

Formulation and evaluation of poly herbal face Pack

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Abstract- The main goal of this study project is to create a herbal cosmetic face pack with natural ingredients that can be used on all types of skin and assess the product using a number of assessment criteria. rice flour, Aloevera, Mint Leaves, Basil Leaves, Rosemary Leaves, Dragon Fruit Peel were all included in the formulation. In addition to the irritancy and spreadability tests, the formulation was assessed for various evaluating parameters and a stability check.

Since ancient times, herbal face packs have been used to promote healthy, radiant natural skin. It is used to keep debris out of skin pores and to prevent acne and pimples. It increases blood circulation and revitalises the muscles. According to the study's findings, the created mixture was non-irritating, skin-compatible, and effective across the board. Since all of the formulation's constituents are herbs, there are either little or no adverse effects. This face pack can be used by mixing in honey and keeping the mixture in the fridge. Additional optimisation research is needed for this work, and this study will serve as a standardisation tool for future investigations in this field.

Herbal face packs or masks are used to clean the pores of the skin, promote blood circulation, revitalise the skin, and preserve its elasticity. The attempt to create a natural face mask using various plant powders is excellent. Herbal cosmetics have the advantage of being non-toxic, lowering allergic reactions, and having many substances that have been shown to be effective over time.

Therefore, in the current study, we discovered that the face packs had good qualities. However, more optimisation research is needed to determine the practical advantages of face packs for humans and their application as cosmetics.

Keywords: Poly Herbal, Face pack, Formulation, Evaluation.

I. INTRODUCTION

People have known since ancient times that plants can be used to meet the basic requirements for having attractive, healthy skin. Products for cleaning, beautifying, and promoting an attractive

appearance are known as cosmetics [1]. The vast majority of the skin on the face acts as a mirror, reflecting the general health of the individual. To be healthy, clear, and glossy, the skin needs a balanced diet that includes lipids, carbohydrates, and amino acids. Women used to take additional care of their specific skin types because they were so self-conscious about how they looked. The majority of the face's skin serves as a mirror, reflecting a person's overall health. The skin needs a balanced diet that includes lipids, carbs, and amino acids to stay healthy, clear, and shiny. Women in the past were extremely self-conscious about their appearance and took extra care of their particular skin type [2].

"Poly herbal" describes a medication that has two or more herbs in it. Combining many herbs is a frequent practice in traditional medical systems like Ayurveda, where it is thought to improve therapeutic effects. Some people use the terms "polyherbalism" and "polypharmacy" interchangeably with "polyherbalformulation." In comparison to utilising a single herb, polyherbal formulations aim to maximise the synergistic effects of many herbs, which may result in increased efficacy and decreased toxicity.

People still use natural medicines including plant extracts for cosmetic purposes, such as aloe vera, tulsi, orange peel, rose, etc., especially in rural and hilly areas. Products used to cleanse and enhance the appearance of the skin are known as herbal cosmetics. IJAP (2019) 08 (01) using herbal cosmetics has the primary benefit of being pure and free of adverse effects on the human body. People have rough skin, and if they don't take enough care of it, the sun, other pollutants, etc., can cause the skin to turn dark. [3] For both men and women, we have created a herbal face pack in this post that will naturally lighten, brighten, and whiten skin. This face pack is simple to make at home and contains natural skin-lightening properties. [4] Vitamins that

are necessary for skin health and radiance are abundant in face packs made with natural ingredients. Numerous benefits of these compounds for the skin have been demonstrated. Using natural face packs is simple. The skin becomes more vibrant as a result of their increased blood circulation in the facial veins. [5] A quality herbal face pack should provide the skin with the nutrients it needs, which are accessible as a powder that flows easily. To provide the necessary nutrition, it should pierce deeply into the subcutaneous tissues. Each sort of skin is unique to the needs of the skin pack. [6]

Face packs that are suggested for oily skin that is prone to acne and blackheads often reduce the amount of sebum produced by sebaceous glands and combat the dangerous bacteria that are present within acne lesions. By adding fine powders of sandalwood, rose petals, and dried orange peels, the remaining skin markings can be lessened. Due to its many advantages over chemical-based face packs, herbal face packs are increasingly widely used. They are not harmful, allergenic, or habit-forming. They have a longer shelf life and are natural in every way. Preservatives are not added to them. They are simple to make and keep for a longer period of time. Present research article deals with the formulation and evaluation of herbal face pack for glowing skin by using natural materials i.e. rice flour, Aloe vera,

Mint Leaves, Basil Leaves, Rosemary Leaves, and Dragon Fruit Peel.

Advantages:

1. They aid in quickly restoring the skin's lost radiance and lustre.
2. Using natural facial masks on a daily basis improves skin texture, taint, and shine.
3. Cleaner skin and more refined pores are the results of facial masks.
4. Frequent usage of face masks helps lessen wrinkles, dark spots, fine lines, and other ageing symptoms.
5. They give the skin a uniform tone.
6. They give the skin moisture.
7. They control greasy skin.

Disadvantages:

1. Avoid applying the One Face pack all over your face.
2. Because the skin type varies from one area of our face to another.
3. Occasionally, it takes longer for the face pack to dry.
4. It might be the source of the irritation. Face packs can occasionally make skin red.
5. People with dry skin may find it challenging to apply face packs.



Figure No A: pigmentation

II. MATERIALS AND METHODS

Using natural ingredients such as rice flour, aloe vera, mint leaves, basil leaves, rosemary leaves, and dragon fruit peel, the current study examines the creation and assessment of a herbal face pack for radiant skin. Commercial shade drying was used to create the powdered dragon fruit peel. The following lists the specifics of the natural component that was utilized to make the herbal face pack.

2.1 Ingredients of formulations:

2.1.1 Aloe vera:

Botanical name= Aloe Barbadensis miller

Family = Liliaceae or Asphodelaceae

Synonyms = Aloe Barbadensis Mill., Aloe

vulgaris Lam

Common Name=Kuarpathu

By lowering bacteria and encouraging healing, aloe vera's antibacterial qualities can help treat pimples and acne.

Its anti-inflammatory qualities help reduce inflammation brought on by conditions like rosacea, eczema, or acne.

Vitamins A, C, and E included in aloe vera aid in the skin's natural healing process and aid in the restoration of damaged skin cells. They can also lessen the visibility of dark spots, blemishes, and acne scars.

Aloe vera also encourages the synthesis of collagen, which enhances skin suppleness and lessens aging

symptoms.

Aloe vera's enzymes can aid in the gentle exfoliation and removal of dead skin cells, resulting in a complexion that is more luminous and brighter.

It can also lessen uneven skin tone and brighten the skin [7].



Figure No B: Alovera Peel and Dry Powder of Alovera

2.1.2 Mint Leaves :

Botanical name=*Menthapiperita L.*

Family=Lamiaceae; labiatae

Synonyms = Mentha

Common Name=Pudina

Mint leaves can tighten the skin and make pores less noticeable by acting as a moderate astringent. Additionally, they can aid in clearing the pores of debris, leaving the skin feeling cleansed and

renewed.

Mint leaves contain salicylic acid, which can help decrease acne and acne scars.

Their antibacterial and anti-inflammatory qualities can also help to clear acne and reduce inflammation.

Mint has a cooling effect on the skin, making it a wonderful choice for soothing irritated or sunburned skin.[8]



Figure No C: Mint Leaves and Mint Leaves Powder

2.1.3 Basil Leaves:

Botanical name=*Ocimumbasilicum*

Family=Lamiacea

Synonyms = Albahaca, Basilic, Basilic Commun

Common Name=Tulsi

Basil leaves have antibacterial, anti-inflammatory, and antioxidant properties.

These qualities lessen inflammation, calm irritated skin, and stop germs that can lead to acne and other skin problems from growing.

As a natural cleanser, basil leaves aid in clearing the skin of pollutants, oil, and debris.

Additionally, their astringent qualities can aid in pore tightening and diminishing the visibility of enlarged pores.

It can lessen inflammation, eradicate bacteria, and stop fresh outbreaks.

Leaves of basil can help lighten skin and enhance complexion in general.

They can aid in preventing dryness and hydrating the skin. [9]



Figure No D: Basil Leaves And Basil Leaves Powder

2.1.4 Rosemary Leaves:

Botanical name=*Rosmarinus officinalis* L

Family=*Lamiaceae*

Synonyms = *Rusmari*, *Encensier*, *Compass Plant*

Common Name=*Rosemary*

Purple claims that rosemary's high antioxidant content helps shield the skin from harm brought on by free radicals.

Moreover, rosemary's antioxidant properties might lessen the appearance of drooping skin and increase skin elasticity.

According to Purple, rosemary has chemicals that can help lessen skin redness and inflammation. This can help soothe inflammation and minimize swelling, which can be especially helpful for people with sensitive skin or acne. This can enhance skin texture and lessen the visibility of pores. [10]



Figure No E: Rosemary leaves Rosemary leaves powder

2.1.5 Dragon Fruit Peel:

Botanical name=*Selenicereus undatus*

Family=*Cactaceae*

Synonyms = *Pitaya*

Common Name=*Night blooming cereus*, *Strawberry pear*

Betacyanin pigments and other bioactive substances found in the peel can aid in skin whitening, age symptom reduction, and complexion promotion. The natural exfoliating qualities of the peel can also aid in the removal of dead skin cells, leaving the skin smoother and more glowing.

Antioxidants like vitamin C and betalains, which are found in dragon fruit peel, help scavenge free radicals that can harm skin and cause early aging.

The high water content of dragon fruit helps to hydrate the skin, giving it a plumper, healthier appearance.

The peel's vitamin C and antioxidants may help reduce the development of melanin, which could lighten dark spots and make lifeless skin more radiant.[11]



Figure No F: Dragon Fruit Peel and Dragon Fruit Peel Powder

2.1.6.Rice Flour:

Botanical name=Oryzasativa

Family=Poaceae

Synonyms = Sea grass matting,Paddy

Common Name=Chawal

Gentle Exfoliation: The fine texture of rice flour aids in the gentle removal of dead skin cells, exposing softer, more radiant skin beneath.

Oil Absorption: It helps oily or acne-prone skin by absorbing excess oil.

Natural enzymes and antioxidants included in rice flour have the ability to brighten and even out skin tone.

Calming Effects: Its anti-inflammatory properties might help calm sensitive or inflamed skin. Antioxidants found in rice flour aid in the fight against free radicals, which can hasten the aging process.

Tan Removal: Some face packs made of rice flour can help undo slight sun damage and tanning. [12].



Figure no G: Rice Rice Flour

2.2 Methods of preparation:

Procedure of dry powder:

The first step in making dry powder from herbs is to make sure they are completely dried to eliminate any remaining moisture. After that, grind the dried herbs in a coffee grinder, blender, or spice mill until they are finely ground.

Steps:

Drying the Herbs: For fresh herbs, rinse them and shake off any extra water gently.

Drying Method:

Air Drying: Until herbs are brittle, hang them in a dry, dark, and well-ventilated location.

2. Pulverizing the Dehydrated Herbs:

Choosing a Grinder: Select a grinder based on the amount of herbs you want and the level of fineness you want:

For modest amounts, a coffee grinder is a suitable choice.

3. Sieving: Mesh Size: You might need to run the ground herbs through a fine mesh sieve (such as 40

mesh) to achieve a very fine powder.

4. Storage: Airtight Containers: To preserve quality, keep the completed powder at room temperature in sealed containers.

Procedure of Face Pack Formulation:

- Weighing: A digital balance was used to precisely weigh each of the necessary herbal powders for making the face pack. Table lists the quantity and components.
- Mixing: To create a uniformly fine powder, all of these fine materials were thoroughly combined using a mixer.
- Sieving: To obtain a suitable amount of fine powder, this fine powder was next put through a sieve No 40.
- Gathering and storing: The powder mixture was gathered, stored in an appropriate plastic container, and utilised to perform evaluation parameters.

Sr.No.	Constituent	F1 (20gm)	F2 (20gm)
1.	Aloevera	3gm	4gm
2.	Mint Leaves	2gm	3gm
3.	Basil Leaves	2gm	3gm
4.	Rosemary Leaves	6gm	7gm
5.	Dragon Fruit Peel	2gm	3gm
6.	Rice Flour	6gm	7gm

Table no 1: Formulation Face Pack

Prepared Product:



Figur No H: Prepared Product



Figure No I: face pack

2.3 Procedure for application of face pack:

Every day, the pack should be applied to a damp face until it forms an optimally thick paste in water. A brush should be used to apply it evenly throughout the face. For full drying, it should be left for fifteen minutes. A wet sponge should then be used to remove it.

2.4 Evaluation of face pack:

2.4.1 Morphological Evaluation:

Among other things, it means evaluating the herbal face pack according to its colour, texture, appearance, and smell. The external characteristics of the formulation were examined using the Siddiqui et al. method. [16].

The morphological parameters listed in Table 1 were used to evaluate the herbal face pack. The formulation had a light yellow hue. The produced formulations have a nice, acceptable smell, which is ideal for cosmetic formulations. According to the specifications of cosmetic formulas, texture and smoothness were acceptable.

Sr.No	Parameter	Observation	
		F1	F2
1.	Color	Pale Green	Pale Green
2.	Odour	Pleasant	Pleasant
3.	Appearance	Fine	Fine
4.	Texture	Fine	Fine
5.	Smoothness	Smooth	Smooth

Table No 2: Morphological Evaluation

2.4.2 Physicochemical Evaluation:

Physicochemical properties that were measured included extractive value, pH, and moisture content. [17].

The physicochemical parameters listed in Table 2 were used to evaluate the herbal face pack. The

formulation's pH was discovered to be nearly neutral. Both the moisture and ash contents were within acceptable bounds. The formulations' particle sizes were found to be between 24.3 and 25.5 µm.

Sr.No	Parameter	Observation	
		F1	F2
1.	pH	6.68	6.66
2.	Loss on Drying	2.8	2.7
3.	Partical Size	25.4	24.5

Table no 3: Physicochemical Evaluation

2.4.3 Irritancy Test:

On the dorsal surface of the left hand, mark a 1 sq. cm area. Time was recorded after applying a set amount of prepared face packs to the designated area. Oedema, erythema, and irritation were

monitored for up to 24 hours at regular intervals and reported. [18].

Table 3 displayed the irritancy test findings. During irritancy testing, the formulation demonstrated no signs of irritation, redness, or oedema. It is safe to apply this formulation to the skin.

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

Table no 4: Irritancy Test

2.4.4 Stability Studies:

The developed formulation underwent stability testing by being stored for a month at various temperatures. The formulation's packed glass vials were kept at room temperature and 40 degrees Celsius, and its physical characteristics—such as

colour, smell, pH, consistency, and feel were assessed. [19]

Table 4 displayed the stability results. With the exception of pH, no changes in colour, texture, smoothness, or odour were noticed at the stability conditions listed. The stability tests revealed a minor shift in the formulation's pH at 40°C.

Sr.No	Parameter	Room temperature	40°c [F1]	40°c [F2]
1.	Colour	No Change	No Change	No Change
2.	Odour	No Change	No Change	No Change
3.	pH	6.66	6.60	6.61
4.	Texture	Fine	Fine	Fine
5.	Smoothness	Smooth	Smooth	Smooth

Table no 5: Stability Studies

2.4.5:Phytochemical evaluation:

Sr.No	Phytoconstituents	Observation
1.	Carbohydrates	+
2.	Alkaloids	+
3.	Flavonoids	+
4.	Tannins	+
5.	Essential oils	+

Table no 6: Phytochemical evaluation

III. RESULT

The face pack made of polyherbal ingredients was created and assessed. Table 1 presents the evaluation's findings. The formulation was characterized for its organoleptic and physico-chemical evaluation in order to conduct preformulation experiments. Nature, color, texture, odor, pH, irritation, and smoothness were all studied.

According to stability experiments, the formulation's pH changed somewhat while it was stored at 40°C, but not at room temperature (Table 4). The formulation was skin-compatible, non-irritating, easily spreadable, and slightly acidic.

packs are used to stimulate blood circulation, rejuvenate the muscles and help to maintain the elasticity of the skin and remove dirt from skin pores. It is a our good attempt to formulate the herbal face pack containing natural herbal ingredients such as multanimitti, turmeric, sandal wood, saffron, milk powder, rice flour, orange peel and banana peel. After evaluation, we found good properties for the face packs, free from skin irritation and maintained its consistency even after stability storage conditions. It has been revealed that herbal face pack having enough potential to give efficient glowing effect on skin. The overall study is useful to substantiate product claims due its useful benefits on the human beings.

IV. CONCLUSION

Smooth Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. Herbal formulations have growing demand in the world market. Herbal face

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