



Formulation and Evaluation of Herbal Face Pack

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ABSTRACT

Abstract:

The main aim of this work is to formulate and evaluate the herbal face pack by using natural herbal ingredients, the goal of this project is to create and assess a face pack for bright skin. We bought dried powdered forms of natural herbal substances like multani mitti, turmeric, sandalwood, neem, nutmeg, beetroot, and orange peel from the local market. Commercial shade drying was used to create the powdered banana peel. All of the natural ingredients were sieved through #120 mesh, precisely weighed, and combined geometrically for a consistent formulation. Then, morphological, physicochemical, physical, phytochemical, irritancy, and stability examination parameters were assessed. Therefore, we created a herbal face pack in this work that is simple to make using readily available items.^[1] The project's goal is to make and evaluate a herbal face pack for cosmetic usage utilizing a range of natural materials that were purchased from nearby markets, such as turmeric, aloe vera, neem, rose petal powder, sandalwood, orange peel, and multani mitti. Every powdered natural component was meticulously weighed, measured, and run through a #120 mesh filter before being combined and tested for morphological, physicochemical, physical, phytochemical, irritancy, and stability criteria. Herbal face packs are used to maintain skin suppleness, increase muscle tone, renew the muscles, and open up skin.^[2]

Keywords: Natural Ingredients, skin, Herbal face pack, cosmetic,

INTRODUCTION:

This study's objective is to create and assess a herbal face pack for radiant skin using organic herbal components. We purchased dried, powdered versions of natural herbal ingredients such as multani mitti, turmeric, sandalwood, saffron, milk powder, rice flour, and orange peel from the neighborhood market. The powdered banana peel was made using commercial shade drying. For a consistent formulation, all natural ingredients were geometrically combined, accurately weighed, and sieved through #120 mesh. Then, parameters for evaluating stability, irritancy, physical, physicochemical, morphological, and phytochemical characteristics were analyzed. As a result, we developed a herbal face pack in this study that is easy to prepare with common ingredients. The aim of the project is to create and assess a herbal face pack for cosmetic use using a variety of natural ingredients acquired from local markets, including turmeric, aloe vera, neem, rose petal powder, sandalwood, lemon peel, and multani mitti. Prior to being combined and evaluated for morphological, physicochemical, physical, phytochemical, irritancy, and stability criteria, each powdered natural ingredient was carefully weighed, measured, and passed through a #120 mesh filter. Herbal face packs are utilized to rejuvenate the muscles, improve muscle tone, maintain skin elasticity, and open up the skin. herbal face pack, cosmetics, natural ingredients, skin.

Everyone desires to have clear and beautiful skin. Nowadays, acne, blackheads, pimples, and dark circles are prevalent among young individuals and those dealing with these issues. According to Ayurveda, skin conditions are generally caused by impurities in the blood. Toxins that build up in the blood due to an inadequate diet and lifestyle lead to skin-related ailments. Ayurveda recommends various herbs and remedies to cleanse the blood. The herbal paste that is

applied to the face for treating acne, pimples, scars, and pigmentation is referred to as "Mukhalepa" in Ayurveda. The procedure of applying this herbal mixture on the face is called "Mukhalepana. " This beauty treatment is commonly known as a facial.^[3]

Ancient times, women were highly aware of their beauty and addressed facial skin issues using medicated herbs such as neem, aloe vera, tulsi, orange peel, and rose, along with blood purification herbs like Manjistha, Chandana, Turmeric, and various rock salts. The primary benefits of herbal cosmetics are that they are pure and do not cause any side effects on the human body.

An effective herbal face pack should provide essential nutrients to the skin and create a glow on the face; the method of applying this mixture of herbs on the face is referred to as "mukhalepana."^[4]

Grown in popularity. Individuals use a range of products to safeguard their bodies, enhance their traits, and avoid body odor, like foot powder, lipstick, mouthwash, and complexion treatments. Products meant to be rubbed, poured, sprinkled, sprayed, injected into, and otherwise applied to the body in order to cleanse, enhance, promote attractiveness, and change the appearance of skin are known as skin care preparations. Ayurveda details various plants, including amla and haldi, in cosmetic recipes. Due to a lack of awareness about risks, numerous European women who used lead carbonate to lighten their faces in the eighteenth century succumbed to lead poisoning. Cosmetics are created products that are applied to the skin to enhance its appearance through washing, beautifying, and promoting beauty.^[5]

These formulations, available in liquid or paste varieties, are spread onto the face and allowed to dry, forming a film that tightens, fortifies, and purifies the skin. To ensure complete drainage of excess water, they are typically left on the skin for a duration of fifteen to thirty minutes.^[6] This process leads to the resulting film compressing and solidifying, which facilitates easier removal. While the colloidal and adsorption clays used in these formulations extract dirt and oil from the facial skin, the heat and tightening effect generated by using a face pack provides a revitalizing sensation for the face.^[7,8]

The primary benefit of utilizing herbal cosmetics is that they are natural and do not cause any adverse effects on the human body.^[9]

BENEFITS OF HERBAL FACE PACK :

- 1) Assists in minimizing acne, pimples, scars, and blemishes based on its herbal components.
- 2) Face masks typically eliminate dead skin cells.
- 3) These facial masks offer a calming and relaxing impact on the skin.
- 4) They aid in averting early skin aging.^[10]

MATERIALS AND METHOD

1) NEEM:

Neem: (*Azadirachta indica* J.)

Neem possesses anti-inflammatory, antiseptic, and significant advantages for oily and acne-prone skin. The anti-acne properties arise from the anti-microbial, anti-inflammatory, and anti-oxidant functions of various chemical constituents. The phytochemical elements found in neem have been shown to consist of carotenoids, phenolic acids, and flavonoids that can offer substantial antioxidant activity, contributing to potential effects in skin anti-aging. Neem's advantages for skincare originate from its antifungal and antibacterial properties. This aids in cleansing skin cells of irritants and dead skin cells that might have otherwise led to pus formation and inflammation of the facial skin. Commonly referred to as acne, these red protrusions on the facial skin can become painful if not addressed promptly. Another of the neem benefits related to skincare is its effectiveness in removing acne and pimple scars, helping you achieve a clear and blemish-free complexion.^[11]

2) TURMERIC:

Turmeric (*Curcuma longa*)

The main purpose of turmeric is facial care. It possesses extra features such as antibacterial, antiseptic, and anti-inflammatory properties, along with the ability to postpone the emergence of wrinkles. This is the best source for blood purifiers. Its antiseptic and antibacterial qualities, which help in eliminating pimples, contribute to providing your face with a youthful radiance, making it effective in treating acne.^[12]

3) SANDALWOOD:

Sandalwood: (*Santalum album*)

The wood known as sandalwood or *santalum album* possesses properties that combat tanning and aging. It additionally benefits the skin in various ways, including its toning effect, emollient qualities, antibacterial characteristics, cooling astringent properties, as well as its soothing and healing abilities.^[13]

4) ORANGE PEEL:

Orange peel (*Citrus aurantium*)

Orange is a citrus fruit that includes various nutritional sources such as vitamin C, calcium, potassium, and magnesium. It protects the skin from free radical harm, maintains skin hydration, and reduces oxidative stress. Additionally, it possesses an instant glow effect, helps prevent acne, blemishes, wrinkles, and the signs of aging.^[14]

5) NUTMEG:

Nutmeg: (*Myristica fragrans*)

Uses: Nutmeg along with its oil serves as stimulants, flavoring agents, and carminatives. The expressed fatty oil and the volatile oil have been utilized externally for chronic rheumatism.

Effects: When ingested in small quantities as a spice, nutmeg does not elicit any significant physiological or neurological effects; however, in larger amounts, both freshly ground raw nutmeg from kernels and nutmeg oil exhibit psychoactive properties, which seem to originate from anticholinergic-like hallucinogenic mechanisms linked to myristicin and elemicin.^[15]

6) MULTANI MITTI:

Multani Mitti: (*Calcium bentonite*)

Multani mitti benefits the skin in various ways such as reducing pore sizes, eliminating blackheads and whiteheads, lightening freckles, calming sunburns, purifying the skin, enhancing blood circulation, complexion, decreasing acne and

blemishes and providing a radiant effect to the skin as they are packed with healthy nutrients. Multani mitti will assist in making your skin luminous and is ideal for sensitive and inflamed skin. Multani mitti is abundant in magnesium chloride.^[16]

7)ALOE VERA:

Aloe vera: (Aloe barbadensis)

Aloe vera has been a significant herb desired by the cosmetic industry, as it serves as an exceptional moisturizer; It softens the skin and provides a youthful look and radiance. The herb additionally possesses remarkable healing properties that can be utilized to address rashes, cuts, bruises, sunburns, and various other skin issues.^[17]

8)BEETROOT:

Beetroot powder (Beta vulgaris L.)

The vegetable, rich in antioxidants, aids in the prevention of wrinkles while postponing the onset of fine lines. The high concentrations of antioxidants and folates diminish the severity of wrinkle appearances. This can be accomplished by either drinking beet juice or applying beetroot paste directly onto the face. Beetroot juice serves as an incredible detox beverage that assists in eliminating toxins from the body and cleansing the blood. The outcome is an immediate glow. The iron found in the juice, when ingested, revitalizes damaged cells from within. Consequently, it provides an instant radiance to dull skin and enhances the skin complexion.^[18]

9)ROSE PETALS:

Rose petals contain high levels of vitamins A, C, and K that aid in enhancing collagen creation in the human body. Collagen contributes to maintaining skin elasticity and firmness. The vitamin C found in roses also lightens and enhances skin complexion, diminishes scars, reduces pore size, and lessens hyperpigmentation. Rose petals powder exhibits antibacterial characteristics. Additionally, it offers a pleasing fragrance and visual appeal when applied, making it desirable in cosmetic formulations.^[19]

METHODS OF PREPARATION:

Equipments :-

- a) Mortar pestle,
- b) Hot air oven,
- c) Sieve no.100,
- d) Weighing balance,
- e) Spatula

FORMULA:

Sr.No	Ingredients	F1	F2	F3
1)	Neem	1gm	1.2gm	1.4gm
2)	Turmeric	0.2gm	0.1gm	0.2gm
3)	Sandalwood	4gm	4.2gm	4.5gm
4)	Orange Peel	7gm	7.3gm	7.1gm
5)	Nutmeg	1gm	0.5gm	1.5gm
6)	Multani Mitti	1gm	1.2gm	1.5gm
7)	Aloe Vera	1.8gm	1.6gm	2gm
8)	Beet root	3gm	3.5gm	3.2gm
9)	Rose water	Q.S	Q.S	Q.S

Table No:1 Composition Of Ingredients:

FORMULATION OF FACE PACK:

To obtain uniformly sized particles, each powdered ingredient was independently run through a 100 grit filter before being precisely weighed. Additionally, to ensure even and consistent mixing, all powder elements were combined geometrically. Table 1 shows the quantity of each element. The created face pack was assessed using a number of evaluation criteria and kept in an airtight container.

Step 1: Using a digital balance, each of the necessary herbal powders for making the face pack was precisely weighed separately. Table 1 lists the quantity and components.

Step 2 : The herbal remedies, including Neem, Orange peel, Sandalwood , Beet root, Multani mitti, Nutmeg , Turmeric were moved to a mortar and pestle and made into a trituration.

Step 3. Herbal substances are ground in a distinct mortar and pestle to create a consistent fine blend.

Step 4: The earlier prepared combination of herbal powders was moved to the blend of fine powders and ground to achieve a uniform drug powder for the face pack.

Step 5: The powders were sifted through sieve no #100.

Step 6: The resulting face pack powder was enclosed in a self-sealing polyethylene bag, labeled, and used for subsequent studies.

PROCEDURE OF HERBAL FACE PACK APPLICATION:

- Take the prepared face pack powder in a bowl according to the needed amount. Add rose water and aloe vera.
- Mix thoroughly until a paste of suitable thickness is formed. It should be applied uniformly on the face using a brush.
- Cover the spots of acne and blemishes. Allow it to remain in place until completely dry for 20-25 minutes. Afterward, it should be rinsed off with cold water.^[20]

EVALUATION PARAMETER:

1)ORGANOLEPTIC EVALUATION:

The tangible characteristics of the substance were evaluated by hand for the sensory parameters that encompass its nature, colour, smell, texture, and consistency.^[21]

Sr. No	Parameters	Observation		
		F1	F2	F3
1.	Appearance	Powder	Powder	Powder
2.	Colour	Slight Brown	Slight Brown	Reddish Brown
3.	Odour	Slight	Slight	Slight
4.	Texture	Fine	Fine	Fine
5.	Smoothness	Smooth	Smooth	Smooth

2)PHYSICAL EVALUATION:

The flow characteristic of the dried powder in combined form was assessed by conducting the Angle of Repose using the funnel technique, along with bulk density and tapped density through the Tapping Method.^[22]

Sr.No.	Parameters	Observation		
		F1	F2	F3
1.	Tapped density	1.20gm/ml	1.22gm/ml	1.24gm/ml
2.	Bulk density	1.06gm/ml	1.05gm/ml	1.07gm/ml
3.	Angle of repose	30.60°	32.40°	33.50°
4.	Hausner's ratio	1.132	1.161	1.158
5.	Carr's index	11.66%	13.93%	13.70%

3) IRRITANCY TEST:

Mark a section (1sq. cm) on the left hand's dorsal surface. Defined amounts of prepared face packs were applied to the designated area and the time was recorded. Irritancy, erythema, and edema were monitored for any occurrence at regular intervals for up to 24 hours and documented.^[23]

Sr.No.	Evaluation	Formulation			Observation
		F1	F2	F3	
1.	Irritant	NIL	NIL	NIL	No Irritation
2.	Erythema	NIL	NIL	NIL	No Irritation
3.	Edema	NIL	NIL	NIL	No Irritation

4) WASHABILITY TEST: This is the usual technique for assessing the wash ability of the formulations. The formulation was applied to the skin and subsequently, the degree and extent of washing with water were manually evaluated by using a liter of water to eliminate all traces of the formulation that had been applied to the surface.^[24]

Sr.No.	Formulation	Washability
1.	F1	Easily washable
2.	F2	Easily washable
3.	F3	Easily washable

5) DETERMINATION OF pH:

It measures the acidity or alkalinity of the product assessed on a scale ranging from 0 to 14. The pH of the prepared face pack in water was determined.

RESULT:

The face pack created was observed to have a reddish-brown hue and emitted a pleasant fragrance. The formulated face pack was consistent, smooth, and homogeneous in its nature. After conducting numerous tests, this product has been verified as safe owing to the herbal extracts it contains, with no harmful chemicals and a lack of synthetic ingredients. It maintains a neutral pH which aligns with the skin's pH. No allergic reactions were observed during or following the testing of this face pack. The researched herbal face pack demonstrated acceptable organoleptic physico-chemical properties. Additionally, it enhances skin hydration without altering the skin's pH value.



Fig: Formulation of herbal face pack

CONCLUSION:

Natural remedies are regarded as more acceptable due to the belief that they are safer with fewer side effects compared to synthetic ones. Natural Remedies are seen as more acceptable because of the belief that they are safer with side effects than synthetic ones. Herbal face packs or masks are applied to enhance blood circulation, rejuvenate the muscles, and aid in maintaining the skin's elasticity while cleansing dirt from skin pores. The benefit of herbal cosmetics lies in their non-toxic nature, which reduces allergic reactions and the time-tested efficacy of many ingredients. Therefore, in this current study, we identified beneficial properties for the face packs, and for future research, further optimization studies are needed to uncover the advantageous effects of face packs for human use as cosmetic products.

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