



“FORMULATION AND EVALUATION OF HERBAL FACE PACK”

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Abstract:

This study aimed to develop and assess an herbal face pack using ingredients like Beetroot powder, aloe vera, sandalwood, orange peel, rose petal powder, Neem powder, and . After procuring and preparing the ingredients, they were evaluated for their organoleptic, physico-chemical properties making it ideal for a face pack. Herbal face packs are known to improve blood circulation, rejuvenate skin, maintain skin elasticity, and cleanse pores. Their non-toxic nature reduces allergic reactions, making them a safe option. Further optimization studies are needed to fully understand their cosmetic benefits for human use.

Keyword-Natural ingredient, home remedy.

Introduction:

Cosmetics are defined as the products used for the purposes of cleansing, beautifying, promoting attractiveness or alternating the appearance . 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. 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. 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. Although cosmetic products have undergone many changes in modern times, the basic concept of using cosmetics to enhance the features of good health has not changed. Present research article deals with the formulation and characterization of cosmetic natural herbal face pack and preparation Normal skin is neither too dry nor too oily so it looks vibrant and moist. Skin care can be cleansing, toning and moisturizing. However, herbs selected in this preparation rejuvenates the skin protect it from tanning and allergies. The present work was carried to formulate herbal face pack containing powders of orange peel powder , sandalwood powder , rose petals powder , beet root powder , Neem powder , aloe powder as the base along with other required

ingredients which will fulfil as complete face pack .The prepared face pack was evaluated for physical, chemical and biological evaluation.

Plant profile:



Binomial name- Santalum alba , **Family:**Santalaceae **Genus:** Santalum
Species:S. album.

The antiseptic quality of sandalwood benefits to treat rashes, acne, blackheads and other skin eruptions. Its germicidal quality inhibits the growth of bacteria. It is also a natural astringent, especially for oily skin and also helps in toning up the skin..

Fig no.01. Plant of Santalum alba(sandalwood)



Binomial name-Rosa canina, **Family:**Rosaceae, **Genus:**Rosa
Species:R. canina.

Nourishing Properties: Rosa Canina is rich in essential nutrients that contribute to skin nourishment, promoting a healthier complexion.
Antioxidant Effects: The ingredient possesses antioxidant properties, helping to combat free radicals and protect the skin from environmental stressors.

Fig no.02. Plant of Rosa canina



Binomial name-Azadirachta indica, **Family:**Meliaceae
Genus:Azadirachta ,**Species:**A. indica.

Azadirachta Indica also helps reduce skin blemishes. Neem is a rich source of Vitamin E which help repair damaged skin cells. Neem has scientifically proven antifungal property which helps treat fungal infections. Neem can prove useful in detoxification both internally and externally.

Fig no.03. -Azadirachta Indica



Binomial name-Citrus x sinensis, **Family:**Rutaceae, **Genus:** Citrus
Species:C. x sinensis

In skin care, it is known to help brighten and even out the complexion, improve skin texture, and soothe dry and irritated skin. In hair care, it is used to promote shine and improve the overall health of the hair.

Fig no.03. - Citrus x sinensis



Fig no.04. Plant of Beta vulgaris

Binomial name-Beta vulgaris,**Family:** Amaranthaceae **Genus:** Beta
Species:B. vulgaris.

It helps in the overall well being of the body naturally. Beetroot contains Vitamin C that prevents skin pigmentation, thereby providing a fairer complexion. Beet is also a rich source of iron, phosphorus and protein, which in unison give you a healthy and pinkish skin.



Binomial name-Aloe vera (L.) Burm.f., **Family:**Asphodelaceae,

Subfamily: Asphodeloideae, **Genus:**Aloe, **Species:**A. vera.

Aloe Vera gel has cooling properties and is anti-inflammatory. Hence, it is one of the most natural remedies for sunburn or burnt skin. Applying this gel helps with a protective layer for the skin, and it also helps to retain moisture. It is rich in antioxidants and minerals that boost the healing process.

Fig no.04. Plant of Aloe vera (L.) Burm.f.

Table no. 01- Plant Profile

Sr. No.	Ingredients	Scientific name	Part used for Research	Uses
1.	Sandalwood powder	<i>Santalum alba</i>	Bark	Anti-oxidant
2.	Rose petals powder	<i>Rosa canina</i>	Petals	Anti-inflammatory, Anti-aging
3.	Neem powder	<i>Azadirachta indica</i>	Leaves	Anti-bacterial
4.	Orange peel powder	<i>Citrus sinensis</i>	Peel	Anti-blemish
5.	Beetroot powder	<i>Beta vulgaris</i>	Fruit	Anti-oxidant, Anti- inflammatory
6.	Aloe vera powder	<i>Aloe barbadensis</i>	Leaves	Anti-bacterial, Anti- oxidant

Method and Material:

1. **Dried orange peel:** Wait for the peels to dry in the sun, or remove moisture in a dehydrator for up to 24 hours. Or also use a conventional oven set to its lowest temperature for six hours. And after that grind them into a powder using a blender.



Figure 05. Dried orange peel And powder

2. **Dried Beetroot:** Spread the beets on a parchment-lined baking sheet and leave them on a sunny windowsill for at least 48 hours. And after that grind them into a powder using a blender.



Figure 06. Dried Beet root And powder

3. **Dried Neem Leaves:** Take a few fresh Neem leaves and sundry them for 2 days until all the moisture from leaves gets dried out becoming dry and crispy. Put them in a blender and grind into a fine powder and store it in an airtight container.

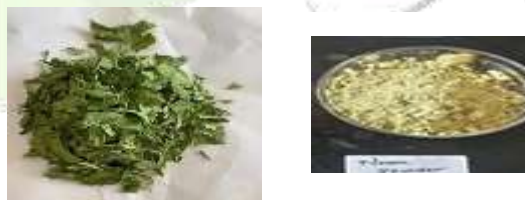


Figure 07. Dried neem leaves And powder

4. **Dried Aloe vera:** vera leaves collected from a single area were washed with distilled water before being oven dried at 45 °C for three to five days. Dried Aloe vera leaves were ground to powder form and stored in a tightly sealed container.



Figure 08. Dried Aloe vera And powder

5. Rose petals powder: To make rose petal powder at home you shall need 10-15 roses. Remove the petals from the roses and place them in a bowl. Wash the petals nicely to remove any dust or dirt particles trapped in them and spread them on the tray. After this, leave them in a safe place to let them dry for about 4-5 days.



Figure 09. Dried rose petal And powder

Apparatus used :-



Figure 10. Mortar Pestle, sieve, digital balance.

Methods of preparation:-

The accurate quantity ingredients were weighed and ground into fine powder by using sieve 20,40,60. Then the all ingredients were mixed geometrically by uniform mixing.

Table 02: Formulation of Herbal Face Pack

Sr.No	Name of Ingredients	Scientific name	Quantity of Sample for 100g
1.	Sandalwood powder	Santalum alba	15
2.	Neem powder	Azadirachta indica	15
3.	Beetroot powder	Beta vulgaris	15
4.	Aloe Vera powder	Aloe barbadensis	10
5.	Orange Peel powder	Citrus sinensis	15
6.	Rose Petals powder	Rosa canina	10

Steps involved in Preparation :-

1. Selection of Herbs:

Choose a variety of herbs suitable for skin types and desired effects. Common herbs used in face packs include sandalwood, rose petals, neem, aloe vera, beet root, orange peel, etc. Consider the properties of each herb and how they complement each other.

2. Preparation of Herbs:

- Clean the herbs thoroughly to remove any dirt or impurities.
- Dry the herbs completely to prevent any bacterial growth.
- Grind or crush the herbs into a fine powder using a mortar and pestle or a grinder.

3. Mixing Ingredients:

Determine the proportions of each herb based on their properties and desired effects. You may experiment with different ratios to achieve the desired consistency and effectiveness. Mix the powdered herbs together in a clean, dry bowl. Ensure thorough mixing to create a homogeneous blend.

Result and Discussion:

1. Organoleptic Evaluation

Organoleptic Evaluation the organoleptic parameters include its nature, colour, odour, feel and consistency which were evaluated manually for its physical properties.

Table 3: Organoleptic Properties

Parameters	Observation
Appearance	Powder (Free Flowing)
Colour	Slightly pink
Odour	Slight
Texture	Fine
Smoothness	Smooth

2. 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 method.

- i) **Bulk Density :-** bulk density is the ratio of the mass of the powder to the bulk volume of the powder.

$$\begin{aligned} \text{Bulk density} &= \text{mass of the powder} / \text{bulk volume of powder} \\ &= \mathbf{65 \text{ g/ml}} \end{aligned}$$

- ii) **Tapped Density :-** tapped density of powder is the ratio of the mass of the powder to the volume occupied by the powder after it has been tapped for definite period of time.

$$\text{Tapped density} = \mathbf{40 \text{ g/ml}}$$

- iii) **pH :-**

pH was found by using pH meter .

The particle size was tested by microscopy method.

Table 04. Physical Parameters

Parameters	observation
Particulate size (μm)	SIEVE NO.120
pH	5-6

3. 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.

Table 05. Irritancy Test

Parameters	Observation
Irritant	No Irritation
Erythema	No Irritation
Edema	No Irritation

Formulation Direction of Use :-

1. Before applying the face pack, cleanse your face with a gentle cleanser to remove any dirt or makeup.
2. Mix a small amount of the herbal powder with water, milk, or rose water to form a paste of desired consistency.
3. Apply the paste evenly to your face and neck, avoiding the sensitive eye area.
4. Leave the pack on for 15-20 minutes or as directed, allowing the herbs to work their magic.
5. Rinse off the pack with lukewarm water and pat your skin dry with a clean towel.

Post-Application Care :-

1. Follow up with a moisturizer suitable for your skin type to lock in moisture and keep your skin hydrated.
2. Use the face pack regularly as part of your skincare routine for best results.

Storage :-

Store the polyherbal face pack mixture in an airtight container to maintain its freshness and potency.

Keep the container in a cool, dry place away from direct sunlight.

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 a 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 Neem powder, Beetroot powder, aloe vera, sandalwood, Orange peel, Rose petal powder. It is suggested that the prepared formulation was physicochemically and microbiologically stable, and possessed characteristics of a standard cosmeceutical's formulation for skin.

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