

PREPARATION AND STANDARDIZATION OF HERBAL FACE PACK

Kunal S. Makone ,Prof.Kalpana S. Kale , Dr. Megha T. Salve

Kunalmakone1@gmail.com

Shivajirao Pawar College of Pharmacy, Pachegaon Tal- Newasa Dist- Ahmednagar

Corresponding author:- Mr. Kunal S. Makone

ABSTRACT:

The primary aim of this study is to develop and assess a natural herbal face mask using organic components. The ingredients were derived from herbal sources like Multani mitti, green tea, saffron, gram flour, turmeric, shwet chandan, and milk powder. These ingredients were procured locally, dried, ground, sieved, blended thoroughly, and then analyzed for various parameters including organoleptic, physicochemical, rheological, phytochemical, stability, and irritancy properties. The dried powders of the combined mask exhibited good flow characteristics suitable for facial application. Organoleptic assessment indicated that the mask is a smooth and pleasantly scented powder. Rheological analysis confirmed the flow properties of the mask, showing it to be free-flowing and non-sticky. The results demonstrated the stability of the formulation in all aspects. Irritancy testing yielded negative results. Stability tests conducted indicated the inert nature of the mask. Therefore, this study successfully developed a mask using easily accessible ingredients that offers all the benefits of a face mask. Further research is needed to optimize various parameters and explore its potential benefits for human use.

Key Words - Skin, Face pack, Preparation, Evaluation.

AIM & OBJECTIVE :

AIM: To Prepare and Evaluate the herbal face pack.

OBJECTIVE:

To study the importance of natural source used for the preparation.

To Prepare herbal face pack

To Evaluate face pack with different parameters

INTRODUCTION:

Since ancient times, individuals have recognized the benefits of utilizing plants for maintaining healthy and radiant skin. Cosmetics play a crucial role in cleansing, enhancing, and promoting an appealing appearance. The facial skin is exposed to various elements such as the sun and pollutants. In this piece, we have devised a homemade facial pack that naturally lightens, brightens, and whitens the skin for both men and women. This facial pack possesses natural skin-lightening properties and can be easily concocted at home. Facial packs containing natural ingredients are abundant in essential vitamins that contribute to the skin's health and radiance. These components have been scientifically proven to be advantageous for the skin in numerous ways. Natural facial packs are simple to apply and aid in improving blood circulation, which is a reflection of an individual's overall health. A well-balanced diet comprising amino acids, lipids, and carbohydrates is essential for maintaining clear, glossy, and healthy skin. In ancient times, women were particularly attentive to their beauty and took special care of their unique skin types. Even today, individuals, particularly in rural and mountainous regions, opt for natural remedies such as plant extracts for various cosmetic purposes, including neem, aloe vera, tulsi, orange peel, and rose. Herbal cosmetics are products used to cleanse and enhance the skin. The primary advantage of using herbal cosmetics is their purity and lack of adverse effects on the human body. Men often have rough skin, and without adequate care, their skin can darken due to excessive exposure to the sun. A high-quality herbal facial pack should provide essential nutrients to the skin in the form of a fine powder applied externally. It should penetrate deep into the subcutaneous tissues to deliver the necessary nutrients. Each skin type has its specific requirements.

MATERIAL:**A. Multani Mitti-**

Multani mitti which helps to remove the impurities in the form of dead skin cells. It helps to make the skin radiant. It has been proven best for the irritation-prone skin. Its soothing action calms the skin, cures the inflammation caused due to elevated phlogistic agents. It is perfect for oily skin. It removes the dirt and excess of oil by acting as a perfect adsorbent. It provides fresh, radiant and glowing skin. Multani mitti can be easily available in market.

**B. Turmeric-**

Turmeric has been used in this preparation due to its blood purifying property and helps in wound healing, because of its antiseptic action. It cures the skin diseases occurring due to blood impurities. It is a very good anti-inflammatory and anti-

allergic agent. The phytoconstituents, mainly terpenoids present in it helps to lighten the skin tone. Haridra delays the signs of aging like wrinkles, improves skin elasticity. It cures pigmentation, uneven skin tone and dull skin. Turmeric can be easily available in market.



C. Shwet Chandan

White Sandal wood powder is used to cure various skin allergies. It has cooling and soothing action. It protects the skin from environmental pollution and keeps it glowing, fair and healthy. Sandalwood possesses antimicrobial properties, therefore it is used to cure various skin problems and also removes scars, acne etc. Chandan powder can be very caustly available in market.



D.Green Tea

Belonging to the family Theaceae, green tea, due to its rich phytoconstituents, serves for numerous therapeutic benefits. It slows down aging, reduces inflammation and provides a healthy glow, participants applied an experimental formulation of green tea extract to their forearm for 15 and 30 days. At the end of the study, the researchers found that the participants had increased skin moisture and a reduction in skin roughness. The benefits of green tea range from boosting brain function to promoting weight loss. But green tea doesn't only have properties that improve the mind and body. It can also benefit the skin, which is why it's often included as an ingredient in many types of beauty products. It can be easily available in market.



E.Gram Flour

Gram flour, commonly known as Besan has been used extensively since the olden times for its beauty-enhancing benefits. It mainly acts as a tonic for the skin as it helps to clean and exfoliate it. Gram flour is nothing but a pulse flour obtained from grinded chickpeas. It is very beneficial for skin as well as hair. It is used to decrease tanning of the skin, also reduces the oiliness of skin, thus proving as a good anti-pimple agent. It lightens the skin tone, therefore used as an instant fairness agent.



F.Saffron

Mainly consists of dried stigmas and upper parts of styles of plant known as *Crocus sativus* in, belonging to the family Iridaceae. It lightens the skin tone and provides fair and glowing skin. Saffron contains chemicals that might alter mood, kill cancer cells, decrease swelling, and act like antioxidants. It can take 75,000 saffron blossoms to produce a single pound of saffron spice. Saffron is largely cultivated in Iran and harvested by hand. It's one of the world's most expensive spices



G.Milk Powder

It is very beneficial for skin, as it provides nourishment for dry, rough skin for the longer duration. Milk cream either in the form of powdered raw milk or milk as such provides a brilliant shine to skin. This is beneficial in hydrating the face deeply and makes skin youthful, lustrous and flawless. It bleaches the skin to remove dark spots, pigmentation, acne etc. This pack also removes blackheads, whiteheads, and other skin imperfections naturally. This facial pack helps in fading suntan Milk powder can be easily available in market. [Note-At the time of applying face pack there is milk can also taken for mixing the powder.



Table No.1: Composition of Herbal Face Pack

Sr.No	Constituent	Quantity (gm)
1.	Multani Mitti	20 gm
2.	Turmeric	5 gm
3.	Shwet Chandan	10 gm
4.	Green tea	10 gm
5.	Gram flour	40 gm
6.	Saffron	5 gm
7.	Milk Powder	10 gm

The Ingredients use for the face pack which can be obtained from the following table (table 1) there is the percentage of the powder can be taken for the preparation of the face pack. That is Multani mitti 20%, Turmeric 23853 ijariie.com 1720

14%, Shwet chandas 10%, Green les 10%, Ciram flour 40%, Saffron 5%, Milk powder 100%, es, these percentage is very important for the preparation of face pack.

Method of Face Pack Preparation -

1. Issue of Ingredients-

The crude drugs used in this study were procared from the nearby local arcs. All the Ingredients were collected from natural sources. The following ingredients were ined for the preparation of this polyherbal face pacic formulation, such as Multanimini, green tea, saffron, gram flour, turmeric, sowetchandan and milk powder, etc

2. Drying the Ingredients-

All these issued ingredients should washed clean and it can be dried separately, and not dried in sunlight. Dried it completely, not moist part of substancie can be obtained

3. Grind and Sieve the Ingredients-

All the dried ingredients can be taken for the grinding. There will be griend in dry and clean mixer. Fine powder can be grind properly. Then passed through sieve no 40 properly.

4. Preparation of the face pack-

All the grind and sieved powder can be ready for preparation of face pack. For the preparation of face pack all the powdered ingredients can be prepare the paste with the help of water or rose water. When the smooth paste is prepare then these is the formation of Polyherbal face pack. Then it can be evaluated for parameters including organoleptic, physicochemical, theological features, phytochemical, stability, and irritancy examination test.

How to apply Face Pack on Face-

The pack should be applied daily on 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.

EXPERIMENTAL WORK

Experimental research is a study that strictly adheres to a scientific research design. It includes a hypothesis, a variable that can be manipulated by the researcher, and variables that can be measured, calculated and compared. Most importantly, experimental research is completed in a controlled environment.

A. Morphological Evaluations -

It refers to the evaluation of the pack by its color, odor, appearance, The external characters of the samples were examined based on This method of evaluation.

Sr.No.	Parameter	Observation
1.	Colour	Pale yellow
2.	Odor	Pleasant
3.	Appearance	Smooth, fine

Table 2- Morphological Evaluations

B. Physicochemical Evaluations –

Physicochemical parameters were determined, including the determination of extractise value, ash value, pH and moisture content. (Table 3)

1. L.O.D-It means loss of drying. We take 2 gm of sample powder and calculate its ash value, the weight of ash is 0.5 gm then the percentage of L.O.D. is 25%
2. PH-The observed pH of the face pack is Neutral.
3. Ash Value - The ash value can be calculate by the 2 gm of sample can be ashing to remove the traces of organic matter which may be interferes in an analytical determination. (Fig-7)

Calculations -

Sample weight = 2 gm.

Crucible weight = 11 gm

Crucible with sample = 13 gm.

Ash with crucible = 11.5 gm.

Weight of Ash = (11.5-11)-0.5 gm.

Total Sample x Wt. of Ash/Wt. of drug Taken

$$= 100 \times (0.5) / 13$$

$$= \text{Ash Value } 3.8\%$$

Sr.No.	Parameter	Observation
1.	L.O.D	25%
2.	PH	Neutral
3.	Ash value	3.8%

Table 3 - Physicochemical Evaluations

C. Determination of Rheological Properties of the prepared pack -

Physical parameters like Untapped (Bulk) density, tapped density, the angle of repose, Hausner's ratio, and Carr's index were observed and calculated for the formulation. Bulk density refers to the adjustment of particles or granules to pack themselves collectively. The formula for determination of bulk density (D) is $D = M / V$ where M is the mass of particles and V the total volume occupied by them. The volume of packing can be determined in a graduated cylinder. 100 grams of weighed formulation powder was taken and slowly added to the cylinder with the aid of a funnel. The initial volume was observed firstly and the sample was then tapped until no further volume reduction occurred. The bulk density value was obtained from the initial volume and after tapping the volume reduced, from which tapped density was calculated. The angle of repose is used to quantify the flow properties of powder because it influences cohesion among the different particles. The fixed funnel cone method employs the calculation of height (H) above the glass paper that is placed on a flat tabular surface. The pack was carefully poured through the funnel till the peak of the conical heap just touched the tip of the funnel. Here, R denotes the radius of the conical heap, $\tan a = H/R$ or $a = \arctan H/R$, where 'a' is the angle of repose. Hausner's ratio is associated with interparticle friction and predicts powder flow properties. The Hausner's ratio is calculated as D/D' where D is the tapped density and D, the bulk density. Carr's index helps to measure powder flow from bulk density.

Calculations -

Given, Weight of Sample = 1 gm.
 Bulk Volume or Untapped Density 5 ml.
 Tapped Density = 3.4 ml.
 Mass of Sample = 0.2 gm.
 Bulk Density (Untapped Density)
 Mass/Bulk Volume = 0.2/5 = 0.04 gm/mol.
 Tapped Density
 Mass/Tapped Volume = 0.2/3.4 = 0.05 gm/mol.

Angle of Repose.

Height of Pile-0.7cm
 Radius of Circle 1

Formula : $\theta = \tan^{-1}(\text{height} / \text{radius})$
 $\theta = \tan^{-1}(0.7/1.8)$
 $\theta = \tan^{-1}(0.38)$

Angle of Repose = 20.80 °

Hausner's Ratio: H Tapped Density/Bulk Density.

H = 0.05/0.04

Hausner's Ratio = 1.25 w/v.gm/ml

Carr's Index:

$C = 100 \times \text{Tapped Density} / \text{Bulk Density}$
 $C = 100 \times 0.05 / 0.04$

$C = 100 \times 0.2$

Carr's Index = 20%

Sr.No	Parameter	Observation
1.	Tapped density	0.05 gm/ml
2.	Untapped density	0.04 gm/ml
3.	Angle of Repose	20.80 °
4.	Hausner'st ratio	1.25 w/v gm/ml
5.	Carr's index	20%

Table 4 - Rheological Evaluations

4. Phytochemical Screening -

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

1. Test for Carbohydrate - Take 2ml of given sample solution in a clean test tube. Add 2 ml of Fehling's solution A and Fehling's solution B to it. Keep the solution in a boiling water bath for about 10 minutes. If there is the formation of red precipitate then the presence of carbohydrate is confirmed.

2. Test for Alkaloids - Dragendorff's test: To 2 ml of the extract added 1 ml of Dragendorff's reagent along the side of the test tube. Formation of orange or orange reddish brown precipitate indicated the presence of alkaloids.

3. Test for Glycosides - 0.5 mg of sample extract was dissolved in 1 ml of water and then aqueous NaOH solution was added. Formation of yellow color indicates the presence of glycosides.

Sr.No.	Phytoconstituents	Presence
1.	Carbohydrates	+
2.	Alkaloids	+
3.	Glycosides	+
4.	Tannins	-
5.	Volatile oil	-

5) Irritancy Test –

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

Procedure –

- First to apply the face pack on the dorsal surface of the hand in minor quantity.
- Then stay for 2-3 min. Then wash it and observe the results.
- Then observe the Irritation, Redness and Swelling.
- And finally we observe that Irritation, Redness and Swelling is not observed

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

Table 6 – Irritancy Evaluations

6) Stability Test -

Stability testing of the prepared formulation was conducted by storing at different temperature conditions for the period of one month. The packed glass vials of formulation stored at different temperature conditions viz., Room temperature and 35°C were evaluated for the physical parameters like Color, Odour, pH, texture, and smoothness.

Sr.No.	Parameter	Room temperature	35 ^o C
1.	Colou	No Change	No change
2.	Odour	No Change	No change
3.	pH	6.62	6.65
4.	Texture	Fine	Fine
5.	Smoothness	smooth	smooth

Table 7 – Stability Evaluations

RESULT AND DISCUSSION

The pack was evaluated organoleptically and determined to have a smooth texture and pleasant scent. Physicochemical analysis indicated that the moisture content was minimal, measuring at only 5%. The pH level was neutral, making it suitable for all skin types. The ash value and extractive values were within acceptable limits, and rheological findings confirmed that the pack had desirable flow properties, being both free-flowing and non-sticky. These results demonstrated the overall stability of the formulation. Furthermore, the pack was found to be rich in essential phytoconstituents such as carbohydrates, alkaloids, and glycosides, which provide nourishment to the skin. Irritancy tests revealed no negative effects, including irritancy, redness, or swelling, as the herbal ingredients in their natural form were compatible with skin proteins without the need for additional chemicals. Stability tests conducted over a one-month period at various temperatures confirmed that the pack remained inert, maintaining its color, odor, appearance, texture, and pH.

Comparative study of marketed face pack and herbal (formulated) face pack –

Parameters	Marketed product (Active charcoal)	Formulated product (Herbal pack)
colour	Shiny black	Pale yellow
Odour	Fresh fragrance	pleasant
Appearance	Smooth & fine	smooth
pH	7.2-7.4	Neutral
Consistency	Semisolid	Semisolid
Washability	Washable	Washable
Irritation	Sometime occurred	No irritation

CONCLUSION AND SUMMARY

An herbal facial mask is utilized to revitalize the muscles, preserve the skin's elasticity, eliminate accumulated dirt particles, and enhance blood circulation. The advantages of herbal-based cosmetics lie in their non-toxic nature, nourishing the facial skin. This facial mask provides essential nourishment to the skin, aiding in the elimination of acne, pimples, scars, and blemishes. It exfoliates the skin, delivering a soothing, calming, and cooling effect. Moreover, it restores the skin's natural radiance within an optimal timeframe. Regular use of natural facial masks enhances skin texture and complexion. The detrimental effects of pollution and harsh climates on the skin can be effectively countered through consistent application of facial masks. They assist in maintaining the elasticity of skin cells, thereby preventing premature aging. Natural facial masks are also effective in controlling wrinkles, fine lines, and skin sagging. This study has revealed remarkable properties of facial masks, and further research is required to explore additional beneficial aspects of these cosmetics. Natural remedies are accepted nowadays with open hands as they are safer with fewer side effects than the chemical based products. Herbal formulations are required in large amounts to fulfill the needs of the growing world market. It is an effective attempt to formulate the herbal face pack containing different powders of different plants with multiple therapeutic benefits.

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