

## Formulation, Development and Evaluation of Topical Ayurvedic Face Pack For Healthy Skin

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### ABSTRACT

The aim of this work is to formulate and evaluate an herbal face pack by using natural herbal ingredients. Natural herbal ingredients such as Papaya, turmeric, milk powder, rice flour, gram flour, glycerine, honey, rose water, and pomegranate were purchased from the local market in the form of dried powder. The powder was prepared by shade drying commercially, all powdered natural ingredients were sieved using #120 mesh, weighed accurately, and mixed geometrically for uniform formulation and then evaluated for parameters including morphological, physicochemical, physical, phytochemical, irritancy along with stability examination. Thus, in the present work, we formulated a herbal face pack that can be easily made with the easily available ingredients. After evaluation, we found good properties for the face packs, free from skin irritation, and maintained their consistency even after stability storage conditions. The results of the study scientifically verified that herbal face packs have enough potential to give an efficient glowing effect on the skin. The overall study is useful to substantiate product claims due to its useful benefits for human beings.

**Keywords:** Skin, Herbal face pack, Formulation, Evaluation.

### I. INTRODUCTION

From ancient days, people are aware of the use of plants for the essential needs of healthy and beautiful skin. Cosmetics are products used to clean, beautify and promote an attractive appearance.

The facial skin is the major part of the body. A balanced nutrition containing amino acids, lipids, and carbohydrates is required for the skin to keep it clear, glossy as well as healthy. In historical times, women were very conscious about their beauty and took special care of their specific skin types. Even today, people especially in rural areas,

and hilly regions go for natural remedies like plant extracts for various cosmetics purposes like neem, aloe vera, tulsi, orange peel, rose, etc. Herbal cosmetics are products that are used to purify, beautify, improve skin quality, and change the appearance of the skin. The main advantage of using herbal cosmetic is that it is pure and does not have any side effects on the human body.

In this face pack formulation, we have formulated an herbal face pack to whiten, lighten and brighten the skin naturally for men and women. This face pack has natural skin-lightening properties and can be easily prepared at home. Face packs with natural constituents are rich in vital vitamins that are essential for the health and glow of the skin. These substances have been proven to be beneficial for the skin in many ways. Natural facial packs are easy to use. They increase the circulation of the blood within the veins of the face, thereby increasing the liveliness of the skin.

Face packs which are recommended for oily skin prone to acne, and blackheads, usually control the rate of sebum discharge from sebaceous glands and fight the harmful bacteria present inside acne lesions. Herbal face packs are nowadays being used on a large scale, due to the various benefits of them over chemical-based packs. They are non-toxic, non-allergic, and non-habit forming. They are natural in every aspect, having a larger shelf life. They have no added preservatives. They can be easily formulated and stored over a larger span of time. The present research article deals with the formulation and evaluation of an herbal face pack by using natural herbal ingredients such as Papaya, turmeric, milk powder, rice flour, gram flour, glycerine, honey, rose water, and pomegranate.

### II. MATERIALS AND METHODS

The present research article deals with the formulation and evaluation of herbal face packs by using natural herbal ingredients such as Papaya, turmeric, milk powder, rice flour, gram flour,

glycerine, honey, rose water, and pomegranate. They were purchased from the local market in the form of dried powder.

## 2.1 Ingredients of formulations

### 2.1.1 Papaya :

Papaya will give the skin moisture that can help you battle dry and flaky skin. Daily use of papaya for the skin will help you achieve smooth and radiant skin. Using papaya you can counter the symptoms of ageing. This can cut down on wrinkles and other signs of ageing. It will also kill dead skin cells and regulate pigmentation. This amazing fruit will help you remove tan. Papain and vitamin A and C help to lighten the skin tone and prevent tanning. Using papaya for the skin will help combat acne, too. Dark circles are another issue that can help you with papaya. Papaya can decrease acne and skin problems

### 2.1.2 Turmeric:

Dark spots and dark under-eye circles are very normal but can be difficult to get rid of. Turmeric helps brighten skin and the appearance of uneven tone, leaving you with clearer skin. Your skin wounds may heal a lot quicker when you wash them with turmeric soap. The anti-inflammatory properties decrease the skin's inflammation and speed up the skin's ability to form new tissue. If you suffer from psoriasis, skincare experts have suggested that turmeric can help by killing off bacteria that inflame the skin. After a certain age, our bodies stop producing collagen. Curcumin found in turmeric can stimulate collagen production, making your skin appear more youthful.

### 2.1.3 Milk powder :

It is rich in lactic acid which naturally cleans and brightens skin. Besides skin lightening, what makes milk powder an apt ingredient for the skin is the concentration of vitamins and minerals. This acts as a skin purifier. It can also rid the skin of unwanted impurities like blackheads and whiteheads. It also helps the skin in many ways including toning effect, emollient, antibacterial properties, cooling astringent properties, and soothing and healing properties.

### 2.1.4 Rice Flour

Rice flour face packs help get rid of the excess oil and sebum which in turn minimizes the chances of blackheads, whiteheads, and acne. It lightens the skin tone and provides fair and glowing skin. Rice flour can be applied to cure some forms of skin ailments. In the Indian subcontinent, rice water is duly prescribed by Ayurvedic practitioners as in undigested form.

### 2.1.5 Gram Flour

It's a natural exfoliant that provides an even skin tone. It deeply cleanses and brightens your skin. Gram flour contains zinc that fights dark spots and reduces blemishes and early signs of ageing. In addition to that, it controls sebum production and soothes inflamed skin.

### 2.1.6 Pomegranate

Pomegranates help to improve skin health by reducing wrinkles, preventing sun damage, detoxifying the skin, reducing acne, and promoting collagen production to reduce fine lines. Owing to its antioxidant and anti-aging properties, pomegranate should form a part of your daily diet for optimal skin health.

### 2.1.7 Honey

Honey Deeply Moisturizes and Hydrates the Skin. Honey Diminishes the Signs of Premature Aging. Honey is an Effective Pore Cleanser and Gentle Exfoliator. Honey Lightens Scars and Hyperpigmentation. Honey Fights Acne and Breakouts. Honey Relieves Sunburn.

### 2.1.8 Rosewater

Rose water has antiseptic and antibacterial properties that can help wounds heal faster. These properties can help clean and fight off infection of cuts and burns. They can also help cuts, burns, and even scars heal faster.

## 2.2 Methods of Preparation

The powdered dried natural ingredients were sieved using #120 mesh, weighed accurately, and mixed geometrically for uniform formulation mentioned in Table 1. The prepared face pack was then stored in an air-tight container for evaluation of various parameters.

Table 1: Composition of Herbal face pack Sr. No Constituent Scientific Name Percentage

Ingredients	Quantity
Papaya	20gm
Turmeric	5gm
Milk powder	10gm
Rice flour	10gm
Gram flour	10gm
Glycerine	5ml
Honey	10ml
Rose water	10ml
Pomegranate	20gm

### 2.3 Procedure for application of face pack

The pack should be applied daily on a wet face, forming a paste of it in water with optimum thickness. It should be applied evenly on the face with the help of a brush. It should be left for 15 minutes for complete drying. Then it should be removed with the help of a wet sponge.

#### 2.4 Evaluation of face pack

##### 2.4.1 Morphological Evaluation

It refers to the evaluation of the herbal face pack by its color, odor, appearance, texture, etc. The external characters of the formulation were examined based on the method described by Siddiqui et al.

##### 2.4.2 Physicochemical evaluation

Physicochemical parameters were determined, including the determination of extractive value, ash value, pH, and moisture content.

##### 2.4.4 Phytochemical Evaluation.

The aqueous extract of the herbal face pack was evaluated for the presence of different phytoconstituents as per the standard procedures.

##### 2.4.5 Irritancy test.

Mark an area (1sq.cm) on the left-hand dorsal surface. Definite quantities of prepared face packs were applied to the specified area and time was noted. Irritancy, erythematic, and edema were checked if any for regular intervals up to 24 hrs and reported.

#### 6. Stability studies.

Stability testing of the prepared formulation was conducted by storing it at different temperature conditions for a period of one month. The packed glass vials of formulation were stored at different temperature conditions, room

temperature, and 400C, and were evaluated for physical parameters like color, odor, pH, consistency, and feel.

### III. RESULT AND DISCUSSION

Following evaluation parameters were performed to ensure the superiority of the prepared face pack.

#### 3.1 Morphological Evaluation

Table 2: Morphological Evaluation

S. No	Parameter	Observation
1	Color	Pale orange
2	Odour	Pleasant
3	Appearance	Fine
4	Texture	Smooth
5	Smoothness	Smooth

The herbal face pack was evaluated for morphological parameters shown in Table 2. The color of the formulation was pale yellow. The odor of prepared formulations was pleasant and good acceptable which is desirable for cosmetic formulations. Texture and smoothness were acceptable as per the requirement of cosmetic formulations.

#### Physical Evaluation (powder property)

The herbal face pack was evaluated for physical parameters (powder property) shown in

the Table 5. Rheological findings justified the flow (powder) properties of the herbal face pack. It was found to be free-flowing and non-sticky in nature.

Table 5: Evaluation of flow properties

Sr. No.	Parameter	Observation
1	Tapped density	1.428gm/m
2	Bulk density	1.08gm/ml
3	Hausner's ratio	1.322
4	Angle of repose	32.61
5	Carr's index	21.94%

#### 3.5 Irritancy Test

The results of the irritancy test were shown in Table 6. The formulation showed the

absence of irritation, redness, and swelling during irritancy studies. This formulation has safe to use on the skin.

Sr. No.	Parameter	Observation
1	Redness	No
2	Irritation	No
3	Swelling	No

### 3.6 Stability Studies

The results of stability were shown in Table 7. No change in color, odour, texture, and smoothness was observed at mentioned conditions

of stability except pH. The stability studies showed a slight change in the pH of the formulation at 400C.

Table 7: Stability Test

S. No	Parameter	Room temperature	400C
1	Color	No change	No change
2	Odour	No change	No change
3	P H	6.92 ± 0.12	6.87 ± 0.13
4	Texture	Fine	Fine
5	Smoothness	Smooth	Smooth

## IV. CONCLUSION

Natural remedies are more acceptable in the belief that they are safer with fewer side effects than synthetic ones. Herbal formulations have a growing demand in the world market. Herbal face packs are used to stimulate blood circulation, rejuvenate the muscles and help to maintain the elasticity of the skin, and remove dirt from skin pores. It is our good attempt to formulate the herbal face pack containing natural herbal ingredients such as Papaya, turmeric, milk powder, rice flour, gram flour, glycerine, honey, rose water, and pomegranate. After evaluation, we found good properties for the face packs, free from skin irritation, and maintained their consistency even after stability storage conditions. It has been revealed that an herbal face pack has enough potential to give an efficient glowing effect on the skin. The overall study is useful to substantiate product claims due to its useful benefits for human beings.

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