
FORMULATION AND EVALUATION OF HERBAL FACEPACK FOR SKIN

***¹Aasim Ahmad Siddique, ²Dr. Abhishek Banke, ³Dr. R. B. Goswami**

Student, Sagar Institute of Research Technology & Science-Pharmacy, Bhopal.¹

Assistant professor, Sagar Institute of Research Technology & Science-Pharmacy, Bhopal.²

Director, Sagar Institute of Research Technology & Science-Pharmacy, Bhopal.³

Article Received: 30 April 2026

Article Revised: 20 May 2026

Published on: 10 June 2026

*Corresponding Author: Aasim Ahmad Siddique

Student, Sagar Institute of Research Technology & Science-Pharmacy, Bhopal.

DOI: <https://doi-doi.org/101555/ijrpa.3726>

ABSTRACT

The present study focuses on the formulation and evaluation of a herbal face pack using natural ingredients for improving skin health and appearance. Herbal cosmetics have gained significant importance due to their safety, effectiveness, and minimal side effects compared to synthetic cosmetic products. The objective of this research was to develop a herbal face pack possessing cleansing, anti-acne, anti-inflammatory, antioxidant, and skin-nourishing properties. Various herbal ingredients such as *Azadirachta indica*, *Curcuma longa*, *Aloe vera*, *Santalum album*, and *Ocimum tenuiflorum* were selected due to their beneficial effects on skin care and protection. The herbal powders and extracts were blended in suitable proportions to prepare the face pack formulation. The prepared formulation was evaluated for various physicochemical parameters including color, odor, appearance, pH, consistency, spreadability, washability, irritancy, particle size, and stability studies. The antimicrobial and antioxidant activities of the formulation were also assessed to determine its effectiveness in skin protection and cleansing. The evaluation results demonstrated that the formulated herbal face pack possessed good physicochemical stability, acceptable pH, smooth texture, easy spreadability, and no signs of skin irritation. The formulation showed effective cleansing action, reduction in excess oil, and improvement in skin freshness and complexion. The study concludes that the developed herbal face pack can be used as a safe, natural, and effective skincare formulation for maintaining healthy and glowing skin.

KEYWORDS: Herbal face pack, Skin care, *Azadirachta indica*, *Curcuma longa*.

I. INTRODUCTION

Since the ancient era, people are aware of the use of plants for the essential needs of a healthy and beautiful skin. Cosmetics are products used to clean, beautify and promote attractive appearance. Skin of the face is the major part of the body, which is a mirror, reflecting the health of an individual. A balanced nutrition containing amino acids, lipids and carbohydrates are required for the skin to keep it clear, glossy and healthy. In ancient 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 the natural remedies like plants extracts for various cosmetics purposes like neem, aloe vera, tulsi, orange peel, rose etc. Herbal cosmetics are the products which are used to purify and beautify 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. People have rough skin and when they don't take sufficient care, then the skin turns dark due to overexposure to the sun, other pollutants etc. In this article we have formulated herbal face pack to whiten, lighten and brighten the skin naturally for men and women. This face pack has natural skin lightening property 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 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. A good herbal face pack must supply necessary nutrients to the skin, available in the form of free-flowing powder applied facially for the external purpose. It should penetrate deep down the subcutaneous tissues to deliver the required nutrients. Every type of skin is specific for the requirement of skin pack. Nowadays different types of packs are available separately for the oily, normal and dry skin. Face packs are used to increase the fairness and smoothness of the skin. It reduces wrinkles, pimples, acne and dark circles of the skin. Face packs which are recommended for oily skin prone to acne, blackheads, usually control the rate of sebum discharge from sebaceous glands and fight the harmful bacteria present inside acne lesion. The leftover marks of skin can be reduced by incorporation of fine powders of sandalwood, rose-petals and dried orange peels. 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 larger shelf life. They have no added preservatives. They can be easily formulated and stored over a larger span of time. Present research article deals with the formulation and evaluation of herbal face pack for glowing skin by using natural materials i.e., multani mitti, turmeric, sandalwood, saffron, milk powder, rice flour, orange peel, banana peel.

II. TYPE OF SKIN PROBLEM IN FACE

Dark circle: Periorbital hyperpigmentation (POH) or darkish circles beneath the eyes is a completely frequent subject amongst each younger and grownup sufferers of any pores and skin type. POH interferes with perceived age. We outline POH because the incidence of bilateral hyperchromatic macules and patches typically affecting the decrease eyelids. This hyperpigmentation also can be gift on the higher eyelids, malar region, eyebrows, and neighboring regions. The etiology of POH is multi factorial. Volume loss and tear trough, pores and skin laxity and translucent pores and skin, outstanding vasculature or blood stasis, immoderate pigmentation, allergy, asthma, atopic dermatitis, and orbital adipose tissue prolapse are contributing factors in POH. Several scientific tablets might also additionally purpose POH, which include prostaglandins or imatinib.



Fig 1: Dark circle.

Pimples and acnes: Medically, pimples termed as pimples vulgaris .a not unusual place shape of pores and skin ailment that includes the oil glands at the bottom of hair follicles. Acne is a contamination of the pores and skin. It normally takes place in the course of puberty while the sebaceous (oil) glands come to life. The said glands are inspired via way of means of male hormones produced via way of means of the adrenal glands of each man in addition to females.



Figure 2: Type of face acne.

Black heads: Blackheads are shaped whilst the blocked follicle is open to the air. The sebum acquires a blackish colour due to the oxidation of the fats through atmospheric oxygen, in addition to from the darkish pigment produced through the keratinocytes of the hair follicle. They seem like black or yellowish spots and may be squeezed out, aleven though this isn't always suggested for worry of scarring. The black colour isn't always because of dirt [16].



Figure 3: Black heads.

Rosacea: Rosacea is a continual facial pores and skin situation characterised with the aid of using marked involvement of the relevant face with temporary or chronic erythema, inflammatory papules or pustules, telangiectasia, or hyperplasia of the connective tissue [37]. Transient erythema, or flushing, typically lasts much less than 5 minutes and might unfold to the neck and chest, often followed with the aid of using a sense of 6 warmth. Less not unusualplace findings consist of erythematous plaques, scaling, edema, phymatous changes (thickening of pores and skin because of hyperplasia of sebaceous glands), and ocular signs and symptoms. Rosacea may be related to low selfesteem, embarrassment, and diminished first-rate of life. In a country wide survey, 65% of sufferers with rosacea said signs and symptoms of depression.



Figure 4: Rosacea.

Face Pack: Face packs are the sooth powder is mainly used for facial skin. these types of preparations are applied on the face in the form of liquid and semisolid basically paste and allow to stand until face get dry to form a film of layer which h gives tightening, straitening

and cleaning effect on skin. These preparations are usually allowed to skin for 20-25 minute and weight for water evaporation from the formulation, that can be easily removed in the form of film. The warmth and tightening impact produced via way of means of the soft of the face pack produces the stimulating sensation of a rejuvenated face, even as the colloidal and adsorption clays utilized in those arrangements put off the dust and grease from the pores and skin of the face. When the implemented face pack is on the skin it removed.

III. METHODOLOGY

Present research article deals with the formulation and evaluation of herbal face pack for glowing skin by using natural ingredient i.e., multani mitti, turmeric, sandalwood, saffron, milk powder, rice flour and orange peel. They were purchased from local market in the form of dried powder. The powder of banana peel was prepared by shade drying commercially. All ingredients authenticated at Botany department of SIRTIS-P. The details of the natural ingredient used for the formulation of herbal face pack are mentioned.

1. Multani Mitti :-

Synonyms: - Floridin, multani mitti.

History: The word Fuller's earth is derived from the ancient process of cleaning or pulling wool to remove oil and dust particles with a water slurry of earth.

Source: Fuller earth is mined in open quarry. It is a non-plastic type of kaolin, containing aluminium magnesium silicate.



2. Turmeric: -

Synonyms: Saffron Indian; haldi (Hindi); Curcuma; Rhizoma cur-cumae.

Biological Source: Turmeric is the dried rhizome of *Curcuma longa* Linn. (syn. *C. domestica* Valetton), belonging to family Zingiberaceae.



3. Sandal Wood: -

Synonyms: Chandan, sandal, yellow sandalwood, lignum.

Biological Source: Sandalwood is obtained by distillation of sandalwood, *Santalum album* Linn., belonging to family Santalaceae.



4. Milk Powder: Milk powder 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.



5. Saffron: -

Synonyms: Crocus, Spanish, Saffron, French Saffron.

Biological Source: Saffron is the dried stigma and styletops of *Crocus sativus* Linn., belonging to family Iridaceae.



6. Orange Peel:

Synonyms: Citrus vulgaris, Citrus bigaradia, Citrus aurantium amara, Biga-rade orange, Bitter orange, Seville orange, (Sweet) Portugal orange, China orange, Citrus dulcis, Cortex aurantii amar L, Seville orange peel

Biological Sources: The orange peel is the fresh or dried outer part of the pericarp of Citrus aurantium Linn, belonging to family Rutaceae. **ollection and Preparation:-** Orange Peel is cultivated in Mediterranean countries and England. The peel should be removed with as little of white zest' as possible. Hand cut English dried peel is most esteemed. The peel may be removed in four quarters or in spiral band. It is also found in thin strips similar to those found in marmalade cut by machines. They so called maltese is of this type which is known as 'gelatin cut'.



Table 1: Formulation Table.

1	Multani mitti	10g
2	Sandalwood	5g
3	Milk powder	10g
4	Dry Neem powder	10g
5	Orange peel	10g
6	Turmeric powder	5g

IV. LITERATURE REVIEW

Rani S. and Hiremanth R. (2015) carried out a study on the formulation and evaluation of poly-herbal face wash gel using various herbal ingredients possessing cleansing, antimicrobial, and skin nourishing properties. The researchers emphasized the importance of herbal cosmetics due to their safety, natural origin, and reduced side effects compared to synthetic cosmetic preparations. In their study, herbal extracts were incorporated into gel formulations and evaluated for physicochemical parameters such as pH, viscosity, spreadability, homogeneity, foamability, and skin irritation. The results indicated that the prepared herbal face wash gel showed good cleansing action, acceptable stability, and compatibility with skin. The study concluded that poly-herbal formulations provide effective skincare benefits while maintaining consumer safety and acceptability.

Okereke J. N., Udebuani A. C., Ezeji E. U., Obasi K. O., and Nnoli M. C. (2015) reviewed the possible health implications associated with cosmetic products and highlighted the adverse effects caused by prolonged use of synthetic chemicals in cosmetics. Their review discussed the presence of harmful substances such as parabens, heavy metals, artificial fragrances, and preservatives that may lead to skin allergies, irritation, dermatitis, hormonal imbalance, and other health complications. The authors emphasized the growing demand for herbal and natural cosmetic products because of increasing consumer awareness regarding cosmetic safety. The study suggested that plant-based cosmetic formulations offer safer alternatives with fewer toxic effects and improved biocompatibility with human skin.

Mary P. Lupo (2001) discussed the importance of antioxidants and vitamins in cosmetic formulations and their beneficial role in skin protection and rejuvenation. The study explained that antioxidants such as vitamins A, C, and E help neutralize free radicals generated by ultraviolet radiation and environmental pollutants, thereby reducing oxidative stress and premature skin aging. The author highlighted the role of vitamins in improving skin hydration, collagen synthesis, elasticity, and overall skin appearance. The research also emphasized that incorporation of natural antioxidant-rich herbal ingredients into cosmetic preparations enhances therapeutic value and provides protection against various dermatological problems.

Sowmya K. V., Darsika C. X., Grace F., and Shanmuganathan S. (2015) developed and evaluated a poly-herbal face wash gel containing herbal ingredients with antimicrobial and anti-inflammatory activities. The study focused on preparing a stable gel formulation with effective cleansing properties and skin compatibility. Various evaluation tests such as appearance, pH, viscosity, spreadability, foam retention, and irritation studies were performed to assess formulation quality. The authors observed that the herbal face wash gel effectively

removed dirt and excess oil from the skin without causing irritation or dryness. Their work demonstrated the significance of herbal formulations in skincare applications and supported the increasing use of herbal cosmetics in the pharmaceutical and cosmetic industries.

In another similar investigation, Sowmya K. V., Darsika C. X., Grace F., and Shanmuganathan S. (2015) further emphasized the advantages of poly-herbal face wash gels prepared from medicinal plant extracts. Their research highlighted the synergistic effects of combined herbal ingredients in improving skin cleansing, reducing microbial growth, and enhancing skin health. The prepared formulation exhibited good physicochemical stability and acceptable cosmetic properties. The study concluded that herbal face wash gels can serve as effective alternatives to synthetic skincare products due to their natural therapeutic activities and reduced side effects. Millikan Larry E. (2001) explained the concepts of cosmetology, cosmetics, and cosmeceuticals along with their definitions and regulatory aspects. The study differentiated between conventional cosmetics and cosmeceuticals, which possess both cosmetic and therapeutic functions. The author highlighted the increasing popularity of herbal and natural products in dermatology and cosmetic science. Regulatory guidelines for cosmetic safety, labeling, and quality control were also discussed. The research emphasized that scientifically developed herbal cosmetics can provide therapeutic benefits while maintaining aesthetic appeal and consumer safety.

Rieger M. M. in “Harry’s Cosmetology” (2009) provided detailed information regarding cosmetic formulations including face masks, scrubs, and skincare products. The study discussed formulation techniques, selection of ingredients, stability considerations, and evaluation parameters of cosmetic preparations. Particular attention was given to herbal ingredients used in facial applications due to their exfoliating, moisturizing, and rejuvenating effects on skin. The author explained the role of natural substances in improving skin texture, cleansing pores, and promoting healthy skin appearance. This work serves as an important reference in cosmetic formulation and development.

According to information provided by Femina, gram flour possesses several beneficial properties for skincare and has been traditionally used in herbal cosmetic preparations. Gram flour helps remove excess oil, exfoliate dead skin cells, brighten complexion, and soothe inflamed skin. It acts as a natural cleansing and anti-acne agent and is widely incorporated into face packs and facial cleansers. The article highlighted the importance of natural ingredients in maintaining healthy and glowing skin without harmful side effects associated with chemical-based cosmetics.

Zinnia (2017) described various Ayurvedic face packs used for glowing skin and emphasized

the therapeutic benefits of traditional herbal ingredients in skincare. The article discussed the use of herbs such as turmeric, sandalwood, gram flour, neem, aloe vera, and rose water in face pack formulations. These herbal ingredients possess antimicrobial, anti-inflammatory, antioxidant, and skin nourishing properties that help improve complexion and maintain healthy skin. The study supported the use of Ayurvedic and herbal cosmetics as safe and effective alternatives for skin care management.

Umadevi M., Pushpa R., Sampathkumar K. P., and Bhowmik D. (2012) reviewed the medicinal importance of rice as a traditional medicinal plant in India. The study explained the nutritional and therapeutic properties of rice and rice-derived products in pharmaceutical and cosmetic applications. Rice contains antioxidants, vitamins, minerals, and moisturizing components that help improve skin texture, reduce inflammation, and protect skin from environmental damage. The authors highlighted the use of rice extracts in herbal cosmetic formulations for enhancing skin softness, fairness, and rejuvenation. Their research demonstrated the significance of traditional medicinal plants in the development of modern herbal skincare products.

V. OBSERVATION AND EVALUATION

Observation-There are following test were preformed to the find out the superiority of herbal face pack.

Organoleptic Evaluation- The Organoleptic evaluation is also called as organoleptic or physical observation which includes observing its color, odor, taste, smell and feeling which studies to evaluate its physical characterwere.

Physicochemical Evaluation- Physicochemical parameters were resolute, counting the determination of ash value, pH and moisture content.

Physical Evaluation- The particle size was tested by the help of microscopy method. The flow property of the dried powder of combined form was evaluated by performing Angle of Repose by funnel method, bulk density and grittiness by physical touching.

Phytochemical evaluation- The aqueous extract of the herbal face pack was evaluated for the presence of different phyto-constituents as per the standard procedures.

Irritancy test- The Irritancy Test is performed to determine if a product has the tendency to affect skin irritation when used by consumers. By penetrating through the skin's outer layer, several cosmetic items might irritate the skin.

Antimicrobial Evaluation- The antimicrobial activities of all prepared formulations were determined with the help of modified agar well diffusion methods. This method is very useful for the evaluation of any formulation that used for any skin disease treatment.

VI. RESULTS AND DISCUSSION

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

Physical Evaluation (powder property): - Herbal face pack was evaluated for physical parameters (powder property) showed in the Table Rheological findings justified the flow (powder) properties of the herbal face pack. It was found to be a free-flowing and non- sticky in nature.

Table 2: Evaluation of flow properties.

Sr. No.	Parameter	Observation
1.	Tapped density	1.326gm/ml
2.	Bulk density	1.09gm/ml
3.	Angle of repose	32.510
4.	Hausner's ratio	1.232
5.	Carr's index	22.93%

Irritancy Test: - The results of irritancy test were shown in Table. The formulation showed absence of irritation, redness and swelling during irritancy studies. This formulation have safe to use on skin.

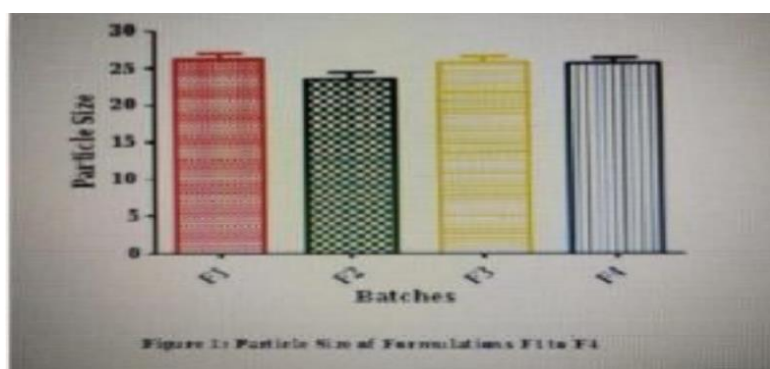
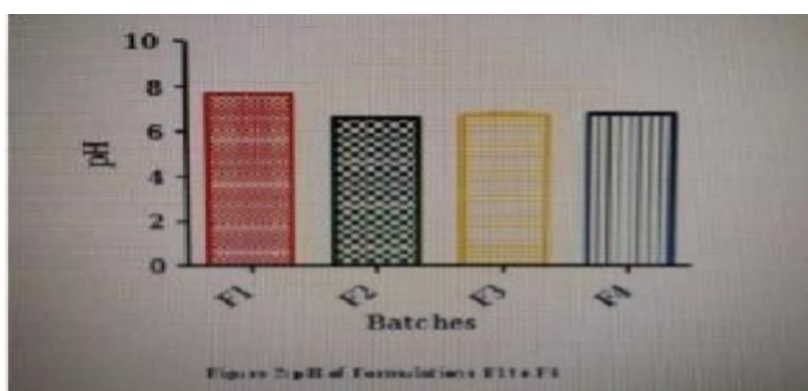
Table 3: Irritancy Test.

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

Stability Studies:- The results of stability were shown in Table. No change in color, odour, texture and smoothness was observed at mentioned conditions of stability except pH.

Table 4: Stability Test.

Sr. No.	Parameter	Room temperature
1.	Color	No change
2.	Odour	No change
3.	Texture	Fine
4.	Smoothness	Smooth



VII.CONCLUSION

Natural and Ayurvedic treatments are widely regarded as safer and less likely to cause adverse effects compared to chemical alternatives. Herbal face packs, in particular, offer several benefits, including stimulating blood circulation, rejuvenating facial muscles, maintaining skin elasticity, and cleansing the skin, especially from pores. Herbal cosmetics are valued for their safety and reduced risk of allergic reactions. The face packs we developed have proven to be beneficial, economical, and effective, meeting all assessment parameters. They demonstrate a significant ability to enhance skin radiance and overall health. The natural face packs are effective in treating acne, pimples, scars, and marks, while also providing soothing, calming,

and cooling effects on the skin. They help control premature aging, reduce wrinkles and fine lines, and improve skin firmness. Our formulation combines natural ingredients like Multani Mitti, Turmeric, Aloe Vera, Sandalwood, Orange Peel, Neem, and Saffron, which are all known for their beneficial properties. This blend provides a comprehensive solution for maintaining and enhancing skin health.

REFERENCES

1. Rani S, Hiremanth R. Formulation & Evaluation of Poly-herbal Face wash gel. *World J Pharm Sci.*, 2015; 4(6): 585-8.
2. Okereke JN, Udebuani AC, Ezeji EU, Obasi KO, Nnoli MC. Possible Health Implications Associated with Cosmetics: A Review, *Sci J Public Health*, 2015; 3(5- 1): 58-63. 3.
3. Mary P. Lupo. Antioxidants and Vitamins in Cosmetics. *Clin Dermatol*, 2001; 19: 467-473.
4. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S. Formulation & Evaluation of Poly-herbal Face wash gel. 4(6): 585-588. *World J Pharm & Pharma Sci.*, 2015; 4(6): 585-8.
5. Sowmya KV, Darsika CX, Grace F, Shanmuganathan S. Formulation & Evaluation of Poly-herbal Face wash gel. *World J Pharm Pharm Sci.*, 2015; 4(6): 585-588.
6. Millikan, Larry E. Cosmetology, Cosmetics, Cosmeceuticals: Definitions and Regulations. *Clin Dermatol*, 2001; 19(4): 371-374.
7. Rieger MM. Harry's Cosmetology. In: Chapter 23, Face, Body& Hair Masks & Scrubs. 8th ed. vol I. New York: Chemical Publishing Co., Inc., 2009; 471-483. 8
8. <https://www.femina.in/beauty/benefits-of-gramflour-for-skin>
84681.html#:~:text=Gram%20flour%20has%20certain%20properties,production%20and%20soothe s%20inflamed%20skin.
9. Zinnia. Ayurvedic Face Packs for Glowing Skin. *Style Craze*, Feb 2017 [cited 2017 Apr 24]. Available from: <http://www.stylecraze.com/articles/5-ayurvedic-facepacks-for-glowing-skin>.
10. Umadevi M, Pushpa R, Sampathkumar KP, Bhowmik D. Rice-traditional medicinal plant in India. *Journal of Pharmacognosy and Phytochemistry*, 2012 May 1; 1(1): 6- 12.