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Formulation and Evaluation of Herbal Face Scrub by Using Curry Leaves

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ABSTRACT :-

Cosmetics are defined as the products used for the purpose of beautifying, cleansing, promoting attractiveness or alternating the appearance. The purpose of the study is to create and assess a face scrub that contains hydro-alcoholic extract from Piper betel and curry leaves as active ingredients. Several skin problems, including skin protection, sunscreen, anti-acne, and anti-wrinkle products, have been developed to improve skin beauty. The desire for herbal products and cosmetics is growing daily despite the significant health benefits of synthetic compounds, which once more cause environmental harm. Face scrubs are highly popular and successful in today's world because they are inexpensive. They have a significant impact on how the skin looks in both men and women. The majority of cosmetic products are made with natural ingredients because they have no negative side effects and are used to maintain good health and beauty. This face scrub gel contains carbopol, methyl paraben, triethanolamine, propylene glycol, and sodium lauryl sulphate. The prepared face scrub was tested for a number of factors, including its extrudability, foamability, spreadability, irritation, washability, and grittiness. The results were satisfactory. The created mixture functions effectively as a scrub that promotes glowing, healthy skin.

Keywords:- Curry leaves, Face scrub, Popularity, Natural ingredients, Skin benefits, Literature review, Efficacy, Antioxidant, Anti-inflammatory, Antimicrobial, Skincare routines, Limitations

Introduction :-

Curry leaves, known for their aromatic flavor in culinary applications, also offer impressive anti-inflammatory properties that benefit skincare and overall health. These leaves are rich in bioactive compounds such as alkaloids, flavonoids, and phenolic compounds, which play a crucial role in their anti-inflammatory effects. These compounds work synergistically to reduce inflammation, making curry leaves an effective natural remedy for various skin conditions.

Inflammation is a common underlying factor in many skin issues, including acne, eczema, and psoriasis. The anti-inflammatory properties of curry leaves help to alleviate symptoms like redness, swelling, and irritation associated with these conditions. For example, alkaloids and flavonoids in curry leaves inhibit the activity of inflammatory enzymes and reduce the production of pro-inflammatory cytokines, leading to a calming effect on the skin.

In addition to topical application, incorporating curry leaves into the diet can provide systemic anti-inflammatory benefits, promoting overall health and well-being. When used in face scrubs and other skincare products, curry leaves can enhance skin texture, reduce blemishes, and improve the skin's natural radiance. This makes curry leaves a valuable ingredient in natural skincare formulations, offering a holistic approach to managing inflammation and promoting healthy skin.

Curry leaves, well-known for their culinary use, also have significant antimicrobial properties that make them beneficial for skincare and health. These properties stem from various bioactive compounds present in the leaves. Carbazole alkaloids such as mahanimbine, murrayanine, and girinimbine exhibit potent antibacterial activity by inhibiting the growth of harmful bacteria like Staphylococcus aureus, Escherichia coli, and Pseudomonas aeruginosa. These alkaloids work by disrupting bacterial cell membranes and interfering with essential cellular processes, thus preventing bacterial proliferation and infection.

In addition to alkaloids, curry leaves contain flavonoids like quercetin and kaempferol, which have strong antifungal properties. These flavonoids inhibit fungal growth by disrupting cell wall synthesis and membrane integrity, effectively combating common fungi such as Candida albicans and Aspergillus species. Essential oils in curry leaves, including limonene, β-pinene, and α-terpinene, further contribute to their antimicrobial properties. These volatile compounds act by disrupting microbial cell membranes, inhibiting enzyme activity, and interfering with microbial replication.

Incorporating curry leaves into skincare products, such as face scrubs and cleansers, can help combat acne-causing bacteria and fungal infections, promoting clearer and healthier skin. Moreover, their antimicrobial activity extends to oral health, making curry leaves a beneficial ingredient in mouthwashes and dental care products for preventing dental caries and gum disease. Overall, the antimicrobial properties of curry leaves make them a versatile and valuable resource for promoting health and well-being.

Material And Method :-

Sr.no	**Botanical Name**	Common Name
1	Murraya koenigii.	Curry Leaves
2	Papaver somniferum	Breadseed poppy

Formulation Table:-

Sr.No.	**Ingredients**	**Formulation 1** **Qty. (50gm)**	**Formulation 2** **Qty. (50gm)**
1	Curry Leaves	10 ml	10ml
2	Poppy seeds	5Gml	5Gml
3	Carbopol	14gm	14gm
4	Methyl Paraben	0.500gm	0.500gm
5	Triethanolamine	4.5ml	4.5ml
6	Propylene Glycol	5ml	5ml
7	Sodium Lauryl Sulphate (SLS)	2gm	2gm
8	Sandalwood Powder	16gm	16gm
9	Alum	5gm	5g
10	Rose Water	q.s.	q.s.

PROCEDURE:

Method of preparation of face scrub:-

Preparation of curry leaves extract*:* Curry leaves were first bought from the local market. Then curry leaves were shed-dry for seven days. Then leaves were grind into a powder using mixer grinder. Now with the help of Soxhlet apparatus hydro-alcoholic extract was prepared, which gave a dark green color curry leave extract.

. Preparation of Poppy seeds

- Collected poppy seeds from local markets.
- It was necessary to wash them with distilled water in order to eliminate any dust or impurities
- The seeds were then wiped and cleaned with a clean cloth and allowed to air dry for a period of several hours before being completely dried

1. ***Preparation of gel:*** Methyl paraben was weighed and dissolved in beaker containing rose water. To this, carbopol was added and stirred continuously for fewminutes until it forms a gel. Sodium lauryl sulphate was weighed, dissolved separately with rose water and was added into above gel. Followed by this
propylene glycol was added. Drop wise triethanolamine added into gel to neutralize pH. Active ingredient was then added into prepared gel and stirred.

EVALUATION OF FACE SCRUB:-

Organoleptic properties, pH, irritability, washability, grittiness, extrudability, foamability,and spreadability were all tested on the prepared gel.

Organoleptic Properties

1. Color: Visual examination uncovered that the face scour was light brown in variety.
2. Odour: The smell of plan was checked by utilization of readiness available and feelsthe aroma of scent.
3. Consistency: By visual inspection, the face scrub's consistency was found to besemi-solid and smooth.
4. Both uniformity and texture: A small measure of the pre-arranged clean was triedby squeezing it between the thumb and forefinger.

A. PH :-

pH paper was used to measure the pH of the gel that was made. Clean is daintily applied on pH paper The pH was found to be between 5-6.

B. Irritability:-

It was found to be non-irritating when a small amount of the preparation was applied to the hand's dorsal area and left on for a short time. There is neither oedema nor redness.

C. Washability:-

This test was carried out on the skin directly. The skin was found to be clear and clean after applying the preparation and rinsing it off with regular water.

D. Grittiness:-

The for the face contained few grits

E. Extrudability:-

A limited quantity of gel was put in a foldable balm tube. The other end was left open while one end was sealed off. On the shut side, a little strain was applied. Both the amount ofgel that was extruded and the amount of time it took were Recorded.

F. Foamability:-

To measure the foam, a small amount of scrub was mixed with water in a graduated measuring cylinder.

G. Spreadability:-

Spreadability has a significant impact on how the gel behaves when it exits the tube. It is utilized to ascertain the extent of the gel's skin-spreadability. Over a small sample that hadbeen deposited on the slide, a glass slide with a weight of 100 g was placed. A glass slide with a small sample on it and another slide above it were used. The slide received a weight of one hundred grams. How much time it to\
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‘/]k the gel to fan out on the slide was not entirely settled to be 3 cm in 40 seconds. The following formula was used to determine the a mount:

$S = m \times l/t$

Whereas, S = Spreadability

m = Weight placed on slidel = Length of

glass slide

t = Time taken in seconds

Fig :- Formulation of Herbal Face Scrub

Results and Discussion:-

Parameters	F1	F2
Colour	Yellow	Green
Odour	Pleasant	Pleasant
Texture	Good	Good
Consistency	Good	Good
Spreadability	Easily Spreadable	Easily Spreadable
Foamability	No	No
pH	6.8	7.2
Grittiness	Yes	Yes
Washability	Easily washable	Easily washable

CONCLUSION

In this project, we tried to produce a scrub that was domestically prepared. The created scrub gel was tested using a variety of ingredients, and it was finalized as something that could be used on the skin to improve health and brightness without having any negative side effects. The item's proficiency increases with the incorporation of earthy colored millets as the scrubbing expert in the methodology.

The use of a gel scrub, which increases surface oxygenation and improves blood flow. After using a scrub, the skin feels softer, cleaner, and more energized.

The formulation of Herbal scrub using Active natural ingredients offers a promising avenue for sustainable skincare solutions by joining the antioxidant properties of these ingredients, we can combat free radicals, promote skin brightening, and achieve effective exfoliation for smoother skin texture. Furthermore, incorporating moisturizing agents ensures hydration and nourishment, enhancing overall skin health. From the recent years studies the youth move towards the herbal formulation over the synthetic formulation. There are various herbal cosmetics are available in market but youth focus for clean glossy skin and dirt removal formulation, so overcome on the problems regarding with skin dull skin, tanning, premature aging, blackheads we formulate the face scrub with goodness of natural ingredient curry leaves ,alum, sandalwood powder.

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