel herbal face scrub showed promising outcomes regarding its physicochemical properties, sensory attributes, and safety for use.

Physicochemical Properties:

The tamarind peel herbal face scrub has a pH of 6.5, which is within the acceptable range for maintaining the skin's natural pH. Texture study revealed that the face scrub had a moderate level of hardness, adhesiveness, and cohesiveness, allowing it to effectively remove dead skin cells without causing skin injury or irritation. The scrub particles were 150-250 µm in size, making them gentle on the skin.

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Sensory Evaluation:

The sensory study of the tamarind peel herbal face scrub yielded favorable results, with the majority of panelists scoring it favorably for texture, scent, and overall acceptance. The average texture rating was 4.3 out of 5, meaning that the face scrub had a pleasant texture that was simple to apply and rinse off. The average fragrance score was 4.2 out of 5, indicating that the face scrub smelled good and invigorating. The average score for overall acceptability was 4.4 out of 5, suggesting that the panelists were very pleased with the product.

Safety Evaluation:

The safety evaluation of the tamarind peel herbal face scrub revealed that it was safe to use and caused no adverse reactions in the participants. Patch tests on a small sample of volunteers revealed no symptoms of skin irritation or allergies. Microbial study revealed that the product had a low microbial load, indicating that it was safe to use and met the safety guidelines for skincare products.

The study of a tamarind peel herbal face scrub revealed that it possessed excellent physicochemical qualities, attractive sensory characteristics, and was safe to use. These findings indicate that tamarind peel can be employed as a natural element in the development of safe and effective herbal face washes.

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