

## DEVELOPMENT AND ASSESSMENT OF HERBAL COSMETIC FACE PACK FOR ENHANCING SKIN RADIANCE

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### ABSTRACT:

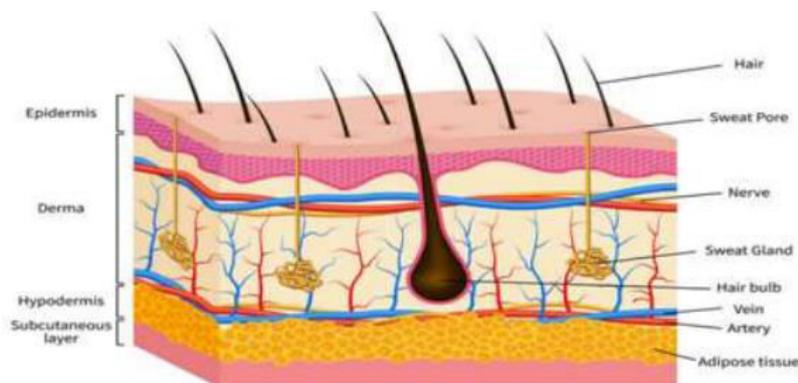
The skin, covering the body's entire external surface, serves as its largest organ. It consists of three distinct layers—the epidermis, dermis, and hypodermis—each with unique anatomy and functions. Acting as the body's primary barrier against pathogens, UV light, chemicals, and mechanical damage, the skin's complex network plays a crucial protective role. Additionally, it regulates temperature and manages moisture release into the environment. This article explores the anatomical components of the epidermal layer in depth, discussing its structure, function, embryological origins, vascular supply, innervation, surgical implications, and clinical significance. The project aims to develop and assess a herbal facial mask made from natural ingredients for cosmetic purposes. Locally sourced Multani Mitti, orange peel powder, UMBER peel, Banna, papaya, and rose water were dried, powdered, sieved through a 120-mesh sieve, and geometrically blended. These ingredients underwent organoleptic and physicochemical assessments, microscopic analysis, and chemical evaluation. The increasing preference for natural remedies, perceived as safer with fewer adverse effects than synthetic alternatives, has driven global demand for herbal formulations. This study aims to create and evaluate a polyherbal facial mask, aligning with the growing popularity of herbal cosmetic products. Skin health is crucial, requiring adequate lipids and carbohydrates to maintain clarity, shine, and overall well-being. Historically, people, especially women, have been diligent in caring for their skin, often relying on natural remedies tailored to their specific skin types. Today, natural medicines, including plant extracts like orange peel powder and rose water, remain popular, especially in rural and mountainous areas. Herbal cosmetics offer distinct advantages such as their non-toxic nature, reduced risk of allergic reactions, and the proven effectiveness of many ingredients over time. The findings of this study highlight promising properties of herbal facial masks, prompting further efforts to optimize them fully as cosmetic products for human use.

**Keywords :-** Orange peels, Multani Matti, Herbal cosmetic, polyherbal face pack

### INTRODUCTION

The skin consists of mesodermal cells that contain melanocytes, responsible for producing melanin, which absorbs harmful ultraviolet (UV) radiation from sunlight. Moreover, the skin

houses DNA-repair enzymes that help mitigate damage caused by UV exposure. Individuals who lack these enzyme genes are more susceptible to higher rates of skin cancer[1]. Malignant melanoma, primarily triggered by UV radiation, is aggressive, spreading quickly, and can be fatal. Skin pigmentation shows considerable variation among different populations.



**Figure 1: Anatomy of Skin**

The skin serves several essential functions:

- **Protection:** It acts as a barrier against pathogens and physical damage, crucial for bodily defense. Langerhans cells within the skin contribute to adaptive immunity.
- **Sensation:** The skin contains various nerve endings that detect sensations like heat, cold, touch, pressure, vibration, and tissue injury. This is integral to the somatosensory system and haptics.
- **Appearance:** Skin defines our outward appearance and facilitates recognition. Healthy skin significantly impacts how we perceive ourselves.
- **Regulation:** It plays a role in regulating body temperature by sweating to cool down and conserving heat in colder conditions.
- **Absorption:** Certain substances can be absorbed through the skin, such as medications or topical lotions.

Skin diseases vary widely in severity:

1. **Acne:** Caused by blocked skin follicles leading to oil, bacteria, and dead skin buildup.
2. **Alopecia Areata:** Results in hair loss in small patches.
3. **Atopic Dermatitis (Eczema):** Causes dry, itchy skin with swelling, cracking, or scaliness.
4. **Psoriasis:** Presents as scaly skin that may be swollen or warm to the touch.
5. **Raynaud's Phenomenon:** Periodic reduced blood flow to fingers, toes, or other body parts, resulting in numbness or changes in skin color.
6. **Rosacea:** Manifests as flushed, thickened skin and pimples, primarily on the face.
7. **Skin Cancer:** Uncontrolled growth of abnormal skin cells.
8. **Vitiligo:** Causes patches of skin to lose pigment.

Skin conditions are common, and remedies in Ayurveda often focus on purifying the blood to address underlying causes like dietary and lifestyle choices that contribute to skin impurities[2].

In Ayurveda, "mukhalepa" refers to an herbal paste applied directly to the face to treat acne, pimples, scars, and pigmentation, serving as a popular cosmetic therapy. A "face pack" typically involves a versatile powder applied to the face, delivering essential nutrients deep into the subcutaneous tissues. Specific herbal face packs are tailored to different skin types.

Ayurvedic face packs are beneficial for women dealing with issues such as wrinkles, under-eye dark circles, pimples, or acne [3]. These packs not only enhance skin fairness and smoothness but also provide personalized nourishment. They boost skin radiance and serve as an effective Ayurvedic method to stimulate appetite. Traditionally, face packs have been a favored means to cleanse the skin, with Ayurveda offering options with nourishing, healing, cleansing, astringent, and antiseptic properties [4].

Throughout history, herbs have played a vital role in skincare and beauty. Cosmetics, evolving over time to enhance attractiveness and skin cleansing, now include homemade natural face packs and masks that contribute to smooth, vibrant, and silky skin. Ayurvedic face packs address concerns like wrinkles, acne, and dark circles while promoting fairness and suppleness [5]. Packed with essential vitamins crucial for skin health and radiance, these natural face packs are simple to apply and offer numerous benefits [6].

By enhancing blood circulation in facial veins, Ayurvedic face packs contribute significantly to skin care, underscoring their role in promoting skin health and beauty.

## METHOD OF PREPARATION

**Mixing:** All these ingredients were thoroughly mixed using a mixer to form a homogeneous fine powder.

**Sieving:** The fine powder was then passed through a No. 100 sieve to obtain the required consistency.

**Collection & Storage:** The powder mixture was collected and stored in a suitable plastic container for further use in evaluation.

### Procedure for Face Pack Application:

1. **Preparation:** Weigh and grind accurate quantities of ingredients into a fine powder using a No. 120 sieve.
2. **Mixing:** Geometric mixing method by serial dilution to ensure uniformity.
3. **Packaging:** Pack the prepared face pack into a self-sealable polyethylene bag.
4. **Application:** Take the required amount of prepared face pack powder in a bowl, add rose water, mix well, and apply evenly over facial skin. Cover acne and blemishes spots as needed.
5. **Drying:** Allow the face pack to dry completely for 20 to 25 minutes.
6. **Rinsing:** Wash off with cold water.

**Evaluation Studies:** The following parameters were evaluated to ensure the quality of the prepared face pack:

1. **Organoleptic Evaluation:** Assessing nature, color, odor, texture, smoothness, and consistency manually for physical properties.

2. **pH Determination:** Drop the sample onto pH paper using a clean dropper. Compare the resulting color with the standard pH chart to determine the pH value.
3. **Grittiness Test:** Check for any roughness or grittiness in the face pack.
4. **Spreadability Test:** Conducted using the glass slide method, where a measured amount of the face pack is spread and weighted under specific conditions.
5. **Irritancy Test:** Apply a definite quantity of the prepared face pack to the left hand dorsal surface. Check for any irritation at regular intervals up to 24 hours and record observations.

These evaluations ensure the effectiveness and safety of the herbal face pack for cosmetic use[7].

### RESULT AND DISCUSSION:-

Sr No.	Parameter	Result
1.	colour	Brown yellow
2.	odor	Slight
3.	texture	fine
4.	apperance	Powder (easily flow)
5.	smoothness	Very smooth
6.	Grittiness	Nil
7.	pH	6.89±0.1
8.	Skin irritation test	NIL

### CONCLUSION:

This study concludes that the herbal face pack is smooth to apply, free from gritty particles, and exhibits excellent spreadability without causing skin irritation. Compared to synthetic face packs, this herbal formulation shows fewer side effects, offering glowing effects, antioxidant properties, and anti-tan activity.

### REFERNCES:-

1. Kokate CK, Purohit AP, Gokhale SB. Pharmacognosy. Vol. 1 & 11. 45<sup>th</sup> ed. Nirali Prakashan, Pune, 2010, p. 12.4
2. Ansari SK, Hasan A, Parray SA. Gile Multani (*Solum fulionum*): An Unani drug of mineral source. Int J Adv Pharmacy Med Bio allied Sci. 2016 (2016): 1-4. Available from:
3. Rani 5, Hiremanth R. Formulation & Evaluation of Poly-herbal Face wash gel. World J Pharm PharmSci 2015; 4(6): 585-8.
4. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S. Shanmuganathan S. Formulation & Evaluation of Poly-herbal Face wash gel. 4(6): 585-588. World J Pharm & Pharmasci 2015; 4(6): 585-8.
5. Ashwant MS, Banchhor M. Herbal Cosmetics Trends in skin care formulation. Pharmacognosy Rev 2009; 3(5): 82-9.
6. Kanlayavattanukul M, Lourith N. Therapeutic agents and herbs in topical application for acne treatment. Int Cosmetic Sci 2011; 33(4): 289-97 Crossruff PubMed
7. Chanchal D, Swarnlata S. Herbal photoprotective formulations, and their evaluation, Open Nat. Prod J 2009; 2: 71-73