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FORMULATION AND EVALUATION OF POLYHERBAL FACE PACK

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ABSTRACT

The objective this work is to formulate and evaluate a polyherbal face pack for cosmetic purpose from herbal ingredients. Neem Powder, Sandalwood, Orange Powder, Turmeric, Alum, Rice Powder, Multani mitti, Kaolin etc. were purchased from the local market and surrounding Area were dried, powdered, then passed through sieve no 100, mixed geometrically and Formulated the Face Pack. After that Evaluated for parameters including morphological, physicochemical, physical, phytochemical, irritancy along with stability examination 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 20-25 μ m. 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.

After Evaluation , In 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 human use as cosmetic product.

Keywords : Face Pack, Cosmetic, Natural, Formulation, Evaluation

INTRODUCTION

Since From Ancient Period Of Time, People Are Aware Of The Use Of Plants For The Healthy, Glowing And Beautiful Skin Cosmetics Are Products Used Clean, Beautify And Promote Attractive To Appearance Cosmetics Are Commercially Available Products That Are Used To Improve The Appearance Of The Skin By Action Of Cleansing. Beautifying, Promoting Attractiveness. Cosmetics are described as the products used to purify, embellish, encourage or alternate the appearance. Various herbs have been used Since ancient times to clean, beautify and treat them.

The herbal pasties, called "Mukhalepa" in Ayurveda, were used as facial therapy. For the treatment of acne, pimple, rash, stains and Pigments, this herbal paste smeared on the Face pack is the smooth powder used for Facial application. Herbal face packs are cheaper and have no side effects to get fair skin Naturally Current research article deals with the formulation and evaluation of herbal face for radiant skin at home using natural materials such as Multani Mitti, turmeric, aloe Vera, sandalwood, lemon peel, rose petal powder, Manjistha, lodhra and gramme flour Various skin types require various kinds of herbal face packs. Homemade natural face packs and masks make way for smooth, healthy and silky skin. In Ayurveda, theki herbal paste applied to the face is known as "mukhalepa" for treating acne, pimples, wounds, stains and pigments "Mukhalepana" is the process of smearing an herbal mix on face. This therapy is now Popularly termed as facial. Face pack is the smooth powder that is used for facial application and a good herbal face pack will supply the skin with the necessary nutrients and should penetrate the subcutaneous tissues to supply the nutrients needed. Face packs are mentioned in ayurveda help women to get rid of Wrinkles, dark circles, pimples and acne. 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. Ayurvedic face packs increase skin Glow and are best ayurveda treatment to increase fairness. Face Packs are helpful for preventive, promotive and curative of any Skin problems.

ADVANTAGES:-

1. They help recover the skin's missing shine and glow in a short period of time.
2. Daily use of the natural face masks gives skin shine, enhances skin texture and taint
3. Helps to reduce, acne, pimple, scars and marks Depending on its herbal ingredients.
4. Face packs usually remove dead cells of skin.
5. These face masks provide a soothing and relaxing Effect on skin.
6. They help to restore the lost shine and glow of skin in short span of time.
7. Regular use of natural face masks bring glow to Skin, improve skin texture and complexion.
8. The harmful effects of pollution and harsh climates Can be effectively combated with judicious use of face Packs.
9. They help to prevent premature aging of skin.
10. Formation of wrinkles, fine lines and sagging of skin Can be effectively controlled by using natural face Packs.
11. Natural face packs make the skin look young and healthy.

DISADVANTAGES :-

1. The One Face pack should not be Apply All Over the Face
2. As every part of our face doesn't has the same type of skin.
3. Sometimes it takes longer duration of time for drying of face pack.
4. It may cause the irritation. Sometimes face pack cause redness to skin.
5. There is difficulty of application of face pack for dry skin person.

MATERIAL AND METHOD OF HERBAL FACE PACK:

The all-natural materials used in the present study i.e. Sandal wood powder, Alum, Kaolin and Aloe vera gel were Purchased From local market in the dried Powder form. Remaining Natural ingredient powders were prepared by shade drying And Grinded to make fine powder by using Size reduction Mill and Grinder such as Turmeric, Rice flour, Neem Powder, orange peel Powder.

Orange Peel Powder:

Orange is a citrus fruit that contains various nutrient sources such as vitamin C, calcium, potassium and magnesium. Protects the skin from damage caused by free radicals, skin moisture and oxidative stress. It also has the property of momentary brilliance and prevents acne, scratches, wrinkles and aging due to the antibacterial, anti-inflammatory and antioxidant effects of various chemical components.

**Neem Powder:**

Neem is anti-inflammatory, antiseptic and highly beneficial for oily and acne prone skin an anti-acne effect is due to antimicrobial, anti-inflammatory and anti-oxidant activities of different chemical constituents.

**Sandal wood:**

Sandalwood has an anti-tanning and anti-getting old belongings. It additionally allows pores and skin in lots of approaches like firming effect, emollient, antibacterial properties, cooling astringent belongings, soothing and recuperation belongings



Aloe vera gel:

Aloe vera is exquisite moisturizer meant for a pores and skin. Aloe vera rejuvenates pores and skin, hydrates this and maintains pores and skin layer searching sparkling all of the time. Aloe vera has anti-microbial belongings rendering it perfect to address zits and pimples. Aloe vera powder carries numerous vitamins like glycerine, sodium palmate, sodium carbonate, sodium palm kemelate, sorbitol.

***Turmeric:***

Turmeric is mainly used to rejuvenate the skin. It delays signs of aging such as wrinkles and has other properties such as antibacterial, antiseptic and anti-inflammatory. It is the best source of blood purifiers. It is effective in treating acne due to its antiseptic and antibacterial effects that fight acne and pimples and give the skin a youthful glow. It also reduces the formation of sebaceous glands.

***Rice Flour :***

Rice is a rich source of many nutrients such as vitamin B, and it helps in making the structure of the skin better. It performed great exfoliation on the skin removing dead cells. It can potentially reduce the appearance of dark spots, pigmentation, and uneven skin tone, resulting in a brighter and more radiant complexion.

***Rose water:***

Rose water made from the distillation of rose petals that turn into rose oil. Nearly 10% to 50% of rose oil is present in rose water, which contains vitamins A, B, C, and Flavonoids and other antioxidants. These antioxidants provide strong cell protection because of their lipid peroxidation inhibitory effects. It is perfect for cleansing your skin and removing any impurities that could cause unwanted spots.

***Bentonite:***

Applying Bentonite Clay to scars, acne marks, and stretch marks can possibly help lighten some skin discoloration. Bentonite clay contains natural minerals such as calcium, magnesium, and iron, which may provide additional benefits.

***Light Kaolin:***

Kaolin clay is suitable for almost all types of skin, especially sensitive skin. It has kaolinite, a mineral that consists of layered silicate. the China Clay reduces oily skin, clears pores and cleanses the skin. It treats acne and tightens and softens the skin. It maintains the pH Level of the Skin.

***Methyl Paraben:***

Parabens mixed in cosmetics serve an important purpose: They prevent harmful Mold, bacteria, and fungi from infecting your products. This helps protect you from infections.



METHODS OF PREPARATION: -

The powdered dried natural ingredients were sieved using #120 mesh, weighed accurately and mixed all materials geometrically for uniform formulation mentioned in following Table The prepared face pack was then stored in an air tight container for evaluation of various parameter.

Sr No.	Name of Ingredient	Scientific Name	Quantity (For 50gm)
1.	Orange Peel Powder	Citrus reticulate	2.5gm
2.	Neem Powder	Azadirachta indica	7.5gm
3.	Sandal wood	Santalum alba	10gm
4.	Aloe Vera Gel	Aloe barbidensis	20ml
5.	Turmeric	Curcuma longa	2.5gm
6.	Rice Flour	Oryza sativa	5gm
7.	Rose water	Rosa damascene	20ml
8.	Bentonite	Absorbent Aluminum Phyllosilicate Clay	10gm
9.	Light Kaolin	Hydrated Aluminum silicate	5gm
10.	Methyl Paraben		0.1gm

METHOD FOR APPLICATION:-

Take 5 grams of the powder mixture containing Multani mitti, sandalwood, orange peel powder, rose petal powder, and neem leaves. Add 3-4 ml of rose water or normal water to get a smooth paste. Apply this paste all over face and allow it to dry for 10-15 minutes. Once the powder dries gently scrub and remove the pack from skin and wash it off using water. The face pack also serves as scrub when rubbed on skin in gentle motion for few minutes.

EVALUATION OF FORMULATION :-

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

Morphological Parameter:

We visually checked morphological parameters such as color, Odor, appearance and texture.

Physicochemical Evaluation:**1) pH: -**

pH of 10 ml aqueous solution of the formulation was measured by using a calibrated digital pH meter at constant value.

2) Loss on Drying: -

Weigh about 2 g of powdered drug into a weighed flat and thin porcelain dish. Dry in an oven at 100 ° C or 105 ° C until the difference between the two consecutive weighing is 0.5 mg or less. Cool with a Desiccator and weigh. Weight loss is usually recorded as moisture.

3) Ash Content: -**a) Total Ash: -**

Value Accurately weighed, about 2 g of crushed, air-dried material is placed in a pre-ignited and tare crucible (usually platinum or silica).

Spread the material over a uniform layer to lighten it and gradually increase the heat to 400-500 ° C until it turns white, indicating the absence of carbon. Cool with a desiccator and weigh immediately. Calculate the total ash content per gram of air-dried material in mg.

b) Water Soluble Ash Value: -

Add 25 ml of water to a pan containing all the ash and bring to a boil for 5 minutes. Collect the insoluble material in a or ashless filter paper. Rinse with hot water and ignite in a crucible at a temperature below 450° C for 15 minutes. Subtract the weight of this residue in me from the weight of the total ash. Calculate the water-soluble ash content per 1 g of air-dried material in mg.

c) Acid Insoluble Ash Value: -

Add 25 ml of hydrochloric acid to a crucible containing whole ash, cover with a watch glass, and bring to a boil slowly for 5 minutes. Rinse the watch glass with 5 ml of hot water and pour this liquid into the crucible. Collect the insoluble material on ash-free filter paper and wash with hot water until the filtrate is neutral. Transfer the filter paper containing the insoluble ingredients to the original crucible, dry it on a hot plate, and let it shine until it reaches a certain weight. Cool the residue in a suitable desiccator for 30 minutes and weigh immediately. Calculate acid- insoluble Ash in mg per gram of air- dried material.

4) Particle Size: -

Particle size is a parameter that affects various properties such as spreadability and particle size. Particle size was determined by a sieving method using an L.P. standard sieve with mechanical shaking for 10 minutes. Immediately. Calculate acid-insoluble ash in mg per gram of air-dried material.

Phytochemical Evaluation: -

Detection of Glycoside

Borntrager's Test:

Add 5-10 ml of diluted HCl to a 1 g face mask, boil in a water bath for 10 minutes and filter. The filtrate was extracted with CCl₄/benzene, an equal volume of ammonia solution was added, the mixture was filtered, and the mixture was shaken. Pink or red formation of ammonium layer due to the presence of anthraquinone units.

Detection of volatile: In face pack 2 g when treated with alcohol solution of volatile oil.

Physical Evaluation (Powder Property): -

a) Tapped Density: -

Tapped density is an accelerated bulk density attained after few routinely tapping a box containing the powder sample. After gazing the preliminary powder quantity or mass, the measuring cylinder or vessel is routinely tapped for 1 min and quantity.

Tapped Density = Mass / Tapped Volume

b) Bulk Density: -

Bulk Density is the ratio between the given mass of a powder and its bulk volume. Required amount of the powder is dried and filled in a 50 ml measuring cylinder up to 30 ml mark. Then the cylinder is dropped onto a hard wood surface from a height of 1 inch at 2 second intervals. The volume of the powder is measured. Then the powder is weighed. This is repeated to get average values.

Bulk Density = Mass / Bulk Volume.

c) Angle of Repose: -

It is defined as the maximum angle possible in between the surface of pile of powder to the horizontal flow. It required amount of dried powder is placed in a cylindrical tube open at both ends is placed on a horizontal surface. Then the funnel should be raised to form a heap. The height and radius of the heap is noted and recorded. For the above method, the angle of repose (θ) can be calculated by using the formula.

$$\theta = \tan^{-1}(h/r)$$

where,

θ - Angle of repose

h -Height of the heap

r - Radius of the base

d) Hausner's Ratio: -

Hausner's Ratio = Tapped Density / Bulk Density

e) Carr's Index: -

Carr's Index = (Tapped Density - Bulk Density)/Tapped Density X 100

Washability:

This is the common method for checking the washability of the formulation. The formulation was applied on the skin and then ease and extent of washing with water were checked manually by using 1 litre of water is used to remove all content of the formulation were applied on the surface.

Irritancy test: - Mark a 1-square-centimeter region on left dorsal surface. A particular measure of arranged face packs were applied to assigned district, & application time was recorded. Disturbance, erythema, & edema were inspected & revealed if present at standard stretches for as long as 24 hours

RESULT: -

Following assessment parameters have been carried out to make sure superiority of organized face Pack

Morphological Evaluation: -

Herbal face percent changed into evaluated for morphological parameters confirmed with inside the Table

Sr No.	Parameter	Observation
1.	Color	Green
2.	Odour	Pleasant
3.	Appearance	Free Flowing Powder
4.	Texture	Fine
5.	Smoothness	Smooth

Physicochemical Evaluation: -

Herbal face percent changed into evaluated for physicochemical parameters confirmed from the above table. The pH of system changed into observed near neutral. The ash content material and moisture content material have been inside limit. The particle length of formulations changed into observed with inside the variety of 25-30 μm .

Sr. No.	Parameter	Observation
1.	pH	7
2.	Loss of drying	10%
3.	Ash content: a) Total ash value : b) Acid insoluble ash value : c) Water soluble ash value :	32.5% w/w 8% w/w 26.5% w/w
4.	Particle size (μm)	25-30 μm

Physical Evaluation (powder property): -

Herbal face percentage changed into evaluated for bodily parameters (powder property) confirmed with inside the Table five. Rheological findings justified the flow (powder) homes of the natural face percentage. It changed into discovered to be a free flowing and non-sticky in nature.

Sr no.	Parameter	Observation
1.	Tapped density	1.25 gm/ml
2.	Bulk density	0.66 gm/ml
3.	Angle of repose	38.7
4.	Hausner's ratio	1.893
5.	Carr's index	47.2

Stability Study: -

The effects of balance had been proven from antimicrobial assay table. No extrade in colour, Odor, texture and smoothness changed into observed. The balance research confirmed a mild extrade in pH of formula at 40°C.

Sr no.	Parameter	At Room Temperature
1.	Color	No Change
2.	Odour	No Change
3.	Texture	Fine
4.	Smoothness	Smooth
5.	pH	7

Phytochemical evaluation: -

Sr no.	Test	Observation
1.	Detection of glycoside Bontrager test :- Add 5ml of dil. HCL to 1gm of face pack. Boil in water bath for 10min and filter. The filtrate was extracted with benzene. Equal volume of ammonia solution (ammonium hydroxide) was added. The mixture filtered and shake the mixture.	Red color formation of ammonium layer. Presence of Anthraquinone
2.	Detection of Volatile oil:- In face pack, 2gm of powder treated with alcohol solution of Volatile oil.	Formation of red color. Presence of Volatile oil

Irritancy test: -

Formulation did not show any sign of rashes, redness, irritation and swelling when it was subjected to irritancy test throughout the test.

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

Washability: -

The Face Pack can easily washed off from skin with Normal water.

Sr No	Parameter	Observation
1.	Washability	Easily Washable

CONCLUSION

Natural remedies are more acceptable in the belief that they are Safer with less side effects than the synthetic ones. Herbal face pack 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 non-toxic 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 in future further optimization studies are required on this study to find the useful benefits of face pack on human use as cosmetic products.

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