International Journal of Pharmacy and Biological Sciences
ISSN: 2321-3272 (Print), ISSN: 2230-7605 (Online)
IJPBS™ | Volume 8 | Issue 4 | OCT-DEC | 2018 | 49-52
Research Article | Pharmaceutical Sciences | Open Access | MCI Approved| ज्ञान-विज्ञान विमुक्तये
|UGC Approved Journal |

FORMULATION AND EVALUATION OF HERBAL FACE PACK

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ABSTRACT

The objective this work is to formulate and evaluate an herbal face pack for cosmetic purpose from herbal ingredients like multani mitti, turmeric, aloe vera, sandalwood, lemon peel, rose petal powder, manjistha, lodhra and gram flour were procured from the local market and were dried, powdered, then passed through sieve no #120, mixed geometrically and evaluated for its organoleptic and physico-chemical, general powder, microscopical characters and chemical evaluation. The dried powder of combined form had passable flow property which is suitable for a face pack. Particle size of the powder was found to be 22.3±2.25 µm. The microscopical characters of dried powder of combined form were noted Herbal face packs or masks are used to stimulate blood circulation, rejuvenates the muscles and help to maintain the elasticity of the skin and remove dirt from skin pores. The advantage of herbal cosmetics is their nontoxic nature, reduce the allergic reactions and time-tested usefulness of many ingredients. Thus, in the present work, we found good properties for the face packs and further optimization studies are required on this study to find the useful benefits of face packs on humanuse as cosmetic product.

KEY WORDS

Face Pack, Cosmetics, Natural, Standardization, Formulation, Evaluation

INTRODUCTION

Cosmetics are defined as the products used for the purposes of cleansing, beautifying, promoting attractiveness or alternating the appearance[1]. From the ancient time, different herbs are used for cleaning, beautifying and to manage them. Face skin is the major part of the body, which indicates the health of an individual[2, 3]. 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[4]. Face pack is the smooth powder which is used for facial application. 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[5]. 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. These face packs increase skin glow and are best ayurveda treatment to increase fairness. Facepacks are one of the oldest and beautiful methods of cleansing skin. There are various kinds of face packs described in Ayurveda which have nourishing, healing, cleaning, astringent and antiseptic properties. Herbal face packs are cheaper and have no side effects for getting fair skin naturally[6]. Present research article deals with the formulation and evaluation of herbal face pack for glowing skin at home by using natural materials i.e., multani mitti, turmeric,

aloe vera, sandalwood, lemon peel, Rose petal powder, manjistha, lodhra and gram flour.

MATERIALS AND METHODS

The materials used in the present purchased from local market, powdered for further use. The below are the details of the plant materials study. The details of the plant material used for the formulation of face pack are mentioned below.

Multani Mitti (Calcium bentonite)

Multani mitti helps skin by different ways like diminishing pore sizes, removing blackheads and whiteheads fading freckles, soothing sunburns, cleansing skin, improving blood circulation, complexion, reducing acne and blemishes and gives a glowing effect to a skin as they contain healthy nutrients. Multani mitti will help to make you skin radiant and excellent for aggravated and irritated skin. Multani mitti is rich magnesium chloride[7].

Turmeric *(Curuma longa)*

Haridra has anti-inflammatory and anti-allergic activity. It is best blood purifier and helps in wound healing. It possesses best blood purification action so it is used in all disease with blood impurities origin. Haridra is rejuvenator of skin and revitalizes skin; delays the signs of aging like wrinkles[8].

Sandal wood (*Santalum alba***)**

Sandalwood has an anti-tanning and anti-aging property. Sandalwood protects the skin against the impact of environmental pollution and keep the skin cool, fair and healthy. Sandalwood is helpful Ayurvedic herb with antimicrobial properties is used for healing various skin problems and removes scars[8, 9].

Aloe Vera (*Aloe barbadensis***)**

Aloe vera has anti-microbial property rendering it ideal to deal with acne and pimples. Aloe vera is a great moisturizer intended for a skin. Aloe vera powder contains several nutrients like glycerin, sodium palmate, sodium carbonate, sodium palm kemelate, sorbitol[10].

Lemon peel (*Citrus limon)*

The high content of Vitamin C in lemon will help to lighten the skin tone and remove dark spots caused by skin tan. It prevents the skin from free radical damage, skin hydration and oxidative stress[11].

Rose petals powder *(Rosa canina)*

Rose petal powder is rich with the anti-bacterial properties along with the positive effects of Vitamin K, C and B. It also has good amount of antioxidants[12].

Manjishtha (*Rubia cordifolia)*

Manjistha holds the reputation of a very good skincare herb. Used externally and internally, it helps one to gain lustre and glow of the skin and aids to remove pimples, freckles and discoloration. Its paste should be applied in various skin disorders like itching, black spots on the face, pimples, leucoderma[8].

Lodhra *(Symplocos racemosa)*

Lodhra is useful in skin diseases. Its name lodhra in Sanskrit means "that which makes the body firmer." Lodhra nourishes the skin and benefits in acne, wrinkles and other health issues related with skin. It lightens skin colour, reduces skin irritation and benefits for acne, wrinkles and other skin related issues[8].

Gram flour (*Cicer arietinum)*

The high content of zinc in gram flour will help to fight infections that cause acne. It removes dead skin, astringent and protective.

Table 1: Formulation of Herbal Face Pack

Sr. No.	Name of Ingredients	Scientific Name	Quantity of sample for 100g
1	Multani mitti	*Calcium bentonite*	15
2	Turmeric	*Curuma longa*	15
3	Sandal wood	*Santalum alba*	15
4	Aloe Vera	*Aloe barbadensis*	10
5	Lemon peel	*Citrus limon*	10
6	Rose petals powder	*Rosa canina*	05
7	Manjishtha	*Rubia cordifolia*	10
8	Lodhra	*Symplocos racemosa*	10
9	Gram flour	*Cicer arietinum*	10

METHODS OF PREPARATION

The accurate quantity ingredients were weighed and ground into fine powder by using sieve #120. Then the all ingredients were mixed geometrically by serial dilution method for uniform mixing. Then the prepared

face pack was packed into a self-sealable polyethylene bag, labeled and used for further studies[13].

PROCEDURE OF FACE PACK APPLICATION

Take prepared face pack powder in a bowl as per the requirement and add rose water to mix. Mix well and apply over the facial skin. Cover the acne and blemishes spots too. Kept as it is for complete drying for 20 to 25 min and then wash with cold water.

EVALUATION OF FACE PACK

Organoleptic Evaluation

The organoleptic parameters include its nature, color, odor, feel and consistency which were evaluated manually for its physical properties[14].

Physical Evaluation

The particle size was tested by 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 tapped density by Tapping Method[15].

Physicochemical Evaluation

Ash content was performed using incinerator, pH was found by using pH meter and loss on drying was also performed[7].

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, erythema, edema, was checked if any for regular intervals up to 24 hrs and reported[16].

Stability studies

Stability testing of 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 like, Room temperature, 35^{0}C and 40^{0}C and were evaluated for physical parameters like Color, Odor, pH, Consistency and feel[6].

Shinoda test

To the ethanolic extrac, few drops of concentrated hydrochloric acid (HCL) were added. Then the magnesium turnings were put into the solution and observed for appearance of pink red colour.

RESULT AND DISCUSSION

Organoleptic Evaluation

Face pack was prepared and evaluated for **Organoleptic** parameters showed in the Table 2. The flow property parameter showed free flowing properties. The colour of formulation was slight yellow. The odor of prepared formulations was good acceptable which is desirable as cosmetic formulations. Texture and Smoothness was good acceptable which is desirable as cosmetic formulations.

Table 2: Organoleptic Properties

Sr. No.	Parameters	Observation
1	Appearance	Powder (Free Flowing)
2	Colour	Slight Yellow
3	Odour	Slight
4	Texture	Fine
5	Smoothness	Smooth

Physical Evaluation and Physicochemical Evaluation

The particle size of formulations was in the range of 22.3±2.25µm. The pH of formulation lied near to neutral. The ash content and moisture content was within limit.

Table 3: Physical Parameter and Physicochemical Evaluation

Sr. No.	Parameters	Observation
1	Particle size (µm)	22.3±2.25
2	Ash content	94 ± 0.412
3	pH	6.86 ± 0.11
4	Loss on Drying	3.10

Irritancy Test

The results of irritancy test were shown in Table 4. The formulation showed no irritation, redness, edema and Inflammation during irritancy studies. This formulation is safe to use for skin.

Table 4: Irritancy Test

Sr. No.	Parameters	Observation
1	Irritant	No Irritation
2	Erythema	No Irritation
3	Edema	No Irritation

Stability studies

The stability studies showed a slight change in pH of formulation which was stored at 40^{o}C and no changes were observed at room temperature and at 35^{o}C There was no change in color and odour at other mentioned conditions of stability which were showed in Table 5.

Table 5: Parameters of Stability studies of Formulation

Sr. No	Parameters	Observation		
		Room Temperature	35±0.5^{0}C	40±0.5^{0}C
1	Colour	No Change	No Change	No Change
2	Odour	No Change	No Change	No Change
3	pH	6.86 ± 0.21	6.85 ± 0.11	6.78 ± 0.31
4	Texture	Fine	Fine	Fine
5	Smoothness	Smooth	Smooth	Smooth

Shinoda test

Flavonoids are present.

CONCLUSION

In the present scenario, people need cure for various skin problems without side effects. Herbal ingredients opened the way to formulate cosmetics without any harmful effect. Herbal face packs are considered as sustaining and productive way to advance the appearance of skin. Thus, in the present work, it is a very good attempt to formulate the herbal face pack containing naturally available ingredients like multani mitti, turmeric, aloe vera, sandalwood, lemon peel, Rose petal powder, manjistha, lodhra and gram flour. It is suggested that the prepared formulation was physico-chemically and microbiologically stable, and possessed characteristics of a standard cosmeceutical's formulation for skincare.

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Received:04.08.18, Accepted: 07.09.18, Published:01.10.2018

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