



Preparation and Standardization of herbal facepack : A Review

Loreno Khuvung*, Arvind Farswan, Dr.Shivanand Patil

Department of Pharmaceutical Science, Shree Dev bhoomi Institute Of Education Science and Technology

ABSTRACT

Herbal face packs have been used for centuries to improve skin health and treat various skin conditions. A combination of natural ingredients, such as sandalwood, green tea, vitamin C, turmeric fuller earth (Multani mitti) and cinchona, are commonly used in herbal face packs to provide a range of benefits for the skin. In this review article, we examine the scientific evidence supporting the use of these ingredients in herbal face packs and their associated benefits. Sandalwood has been shown to have anti-inflammatory and anti-aging properties, while green tea contains antioxidants and polyphenols that protect against UV radiation damage and premature aging. Vitamin C is a potent antioxidant that can brighten and even out skin tone, and turmeric has anti-inflammatory and wound-healing properties. Multani mitti helps to absorb excess oil and unclog pores, while cinchona contains quinine, which has been shown to have antiseptic and anti-inflammatory properties. When combined, these natural ingredients can work together to provide a range of benefits for the skin, including improved texture, reduced inflammation, and protection against oxidative damage. This review article aims to provide a comprehensive understanding of the potential benefits of using a herbal face pack containing sandalwood, green tea, vitamin C, turmeric, multani mitti, and cinchona, and highlights the need for further research in this area.

KEYWORDS: Skin complexion, face pack, standardization.

INTRODUCTION

Cosmetics are goods sold over the counter that try to improve the appearance of the skin by cleansing, beautifying, to increase appeal. Since ancient times, herbs have been used for managing, rejuvenating, and cleaning them. (1)The greatest area of skin on the body, the skin of the face is a good indicator of how healthy someone is.(2) It needs a well-balanced diet to stay clean, bright, and healthy because it is made up of components including amino acids, lipids, and carbohydrates.(3).In Ayurveda, a herbal paste known as "mukhalepa" is applied on the face for therapeutic purposes. This herbal paste is applied to the face to cure pigmentation, scars, marks, and acne.(4) Herbal face packs have been used for centuries in many cultures around the world for their natural and chemical-free properties to promote healthy skin. Green tea, cinchona bark, and vitamin C are three ingredients that have been used for their numerous benefits for skin health. These ingredients have been used in traditional medicine for many years and have been studied for their potential use in skincare. Green tea has been used for medicinal purposes for thousands of years in Asia. In traditional Chinese and Indian medicine, it has been used to treat various ailments such as headaches, depression, and digestive problems. In recent years, green tea has gained popularity in skincare due to its antioxidant properties that help protect the skin from oxidative stress caused by free radicals. Studies have shown that green tea can also reduce inflammation, improve skin hydration, and reduce the signs of aging (5).



Cinchona bark has been used for centuries by the indigenous people of South America to treat fevers and other illnesses. In the 17th century, it was introduced to Europe and became known as the "fever tree" due to its ability to treat malaria. Cinchona bark contains quinine, a compound that has anti-inflammatory and anti-microbial



properties. It has been used in skincare to reduce inflammation, redness, and irritation (6).

Vitamin C has been used in skincare for many years due to its role in collagen synthesis. In the early 20th century, sailors on long sea voyages developed scurvy due to a lack of vitamin C in their diet. It was later discovered that vitamin C was essential for collagen production, which is important for skin elasticity and wound healing. Vitamin C has been studied for its ability to reduce the signs of aging, brighten skin tone, and protect the skin from environmental damage (7).



In this review article, we will discuss the benefits of using a herbal face pack containing green tea, cinchona bark, and vitamin C for skin health. We will also provide step-by-step instructions on how to make and use the face pack, as well as potential side effects to be aware of.

LITERATURE REVIEW

1. Yadav N et al.,(2015)- Formulated a herbal facepack containing Multani mitti, Manjistha, Haridra, Rakta chandan and lodhra from the local market. The results were found to be effective which helped to maintain the elasticity of the skin.(8)
2. Yogendra et al.(2017),- Formulated a herbal facepack containing Multani mitti, green tea, saffron, gram flour, turmeric, sheet chandan and milk powder . The results showed a positive result and was useful for the skin.(9)
3. Anil Kumar V et al.,(2020)- Formulated a herbal facepack containing turmeric, rice flour, gram flour, rose powder, tomato powder, orange peel powder. Sandalwood powder, milk powder, camphor powder. The Results of this study scientifically verified that herbal face pack having enough potential to give efficient glowing effect on skin.(10).
4. Avinash O Maske et al.,(2019)- Formulated a herbal facepack containing multani mitti, turmeric, sandalwood, saffron, milk powder, rice flour, orange peel. The results study scientifically verified that herbal face pack having enough potential to give efficient glowing effect on skin.(11)
5. Rokade Priya et al.,(2017)- Formulated a herbal facepack containing dried powder of neem leaves (*Azadirachta indica*), the fruits of nutmeg (*Myristica fragrance*), papaya (*Carica papaya*),turmeric (*Curcuma amada*), Masoor Daal (Red Lentil), Gram Flour (*Fabaceae*), The results showed good antimicrobial activity when compared to and the results of formulation was very nearer compared to standard drug which clearly indicates that the prepared formulate face pack best suits for the skin.(12).
6. Mr. Kg Bhutkar et al.,(2019)- Formulated a herbal facepack containing s. Kaoline, tragacanth, orange peel powder, neem powder, chandan powder, aloe juice powder, turmeric powder , Fullers earth and Cicer arientinum Powder. The results were positive which showed good effect on the skin and reduce the pores and wrinkles of the skin.(13)
7. Saloni Jain et al., ((2022)- Formulated a herbal facepack containing s. Amla (*Emblica officinalis*), masoordaal (*Lens culinaris*), and rose petals. The results showed that the product was physiochemically stable and and have the properties of a conventional cosmeceutical skincare formulation.(14)

8. Sachin Bhagwat et al.,(2018)- Formulated a herbal facepack containing multani mitti, turmeric, aloe vera, sandalwood, lemon peel, rose petal powder, manjistha, lodhra and gram flour. The results showed that that the product was physiochemically and microbiologically stable and possessed characteristics of a standard cosmeceutical formulation for skincare.(15)
9. Roshan Yadav et al.,(2022)- Formulated a herbal facepack containing g multani mitti, orange peel, neem, and aloe vera. The results showed that it increased the blood flow and improve the elasticity of the skin.(16)
10. Chavan Ankita et al.,(2022)- Formulated a herbal facepack containing liquorice, Multani mitti, rose powder and Chandan . The result showed that the facepack were good in physical parameters and free from skin irritation. (17)
11. Lodhe et al., (2021)- Formulated a herbal facepack containing manjistha, absorbent clay, Arjuna, amla. The result showed that the facepack was excellent for oily skin because of the presence of absorbent clay. (18)
12. Abhishek Kadubra Nagri et al.,(2022)- Formulated a herbal facepack containing Multani mitti, manjistha, haridra, sandalwood, aloe vera. The result showed that the facepack stimulate the blood circulation and maintain the elasticity of the skin.(19)
13. Kanungo et al.,(2017)- Formulated a herbal facepack containing chandan, manjistha, masur dal, besan. The result of the formulated facepack showed that it was compatible with normal skin and gave a glowing complexion.(20)
14. VK Redasani et al.,(2020)- Formulated a herbal facepack containing hibiscus, sandalwood, Multani mitti, orange peel,Turmeric and neem. The result showed that it increase the blood circulation within the facial veins.(21)
15. Aditya Singh et al.,(2022)- Formulated a herbal facepack containing Multani mitti, turmeric, sandalwood, orange peel, neem and nutmeg. The result showed that the facepack was found to be good in physical properties and microbiological stability.(22)
16. Priti R Neware et al.,(2022)- Formulated a acne prone facepack containing orange peel, multani mitti, tomato , rice powder, sesame seeds. The result showed the presence of good properties of facepack.(23)
17. Yash Kamble et al.,(2023)- Formulated a multi herbal facepack containing Multani mitti, manjistha, haridra, Rakha Chandan and lodhra. The result showed thatit stimulate the blood vessels and remove the dust from the skin pores.(24)
18. Sanket A Avhad et al.,(2022)- Formulated a poly herbal facepack containing hibiscuas orange peel, Multani mitti, turmeric and neem. The result showed that it was helpful in improving the fairness and smoothness of the skin. (25)
19. Aman Kumar et al.,(2022)- Formulated a herbal facepack containing turmeric , sandalwood, and manjistha. The result showed that it rejuvenate and tighten the skin.(26)
20. B.Greeshma Paul et al.,(2021)- Formulated a herbal facepack containing cucumner extract, aloe vera, turmeric ,neem, orange peel,notus petals,and tea tree leaves. The result showed that it remove the blemishes on the face and provide a clear skin(27)
21. Prerna et al.,(2023)- Formulated a herbal facepack containing cinnamon powder, neem powder,rose petals, saffron, aloe vera powder, and sandalwood powder. The result showed it removes the dirt from the ski and was found good in pimple treatment.(28)

MATERIALS AND METHODS

The crude medicines used in this study were carried from the near original area. All the constituents were washed, shade dried and pulverized finely for farther use. The following constituents were used for the medication of this polyherbal face pack expression.

Multani Mitti, Sandalwood, Turmeric, Green Tea, Cinchona, and Vitamin C are all natural constituents that have been used in traditional drug systems for their implicit health benefits. Then are some of their uses supported by scientific substantiation

1. Fuller Earth(Multani Mitti); Multani Mitti has natural spongy parcels, making it effective in removing redundant oil painting and contaminations from the skin. It can also ameliorate skin complexion, slip the skin, and soothe skin vexation. A study published in the Journal of medicines in Dermatology set up that a Multani Mitti face pack significantly reduced oiliness in individualities with unctuous skin(29).



2. Sandalwood Sandalwood has anti-inflammatory and antibacterial parcels, making it useful in treating acne and other skin vexations. A study published in the Journal of Ethnopharmacology set up that sandalwood oil painting has potent antibacterial exertion against several strains of bacteria, including the acne- causing Propionibacterium acnes(30).



3. Turmeric Turmeric has antioxidant and anti-inflammatory properties, making it effective in treating a variety of skin conditions. A study published in the Journal of Cosmetic Dermatology set up that a turmeric-based cream improved skin pliancy and hydration in individuals with dry skin (31)



4. Green Tea Green tea contains catechins, which have antioxidant and anti-inflammatory properties. A study published in the Journal of the American Academy of Dermatology set up that a topical green tea extract reduced acne lesions in individuals with mild to moderate acne (32).



5. Cinchona -Cinchona contains quinine, which has antimalarial and anti-inflammatory properties. A study published in the Journal of Natural Products set up that cinchona bark extract had anti-inflammatory activity in vitro (33)

6. Vitamin C Vitamin C has antioxidant properties, making it effective in guarding the body from damage caused by free radicals. It's also important in collagen synthesis, wound healing and maintaining healthy skin. A study published in the Journal of Cutaneous and Aesthetic Surgery set up that a topical vit C medication improved skin texture and reduced the appearance of fine lines and wrinkles in individuals with photodamaged skin (34)



Formulation

Ingredient	Benefits for Skin
Fuller Earth	Absorbs excess oil and impurities, unclogs pores, and exfoliates dead skin cells. (35)
Sandalwood	Has anti-inflammatory, antiseptic, and astringent properties that soothe irritated skin, prevent acne, and even out skin tone. (36)
Turmeric	Has antibacterial and antifungal properties that prevent acne and reduce inflammation, and is also a natural skin brightener. (37)
Green Tea	Contains antioxidants that protect against environmental damage and fight inflammation, and also has astringent properties that tighten and tone skin. (38)
Cinchona	Has anti-inflammatory and antimicrobial properties that soothe skin irritations and prevent breakouts. (39)
Vitamin C	Boosts collagen production, brightens skin, and protects against sun damage and environmental stressors. (40)

PROCEDURE OF FORMULATION

Step1: The mentioned accoutrements were directly counted using a digital balance and also collectively base in a mortar and pestle.

Step 2 The specified volume of these maquillages is combined.

Step 3 To gain a fine texture, the grease paint and mixture in step 2 is put through sieve number 120. Step 4 To prepare the herbal face pack greasepaint for unborn operation, keep it in a tone- sealing polythene bag.

Procedure of Face Pack Application

Take set face pack greasepaint in a coliseum as per the demand and add water to mix. Mix well and apply over the facial skin. Cover the acne and mars spots too. Kept as it's for complete drying for 20 to 25 min and also wash with cold water.

Ways for Evaluation

To insure that the set face pack was superior, the following evaluation criteria were used;

Organoleptic Assessment

Its nature, colour, odour, feel, and thickness are organoleptic factors that were assessed for their physical characteristics.(41)

Irritation test

Mark a 1 square centimetre region on the left rearward face. The named region entered a specific number of set face packs, and the operation time was recorded. irritation, erythema, and edema were examined and reported at regular intervals for over to 24 hours.(42)

Stability Studies

For batch B3, stability testing of the developed expression involved storing it under colorful temperature conditions for a month. The packed glass vials of expression were examined for physical characteristics similar colour, odour, pH, thickness, and feel while being stored at room temperature and 35 °C.(43)

Determination Of humidity Content

Place 1.5 g of the medicine's powdered form in a demitasse dish that has been gauged and is flat and thin. Set in the roaster at 100 °C or 105 °C until there's no further than a 0.5 mg difference between two consecutive weights. Desiccate and weigh after cooling. generally, the weight loss is reported as humidity(44).

Determining The Prepared Pack's Rheological rates

For the expression, physical variables such the Untapped(Bulk) viscosity, the Tapped viscosity, the Angle of Repose, Hausner's rate, and Carr's Index were measured and reckoned. The adaptation of patches or grains to pack themselves tightly together is ascertained to as bulk viscosity(45, 46). $\frac{D}{D'}$, where D is the tapped viscosity and D is the bulk viscosity, is the formula for the Hausner's rate. Carr's indicator aids in quantifying greasepaint inflow.

Angle of repose

It's defined as the maximum angle possible in between the face of pile of greasepaint to the vertical inflow.

Bulk viscosity

Bulk viscosity is the rate between the given mass of a greasepaint and its bulk volume. needed quantum of the greasepaint is dried and filled in a 50 ml measuring cylinder up to 50 ml mark. also the cylinder is dropped onto a hard wood face from a height of 1 inch at 2 alternate intervals. The volume of the greasepaint is measured. also the greasepaint is counted. This is repeated to get average values.

The Bulk Density is calculated by using the below given formula.

Bulk viscosity = Volume/ Mass

Tapped viscosity

Tapped viscosity is an increased bulk viscosity attained after mechanically tapping a vessel containing the greasepaint sample. After observing the original greasepaint volume or mass, the measuring cylinder or vessel is mechanically tapped for 1 min and volume, or mass readings are taken until little farther volume or mass change was observed. It was expressed in grams per boxy centimeter(g/ cm³). Phytochemical webbing The waterless excerpt of the herbal face pack was estimated for the presence of different phytoconstituents as per the standard procedures(47)

Shinoda test

A many magnesium turnings were dissolved in an waterless result, and one or two drops of strong hydrochloric acid were added. The development of a pink tinge denotes the presence of flavanoids. Test for lead acetate A small quantum of 10 lead acetate result was added to an waterless result. Pour that's unheroic in colour suggests the presence of flavonoids.

Salkowski Test

Chloroform(2 ml) and concentrated sulphuric acid(3 ml) were precisely combined with the waterless result(5 ml) to produce a subcaste. To confirm the presence of terpenoids, the contact developed a sanguine- brown tinge. flyspeck Size flyspeck size is a characteristic that influences numerous aspects, including spreadability and grit, among others.

PH

PH of 1 waterless result of the expression was measured by using a calibrated digital pH cadence at constant(48)

Wash capability

This is the common system for checking the marshland capability of the expression. The expression was applied on the skin and also ease and extent of washing with water were checked manually by using 1 liter of water is used to remove all content of the expression were applied on the face(49)

Microbial Assay

The antibacterial conditioning of all four phrasings were determined by modified agar well prolixity system. In this system, nutrient agar plates were planted with 0.2 ml of 24 h broth culture of *Escherichia coli* and *Staphylococcus aureus*. The agar plates were allowed to solidify. A sterile 8 mm borer was used to cut wells of equidistance in each of the plates. 0.5 ml of phrasings, herbal excerpts were introduced into the wells at aimlessly. The plates were incubated at 37°C for 24 hours. (50)

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