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FORMULATION AND EVALUATION OF HERBAL LOTION

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ABSTRACT
Liquid preparations called lotions are designed to be applied externally without creating friction. They are applied directly to the skin using an absorbent substance, like gauze soaked in it or cotton wool. The need for natural materials and natural extracts in cosmetics preparations was sparked by customers' desire for herbal products and the usage of natural herbs and their products for their aromatic value. Aloe vera is the most widely used medical plant in the world and the oldest known medicinal plant. Lotion formulation involves a number of procedures, including cutting the leaf's tip and base, extracting the mucilage portion in a mixing jar, grinding it thoroughly, adding vitamin E, pasteurizing the product, and cooling it. Following that, the gel was created. Next, the measured amount of gel was taken and used to formulate lotion by mixing it with the measured amount of ingredients. After a while, lotion was ready.
KEYWORDS : *Aloe vera, Herbal lotion, Herbal cosmetic, pH, Skin*

INTRODUCTION

The term "Herbal Cosmetics" refers to products that are mixed with a variety of approved cosmetic substances to create a basis, and then use one or more herbal ingredients to deliver specific cosmetic benefits. The need for natural materials and natural extracts in cosmetic preparations was sparked by customers' desire for herbal products and the usage of natural herbs and their products for their aromatic value.Liquid preparations called lotions are designed to be applied externally without creating friction. They are applied directly to the skin using an absorbent substance, like gauze soaked in it or cotton wool. Lotions can be used locally for protecting, calming, or cooling effects. Compared to body butter, body lotion has more water. Because it is an oil-in-water emulsion, producers disperse oil into the water. Body lotions made using this technique are lighter than body butter, making application simpler.Depending on their intended use, body lotions can differ slightly from one another. While some varieties are intended for more general use on the body, others are exclusively targeted at the face.

Advantages of Lotion

- It can also be used on broken skin.
- No metabolism first pass
- Localized therapeutic impact
- Portable and easy to use
- Self-medication can be done.
- Better for people who have trouble swallowing

Disadvantages of Lotion

- Poor drug permeability to deeper skin layers.
- less stable than solid dose forms.
- emulsion or suspension lotions require shaking the container before use.
- babies can ingest if applied to their hands.

Applications

cooling, hydrating, smoothing, and softening the skin Scabicidal, local anesthetic, antiseptic, humectant, astringent, antiacne, anti-inflammatory, cleansing, protective, antipyretic, Germicide, Paraciticide, antifungal, Fairness, wrinkle prevention, and anti-aging

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METHOD OF PREPARATION

Ingredients used in Herbal Lotion -

1. Aloe vera gel
2. Coconut milk
3. Honey
4. Almond oil
5. Glycerine
6. Rose water
7. Tomato
8. Vitamin E
9. Lavender oil

1.Aloe Vera Gel

- is used as a moisturizer, to treat burn wounds, and to lessen acne and pimples.
- Reduces scarring, pigmentation, redness, and skin irritation; it also acts as an antifungal and anti-inflammatory.
- It is rich in beta-carotene and vitamin Ç. As a result, it has anti-aging qualities; it also has antibacterial and anti-inflammatory qualities; it has cooling qualities; and it is abundant in minerals and antioxidants that promote healing. Additionally, it has calming and hydrating properties.
- The cooling properties of aloe vera provides a cooling sensation and prevents sunburn from developing.
- This drug is used as a moisturizer to treat or avoid minor skin irritation as well as dry, rough, scaly, and itchy skin.



2.Coconut Milk

- When applied directly to dry skin, coconut milk's high fat content can provide a great moisturizing effect. It also serves as a sealant to hydrate and look in moisture.
- It has the smoothest skin cells, is readily absorbed, and the fats keep your skin supple.
- It is the body's perfect moisturizer, leaving the skin textured and smooth.
- Coconut milk acts as a moisturizer.
- It lowers inflammation and encourages wound healing.

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- It has antifungal and antibacterial qualities.
- It possesses antioxidant qualities.



3.Honey

- As a natural antibacterial and anti-inflammatory, honey aids in the healing of acne outbreaks and guards against further infections.
- Additionally, honey lessens acne's redness and swelling.
- Honey helps to minimize fine lines and wrinkles by moisturizing the skin's outermost layers.
- It is used as an agent to cure wounds.
- Honey combats bacteria because it is an antibacterial substance.
- Honey can be very hydrating and prevent bacterial infections.
- It reduces pores, combats bacteria, and maintains youthful, smooth skin.
- Honey has a long shelf life and works well with a variety of chemicals, making it a great preservative for aloe.
- Mostly made up of sugar, honey also contains a variety of vitamins, minerals, iron, zinc, amino acids, and antioxidants. Honey is used for its antibacterial, anti-inflammatory, and antioxidant qualities, among other health benefits.

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4.Almond Oil

- Almond oil is a hydrating emollient that can help smooth and hydrate skin.
- Since almond oil is lightweight and non-irritating, it is often safe for sensitive skin.
- It might have antioxidant properties.
- It might have an anti-inflammatory effect.
- It might raise levels of healthy cholesterol.
- It might possess antimicrobial properties.
- It might possess antifungal qualities.
- It might have an immune-boosting effect.
- Make the skin clear and bright by reducing the rough and dry skin.
- It aids in the development of smooth and soft skin and provides you with incredibly hydrating skin without making it feel heavy.

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5.Glycerine

- A moisturizer is glycerin.
- It relieves itchy and dry skin.
- It addressed scars and acne.
- It aids in the reduction of wrinkles.
- It possesses anti-aging properties.
- It serves as a cleanser.
- It increases the permeability of the skin.



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6. Rose Water

- Rose water contains anti-aging properties and can calm your skin.
- Rose water is an excellent face spray.
- Fragrances can be made with it.
- One of the most effective ingredients for a face treatment is rose water.
- Rose water has many anti-inflammatory properties.
- In addition to lowering itching and redness, it has a cooling effect.
- It eases inflammation of the skin.
- It moisturizes and hydrates the skin.
- It aids in preserving the pH balance of the skin.
- It enhances the smoothness and texture of the skin



7.Tomato

Lycopersicum esculantum, the tomato, is a member of the Solanaceae family. The tomato is one of the most well-liked and extensively cultivated vegetable crops worldwide.LycopeneTrusted Source is a carotenoid that is present in tomatoes and other fruits. This organic substance is what gives tomatoes their red hue.Vitamin C and antioxidants included in them may help boost your immune system.They also contain the following nutrients:

- Pottasium
- Vitamin A
- Vitamin B
- Magnesium

- It cuts down on superfluous oil.
- Dead skin is removed.
- It keeps acne at bay.
- It makes skin more radiant.
- It alleviates inflammation of the skin.
- It postpones the aging indications.
- It tightens the pores.
- The tomato face wash that clarifies blemishes

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EXTRACTION PROCESS OF TOMATO

1. Fresh tomatoes were chopped and blended in a mixer.
2. To obtain tomato concentrate, a portion of the water was distilled off at 60 °C with reduced pressure and disposed away.
3. A sufficient volume of saturated water was added to the concentrate, which was kept out of the light at room temperature and agitated for two hours.
4. Two hours later, the residue was removed and the extract was collected.
5. After filtering the extract, the filtrate was gathered.

PREPARATION OF ALOE VERA GEL

1. First, gather the raw stuff.
2. Clean the leaf and cut off the base and tip.
3. A part of the leaf is cut.
4. Empty the leaves' mucilage into a mixing jar.
5. Add the agar-agar powder after heating it.
6. Unpasteurized juice is ground or homogenized.
7. Mix thoroughly after adding vitamin E.
8. Store and package the generated gel.

FORMULATION TABLE

Sr. No.	Name of Ingredients	Quantity (ml)
1	Aloe vera gel	10 ml
2	Coconut milk	5 ml
3	Honey	5 ml
4	Tomato	3 ml
5	Almond oil	2 ml
6	Rose water	2 ml
7	Vitamin E	2 Capsule
8	Glycerin	3 ml
9	Lavender oil	2-4 Drops

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METHOD OF PREPARATION OF HERBAL LOTION

1. Weigh each component in accordance with the recipe.
2. Alovera gel was placed in a different, clean beaker and swirled until it became somewhat creamy.
3. After that, tomato extract and honey were added and combined.
4. Next, glycerin, almond oil, lavender oil, and vitamin oil from capsules were added to another beaker.
5. After that, the oils solution was gradually added to the first beaker and properly mixed.
6. After combining all the ingredients, coconut milk and rose water were added according to consistency.

EVALUATION TEST FOR HERBAL LOTION

1. Organoleptic character
2. Homogenicity
3. PH determination
4. Stability test
5. Determination of spredability
6. Irritancy test
7. Washability

1. Organoleptic Character

Colour – Yellowish
Odour -Pleasant
Texture –Smooth
State – Semi-solid

2. Homogenicity

Visual appearance and tactile tests were used to determine the uniformity of the formulation.

3. PH determination

A digital PH meter was used to measure the PH after 0.5 g of cream had been dissolved in 50 ml of distilled water.

4. Stability Test

The formulation was put in the middle of the petri dish, and the plates were then incubated for 72 hours at 37°C to monitor the microbial development.

5. Determination of spredability

The sample was sandwiched between two glass slides and squeezed for five minutes with a 100g weight to achieve a consistent thickness. The pan was given more weight. The measure of spreadability was the amount of time needed to separate the two slides, or the amount of time it took for the upper glass slide to pass over the lower slide. The following formula was used to calculate it:

Spreadability-m*I/t
m-Weight tide to upper slide ,l - Length moved
on the glass slide , t-time taken.

6.Irritancy Test

On the dorsal surface of the left hand, mark the area (2 cm2). After applying the cream to that location, the time was recorded. After that, it is examined for irritability, erythema, and edema for up to 24 hours and reported.

7.Washability

For ten minutes, a dollop of lotion was applied to the hand's skin and let to run under the force of the tap water. It was noted when the lotion was totally gone.

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EVALUATION TABLE

Sr.No.	Test	Observation
1	Appearance	Lotion type
2	Colour	Yellowish
3	Odour	Pleasant
4	PH	5
5	Spreadibility	Easily spreadable
6	Irritancy test	Non irritable and non allergic to the skin
7	Washability test	Easily washable from the skin by using water
8	Stability test	No microbial growth is observed after 5 months

RESULT AND DISCUSSION

After being made, the herbal lotion was evaluated based on a number of criteria. The color of the herbal composition was yellowish. Throughout the trial, the pH ranged between 5 and 6, which is within the typical range for skin pH, and the lotion did not cause any skin irritation when applied. Under typical storage circumstances, the preparation remained stable. These findings showed that the topical region was not negatively impacted by the herbal lotion. This herbal concoction has been shown to have anti-aging and anti-inflammatory properties.

CONCLUSION

In this study, a herbal lotion formulation was created and assessed based on its physiological parameters (pH, spdiability, ease of removal, and irritancy test) as well as its organoleptic qualities (color, odor, and appearance).The current study focuses on herbal extracts. Give the skin the nutrition it needs to stay healthy. There are many naturally occurring herbs that can be used as antioxidants in skincare and cosmetic preparations. In comparison to commercially available cosmetics, the current study found that herbal cosmetics are extremely safe and do not cause any harmful or negative effects. By using herbal lotion, we can prevent skin issues.

This study unequivocally revealed the several drawbacks of allopathic lotion, including sensitivity, high cost, and adverse effects. Simple W/O techniques and minimal equipment are needed to manufacture the herbal lotion of crude pharmaceuticals with special qualities. The study's findings indicated that the poly formulation with F2 formulation outperforms other herbal formulations and represents the potential of herbal formulation in the future. whereby herbal lotion was effectively made, described, and assessed in a number of ways.

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