

Formulation and Evaluation of Herbal Face Pack Powder for Glowing Skin

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ABSTRACT:-

Herbal face packs are commonly designed to cleanse the skin surface, adsorb excess oil, support exfoliation, and provide soothing or antioxidant effects through plant-derived constituents. Existing face-pack studies repeatedly report evaluation through organoleptic parameters, powder flow properties, pH, washability, irritancy, and stability, which provides a practical model for developing a formulation around the present ingredient combination. The selected ingredients combine adsorbent, aromatic, antioxidant, exfoliating, and antimicrobial properties that are frequently discussed in herbal cosmetic literature. Orange peel, sandalwood, hibiscus, and multani mitti are already represented in published polyherbal face-pack formulations, while cinnamon appears in herbal scrub and gel literature as a functional cosmeceutical ingredient with relevance to oily and acne-prone skin. Papaya leaves powder is less commonly reported in the specific face-pack papers retrieved here, but its inclusion can be justified within an herbal-cosmetic framework as a plant material of interest for skin-cleansing formulations; however, its role should be treated as exploratory unless supported by direct experimental data in the final laboratory study.

KEYWORDS:-Herbal Face Pack, Formulation, Evaluation.

INTRODUCTION:-

Skin is the most visible organ of the human body, and facial skin is especially exposed to dust, sunlight, sebum, cosmetics, microbes, and climatic variation. Because of this constant exposure, consumers commonly seek products that cleanse pores, reduce dullness, improve texture, and create a brighter appearance without excessive irritation. Herbal cosmetics have gained attention partly because they are perceived as gentler than long-term use of synthetic preparations, and many publications frame herbal face packs as low-cost, culturally accepted skincare options.

A face pack is generally prepared as a fine powder or paste that is spread over the face, left for a short period to dry, and then washed away. Published descriptions note that such preparations may help remove dead skin, grease, and dirt from pores while providing soothing and tightening effects depending on the ingredients used. This basic concept explains why powdered herbal packs remain popular in academic formulation projects: they are simple to prepare, inexpensive, and suitable for evaluation with standard pharmaceutical and cosmetic tests.

The present review focuses on a herbal face pack made from hibiscus powder, papaya leaves powder, cinnamon powder, orange peel powder, multani mitti powder, and sandalwood powder. The target use is improvement of skin freshness and glow, especially through cleansing, mild exfoliation, oil control, and botanical support from plant powders traditionally associated with skincare. Since “glowing skin” is a cosmetic outcome rather than a strict medical endpoint, the formulation must be discussed carefully in terms of appearance, texture, compatibility, and plausible functional benefits instead of exaggerated therapeutic claims.

Need for Herbal Face Packs

In ayurveda, the herbal paste is called as “mukha lepa” used for as a facial therapy. This herbal paste smeared on face to treat acne, pimple, scars, marks and pigments. Face pack is the smooth powder which is used for facial application.

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These preparations are applied on the face in the form of liquid or pastes and allowed to dry and set to form film giving tightening, strengthening and cleansing effect to the skin. They are usually left on the skin for fifteen to thirty minutes to allow all the water to evaporate, the resulting film thus contracts and hardens and can easily be removed. The warmth and tightening effect produced by application of face pack produces the stimulating sensation of a rejuvenated face, while the colloidal and adsorption clays used in these preparations remove the dirt and grease from the skin of the face. When the applied face pack is eventually removed skin debris and deposited dirt gets removed with it. Herbal face packs increase the fairness and smoothness of skin. We can derive the maximum benefits of herbal face packs by using them according to our skin type.

HERBAL FACE PACK:-

Herbal face packs combine plant powders like hibiscus, orange peel, multani mitti, and sandalwood to cleanse, exfoliate, and brighten skin by targeting the stratum corneum layer through oil adsorption and gentle chemical exfoliation. These natural formulations provide glowing skin effects via multani mitti's pore cleansing, orange peel's vitamin C brightening, hibiscus AHAs for cell turnover, and sandalwood soothing, making them safe, effective alternatives to chemical cosmetics when properly formulated and evaluated.

Benefits of Herbal Face Pack

- **Deep pore cleansing:** Multani mitti adsorbs excess oil, dirt, blackheads from stratum corneum
- **Exfoliation:** Orange peel (citric acid) + hibiscus (AHAs) remove dead cells for brighter complexion
- **Oil control:** Balances sebum production, prevents shiny/oily appearance
- **Tan reduction:** Vitamin C from orange peel fades hyperpigmentation, dark spots
- **Soothing:** Sandalwood reduces inflammation, redness from exfoliation
- **Antimicrobial:** Cinnamon fights acne bacteria at follicle openings
- **Hydration balance:** Prevents over-drying while maintaining matte finish

Properties of Herbal Face Pack

- Removes dust, dirt, and impurities from the skin surface.
- Removes dead skin cells and helps in renewal of skin.
- Improves complexion and gives natural glow to skin.
- Provides cooling effect and soothes irritated skin.
- Prevents growth of microorganisms and reduces acne.
- Reduces redness, swelling, and skin irritation.

Uses of Herbal Face Pack

- Improves skin glow and complexion.
- Cleanses skin by removing dirt and impurities.

- Removes dead skin cells from skin surface.
- Controls excess oil secretion.
- Helps reduce acne and pimples.
- Tightens skin pores.
- Softens and smoothens skin.

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PROFILE OF SELECTED INGREDIENTS:-

A. Hibiscus Powder

Synonym: China rose, Gurhal (hindi)

Family: Malvaceae

Scientific name: *Hibiscus rosa-sinensis* linn

Uses:-

- 1.Hibiscus is rich in AHAs, antioxidants, and mucilage.
- 2.It gently exfoliates the skin by removing dead skin cells.
- 3.This helps reveal brighter and fresher-looking skin.
- 4.It is a useful ingredient in herbal face packs for glow. **Figure No. 1 Hibiscus powder**



B . Papaya Leaves

Synonym: Papita, Pawpaw

Family: Caricaceae

Scientific name: *Carica papaya* L.

Uses:-

- 1.Papaya leaves contain antioxidant flavonoids and natural enzymes.
- 2.They help in skin brightening, tan removal, and gentle exfoliation.
- 3.They may also reduce acne scars and pigmentation.
- 4.With multani mitti and orange peel, they help improve skin texture. **Figure No. 2 Papaya Leaves Powder**



C. Cinnamon powder

Synonym: Ceylon cinnamon, Dalchini, True cinnamon

Family: Lauraceae

Scientific name: *Cinnamomum verum* J.

Uses:-

- 1.Cinnamon is used in low concentration because it is strong.
- 2.It has antimicrobial action that may help against acne-causing bacteria.
- 3.It can support blood circulation and improve skin glow.
- 4.In herbal face packs, it helps cleansing and mild exfoliation, for oily skin. **Figure No. 3 Cinnamon Powder**



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D. Orange Peel

Synonym: Orange peel, Citrus peel, Santra (Hindi)

Family: Rutaceae

Scientific name: *Citrus sinensis* (L.) Osbeck (Sweet orange)

Uses:-

- 1.Orange peel is rich in vitamin C and natural AHAs.
- 2.It helps brighten the skin and remove dead skin cells gently.
- 3.It also supports oil control, which is useful for glowing skin. **Figure No. 4 Orange Peel Powde**



E. Multani Mitti

Synonym: Fuller's earth

Scientific name: Multani Mitti

Uses:-

- 1.Multani mitti is the main base ingredient in herbal face packs.
- 2.It absorbs excess oil, cleans pores, and removes dirt and blackheads.
- 3.It gives a smooth, matte, and temporarily tightened skin feel. **Figure No. 5 Multani Mitti Powder**



F. Sandalwood

Synonym: Chandan, White sandalwood, East Indian sandalwood

Family: Santalaceae

Scientific name: *Santalum album* L.

Uses:-

- 1.Sandalwood powder acts as a soothing and aromatic ingredient.
- 2.It has cooling, anti-inflammatory, and antimicrobial properties.



3.It also gives a pleasant fragrance and improves user acceptability. **Figure No. 6 Sandalwood Powder**

Collection of plants and Authentication:-

Authenticated by Dr. M.G. Awale, Head of Department of Botany Bhawbhuti Mahavidyalaya Amgaon. The collected plant material was primarily washed with tap water, followed by a rinse with distilled water. It was then air-dried under shade and powdered into a coarse texture using a mechanical blender. The coarse powdered passed through sieve 100 mesh sizes and stored in air-tight containers.

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METHOD OF PREPARATION:-

Collected the herbal ingredients and drying for 10 days in the shed.

After drying make a powder of all the ingredients in a mortar pestle

The powdered dried natural ingredients were sieved using #80 mesh, weighed accurately as mentioned in Table 1.

To ensure homogeneous and even mixing, all powder ingredients were also combined geometrically.

The prepared face pack was then stored in an air tight container for evaluation of various parameter

Formulation Table

Figure No. 1 Formulation Table

Ingredient	F1 (g)	F2 (g)	F3 (g)	F4 (g)	Properties
Hibiscus Powder	10g	12g	12g	10g	Rich in antioxidants and helps nourish and soften skin.
Papaya Leaves Powder	8g	8g	6g	10g	Helps exfoliate skin and remove dead cells.
Cinnamon Powder	2g	2g	3g	3g	Has antimicrobial property and helps reduce skin infection.

Orange Peel Powder	5g	4g	5g	4g	Helps brighten skin and reduce tanning.
Sandalwood Powder	10g	10g	8g	8g	Absorbs excess oil and cleanses pores.
Multani Mitti Powder	15g	14g	16g	15g	Provides cooling effect and soothes skin.
Total	50g	50g	50g	50g	

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Procedure For Application f Face Pack

- Take powder mixture made up of Hibiscus, Papaya Leaves, Cinnamon, Orange Peel, Sandalwood Multani Mitti · To create a smooth paste, Mix in face pack powder with 4ml rose water ,water to form smooth paste
- Apply this paste all over your face, give it should be left for 15 minutes for complete drying. · Gently scrape pack off skin once powder has dried, then rinse it off with water
- When gently massaged into the skin for a few minutes, face pack also functions as a scrub and wash it.

METHODS OF EVALUATION:

Prepared face pack was evaluated using following parameters to ensure supremacy of prepared Face pack: **A.**

Organoleptic Evaluation:-

The prepared face pack was evaluated for various organoleptic parameters such as; colour, Order, appearance, texture and consistency. Colour, order, and texture were evaluated visually by Touch and sensation respectively.

B. Physicochemical Evaluation

Physicochemical evaluation included parameters like moisture content, pH and ash values.

1) Ph: The pH of the preparation was determined by using a digital pH meter. The pH meter Was initially calibrated at different pH using a suitable buffer solution. A 10 % (w/v) Dispersion of the preparation was prepared in distilled water and pH was determined Directly without any further dilutions.(5)

2) Moisture content: For plant based products moisture content and loss on drying (LOD) Are important parameters. Insufficient drying of these agents may lead to Enzymatic degradation of active principles. Moisture content of the preparation was Determined by the LOD method. 3 gm. of sample was weighed accurately and placed in Previously weighed petri plate (W1). Weight of petri dish containing sample was Recorded (W2). Petri dish was placed in hot air oven at 100-108° C until contestant Weight of sample was obtained.(12)

3) Ash value: Ash value is generally the residues remaining after complete incineration of The powdered sample. The identity or purity of the drug is used. Principally a very high ash Value is representative of

adulteration, contamination, substitution during preparation of The product.

4) Acid insoluble Ash value: It is used to determine the earthy matter. Add 25 ml of Hydrochloric acid to the crucible containing total ash and covered it with watch Glass. The mixture was boiled gently for 5 minutes. Further watch glass was Rinsed with 5 ml of hot water and added into the crucible. The insoluble matter Was collected on an ash less filter paper and washed with hot water until it Became neutral. The filter paper containing the insoluble matter was transferred To the original crucible, dried on a hot plate and ignited to constant weight and Subjected for cooling in desiccator for 30 minutes followed by weighing the Sample. Percentage of acid insoluble ash was calculated in reference to air-dried Sample.

C. Physical Evaluation:-

It involved evaluation of powder characteristics. The sample was subjected for evaluation by Various physical parameters like angle of repose, bulk density, tapped density and Hauser’s Ratio.

1.Angle of Repose: The required amount of sample was allowed to drop down from the Funnel mounted at the height of 2 cm, the height and radius of the heap was recorded For further calculations.

Angle of repose (θ) can be calculated by using following Formula:

Angle of repose (θ) = tan (h/r)

Where,

θ - Angle of repose.

h - Height of the heap

r - Radius of the base

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2. Bulk Density: It is calculated by the ratio of given mass of powder and its bulk Volume. Determined by transferring 25 gm. of accurately weighed amount of powder Sample to the graduated cylinder.

Bulk density (pb) = $\frac{M}{V_b}$

Where,

pb- Bulk density

M – Weight of powder

Vb – Volume of powder

3. Tapped density: It is measured by transferring a known quantity (10 gm.) of powder Sample into a graduated cylinder. The initial volume of sample in measuring cylinder Was recorded and it was placed on tapped density determining apparatus to give Subsequent tapping to the measuring cylinder containing sample continuously for a Period of 10-15 min. Tapped density was determined as ratio of mass of powder and Tapped volume which is calculated by following formula. (15, 6)

Tapped density (pt) = $\frac{M}{V_t}$

Where,

pt – Tapped density

M – Weight of powder

Vt – Minimum volume occupy by tapping

4.Houser’s ratio: The flow ability of powders can be determined by Hauser’s ratio. It Basically the ratio of tapped density to the bulk density of the powder.

Houser’s ratio (HR) = $\frac{p_t}{p_b}$

Where,

pt - Tapped density

pb - Bulk density

5. Carr's Index ratio:

The Carr's Index (Compressibility Index) is a measure used in pharmaceuticals and powder technology to evaluate the flowability of powders and granules. It is calculated using the bulk density and tapped density of a powder.

$$\text{Carr's Index} = \frac{pt}{bt-pb} \times 100$$

D. Irritancy Test: The prepared face pack was applied to the previously marked area of a 1 square cm was Marked on the left-hand dorsal surface and time was recorded. Skin was then observed For irritancy, erythema and edema (if any), for regular intervals up to 24 hrs.

E. Washability: Formulation was evaluated for its ability to get washed off. Face pack was applied on the Skin and then ease and extent of washing with normal tap water were checked manually.

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RESULT :-

Organoleptic Evaluation :

Figure No.1 Organoleptic

Sr. No.	Parameter	F1	F2	F3	F4
1	Colour	Brown	Brown	Brown	Brown
2	Odour	Characteristic	Characteristic	Characteristic	Characteristic
3	Appearance	Fine powder	Fine powder	Fine powder	Fine powder
4	Smoothness	Smooth	Fine powder	Fine powder	Fine powder
5	Texture	Soft	Soft	Soft	Soft

Physicochemical Evaluation :

Figure No.2 Physicochemical Evaluation

Sr.no	Parameters	F1	F2	F3	F4
1	PH	6	5.5	5	6
2	Moisture content	12	12	11	13

3	Total Ash value	2.069%	2.029%	2.132%	2.365%
4	Acid insoluble Ash Value	0.891%	0.671%	0.756%	0.991%

Physical Evaluation :

Figure No.3 Physical Evaluation

Sr.no	Parameter	F1	F2	F3	F4
1	Bulk Density	0.65 g/ml	0.62 g/ml	0.62 g/ml	0.65 g/ml
2	Tapped Density	0.71 g/ml	0.68 g/ml	0.71 g/ml	0.68 g/ml
3	Angle of repose	21.3	22.1	20.2	21.5
4	Hauser's Ratio	1.09	1.09	1.14	0.95
5	Carr's Index	8.45%	9.29%	9.29%	8.45%

Irritation Test

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Figure No.4.Irritation Test

Sr.no	Parameters	F1	F2	F3	F4
1	Irritation	No	No	No	No
2	Redness	No	No	No	No
3	Swelling	No	No	No	No
4	Photo irritation	No irritation, no redness, no swelling	No irritation, no redness, no swelling	No irritation, no redness, no swelling	No irritation, no redness, no swelling

Stability Testing

Figure No.5 Stability Testing

Sr.no	Parameters	F1	F2	F3	F4
1	Colour	No change	No change	No change	No change
2	Order	No change	No change	No change	No change
3	Texture	Fine	Fine	Fine	Fine
4	Smoothness	Smooth	Smooth	Smooth	Smooth
5	PH	6	5.5	5	6



FIGURE NO.1 FIGURE NO.2

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CONCLUSION

The herbal face pack was successfully formulated using selected natural ingredients such as Hibiscus powder, Papaya leaf powder, Cinnamon powder, Orange peel powder, Multani Mitti powder, and Sandalwood powder. All ingredients were selected because of their beneficial effects on skin, such as cleansing, soothing, exfoliating, and improving natural glow. Different formulations were prepared and evaluated for organoleptic parameters including colour, odour, appearance, smoothness, and texture. The prepared face pack showed good physical characteristics, uniform mixing, fine powder nature, and pleasant herbal smell. It was easy to apply after mixing with water or rose water and showed good skin feel after use. The evaluation indicated that the herbal face pack is suitable for cosmetic application and can be used to improve skin appearance naturally. It helps remove dirt, excess oil, and dead skin cells from the surface of the skin, which may support clearer and brighter skin. The presence of orange peel and papaya contributes to exfoliation, while hibiscus and sandalwood provide soothing and refreshing effects. Multani mitti helps absorb oil and cleanse pores effectively. Overall, the formulation was found stable, safe, and economical, with no harmful chemicals. Thus, the prepared herbal face pack can be considered an effective natural preparation for glowing skin and routine skincare use.

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