



Formulation and Evaluation of Herbal Lotion of Aloe vera.

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❖ Abstract:

Liquid preparations called lotions are designed to be applied externally without causing friction. They're used straight onto the skin with the aid of some absorbent material that has been soaked in it, such as gauze or cotton wool. The market for natural products and natural extracts in cosmetic formulations was driven by consumer desire for herbal products. Natural herbs and their products are employed for their aromatic value in cosmetic preparation. The most widely used medical plant in the world and the oldest known medicinal plant is aloe vera. There are several procedures involved in making lotion, like chopping off the tip and base of the leaf, extracting the mucilage portion and grinding it thoroughly in a mixing jar, adding vitamin E, pasteurizing the mixture, and cooling it down. After the gel was made, take the measured amount of gel and combine it with the lotion formulation. Measure the amount of each component, including the gel, and after a while the lotion was ready.

❖ **Key Words:** Aloe vera, Herbal lotion, Herbal cosmetic, Herbal formulation, wound healing.

❖ Introduction

The Herbal Body Lotion (referred to as "Products") in this paper is made by this study. In order to provide unique cosmetic advantages, these products are painstakingly crafted utilizing a foundation of permitted cosmetic components plus one or more herbal constituents. Fragrant plants and their derivatives are used in cosmetics to make herbal lotions. Customers of herbal products have found this strategy popular, which has increased demand for natural substances and extracts in cosmetics. Non-friction solutions are used externally as lotions. The skin is directly treated to substances using absorbent materials that have been saturated with them, such as gauze or cotton wool. Locally, lotions can soothe, cool, or shield ^[1]. A herbal body lotion is a viscous mixture that is rubbed over the skin to enhance its appearance. Lotions wash the skin and take out sebum. Blood circulation, skin moisturization, astringency, freshness, bleaching, and therapeutic benefits are all enhanced by this chemical ^[2]. Applying herbal body creams is usually done lightly. Insoluble compounds can be finely divided into colloidal particles to promote contact with sick surfaces and reduce inflammatory regions. Many substances

can be added throughout the manufacturing process to enhance the cooling, relaxing, drying, or protecting qualities of lotions^[3]. Cosmetics lessen sebum production, wrinkles, and acne. Numerous formulas target different skin concerns, such as anti-aging, sunscreen, anti-acne, anti-wrinkles, and skin protection. These combinations are made using various substances.

The family of plants is Liliaceae. Aloe vera, Aloe indicia, Aloe Barbados, and Aloe Barbados are several names for this plant. As per the Ayurvedic customs, Aloe, also known as Kumari, also known as "Young Girl," is connected to the resuscitation of femininity and young energy. As a tonic for the female reproductive system, aloe vera is employed. According to Ayurveda, aloe is vulnerary, purgative, tonic, rejuvenating, and alliterative. Aloe vera is believed by Ayurveda to balance Pitta, Kapha, and Vatta. Within the framework of traditional Indian medicine, this drug is used to cure infections, worm infestations, skin conditions, constipation, and diarrhea. About 200 different chemical elements Aloe vera make up. 98% of the gel found in aloe vera leaves water. Aloe vera gel's total solids content varies. around 0.66%. There are an additional 0.56% soluble solids in the gel. desiccated Matter aloe gel has a 55% polysaccharide and a sugar content. (17%), proteins(7%), lipids(4%), minerals (16%), and 1% of chemicals are phenolic. Aloe vera lotion includes vitamins A, C, and E which are antioxidants. Niacin, thiamine, and There's also choline, riboflavin, and folic acid. The process of creating "Herbal Cosmetics" involves mixing approved cosmetic ingredients to create a foundation, then adding one or more

natural ingredients used in cosmetics. Herbs and their derivatives are used in herbal cosmetics to provide fragrance. Because herbal products are becoming more and more popular, the cosmetics industry has to use more natural components and extracts^[4].

It is recommended to keep lotions in a cold, closed, and fully container. Skin that is unharmed, wounded, or irritated can be treated with lotions, emulsions, and suspensions with little to no friction. Simple, therapeutic, emulsion, and suspension formulations are available for lotions. Among these health benefits are the enhancement and quickening of wound healing^[19]. Known for its application in cosmetic preparations^[20], it also possesses antifungal potency^[21], anti-inflammatory, hypoglycemic, or antidiabetic activities, and immunomodulatory, anticancer, and gastro-protective qualities^[22].

These phytochemicals include organic compounds, pyrones, alkaloids, anthraquinones, polysaccharides, flavonoids, carbohydrates, coumarins, tannins, chromones, and vitamin, protein, and mineral components^[25,26,27].

Pharmacological properties of aloe vera:

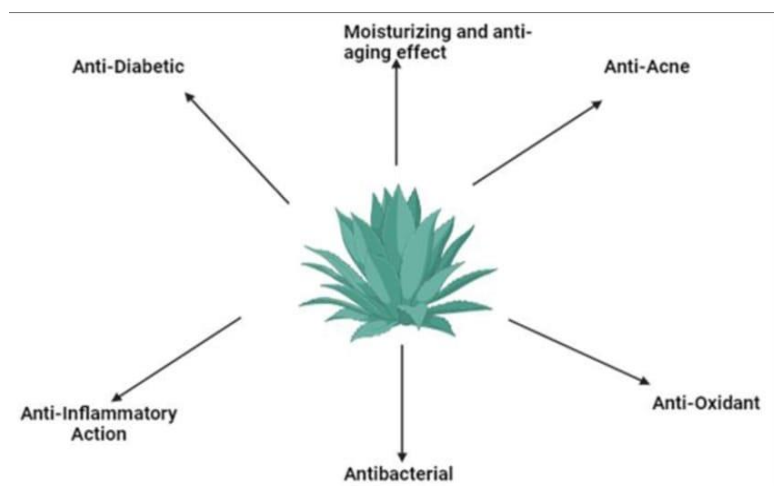


Fig no1: Pharmacological properties of aloe vera.^[13]

Ideal characteristics of Herbal Body Lotion:

- It is advised to remove the particles.
- Investigate any possible emollient impact.
- Get rid of greasy secretions throughout the application procedure ^[5]

Applications:

- Skin softening, smoothing, cooling, moisturizing
- Anti-allergic & Antiseptic
- Anti-inflammatory, Cleaning, Protective, Antipyretic.
- Antifungal, Fairness, Anti-aging, Anti-wrinkle. ^[6]

❖ Benefits of Aloe Vera Lotion:

- **Moisturizing:** Aloe vera retains skin moisture, preventing dryness and keeping skin hydrated.
- **Soothing and Healing:** Reduces inflammation and promotes healing, beneficial for irritated or sunburned skin.
- **Anti-aging:** Antioxidants fight harmful molecules to reduce fine lines and wrinkles
- **Antimicrobial:** Protects the skin from infections, useful for minor cuts and acne.
- **Skin Regeneration:** Promotes collagen production and skin repair. ^[28,29,30,]

❖ Drug Profile:

Aloe vera is a succulent plant species of the genus Aloe, indigenous to the Arabian Peninsula but cultivated worldwide for agricultural and medicinal uses. Here's a drug profile of aloe vera:

➤ Botanical Classification:

- Kingdom: Plantae
- Order: Asparagales
- Family: Xanthorrhoeaceae (formerly Asphodelaceae)

- Genus: Aloe
- Species: Aloe vera
- Active Constituents: Polysaccharides, Anthraquinones, Glycoprotein ^[24].

❖ Materials:

Here is a simplified table listing various materials and their roles in herbal body lotion formulation

Table 1: List and uses of ingredients used in the formulation of herbal body lotion.

Sr no.	Ingredients	Uses
1.	Aloe-vera gel	Moisturizer
2.	Triethanolamine	Emulsifier
3.	Glycerin	Humectant
4.	Distilled water	Diluent
5.	Rose Water	Perfume
6.	Steric Acid	Emulsifier
7.	Coconut oil	Improve skin texture
8.	Honey	Preservative
9.	lemon oil	Perfume

Table no: 01

❖ Experimental Work:

Equipment:- Digital balance, Ph meter, Measuring cylinder, glass bowl, spoon, Brooke filed Viscometer

Required Material:

Sr no	Ingredients	Quantity
1	Aloe vera gel	60 gm
2	Stearic Acid	28 gm
3	Coconut Oil	12 ml
4	Glycerine	4 ml
5	Triethanolamine	4 ml
6	Gulab Gel	Q.S
7	Distilled Water	Q.S
8	Honey	Q.S

Table no: 02

Preparation before the formulation:- Make sure your workspace is spotless and sterilize all of your packaging supplies. When making this recipe, it is advised that you use gloves, protective clothes, and a hair net.

Sr.no	Ingredients	Quantity
1	Aloe vera gel	60 gm
2	Glycerine	4 ml
3	Triethanolamine	4 ml
4	Distilled water	Q.S
5	Rose water	Q.S
6	Honey	Q.S

Methods Of Formulation:**Formulation and preparation of Herbal skin body lotion:**

- Measure out and add aloe vera gel to the mixing bowl. Next, incorporate other components like triethanolamine, rose water, distilled water, and glycerin.
- The aqueous phase was made ready.
- 28 grams of stearic acid were weighed, then placed in a beaker and heated to 25 degrees Celsius.
- To prepare the oil phase, measure out 12 milliliters of coconut oil and pour it into a beaker while stirring continuously.
- After thoroughly mixing each phase, herbal body lotion was created.

Composition Of Aqueous Phase:**Table no: 03****Composition Of Oil Phase:**

Sr no	Ingredients	Quantity
1	Stearic Acid	28 ml
2	Coconut Oil	12 ml

Table no: 04**• Evaluation Of Herbal Body Lotion:**

An evaluation study is characterized as a method of methodical, disciplined investigation used to determine the value or merit of a product, initiative, procedure, activity, or system with the aim of offering data that will assist in making decisions.

✓ Absorption Test:

Applying the lotion to the skin and rubbing it in until it was fully absorbed was how the absorption test was carried out.

✓ Skin Irritancy Test:

To assess for irritant reactions such as swelling, itching, and redness, a formulation was applied to the back of the hand and left on for 15 minutes. Impact on the skin.

✓ Homogeneity And Transparency:

The homogeneity test was evaluated through tactile and visual inspection. This was completed graphically following lotion settling in appropriate beakers. Formulas were examined for transparency, lotion removal efficiency, after-feel, and smear kind^[14, 15, 16]

✓ Smoothness Test:

We used touch testing to measure the lotion's smoothness; we rubbed the lotion between their fingertips and noted any changes in feel. We noted if the lotion felt harsh, homogenous, clumped, or silky^[11].

✓ Washability Test:

For 10 minutes, a dollop of lotion was applied to the hand's skin and let it run under the force of the tap water. It was observed when the lotion was fully eliminated.^[12]

✓ pH Measurement:

A standard buffer solution was used for pH meter calibration. A digital pH meter was used to weigh and dissolve approximately 0.5 grams of lotion in 50 milliliters of distilled water pH of 6.87.

• Directions for use:

- To be used externally only.
- use a small amount on your hand in rougher spots like knees and elbows.
- Apply the lotion to your body by making tiny circular movements with your hands.

❖ Results:

The herbal body lotion was formulated by using various various types of ingredients such as aloe vera gel, glycerin, coconut oil, rose water, and honey. Aloe vera contains antimicrobial and hydrating properties that protect skin against microbial degradation and moisture to skin. Glycerin has anti-aging properties.

A number of parameters, including physiochemical parameters, pH, washability, irritancy, homogeneity, viscosity, smoothness, etc., were utilized to evaluate the herbal body lotion.

Sr no	Physical Parameters	Observations
1	Appearance	White
2	pH	6.87
3	Homogeneity	Homogenous
4	Viscosity	0.7119
5	Absorbancy	Easily absorbed on skin
6	Consistency	Thin
7	Washability	Easily remove by water
8	Irritancy test	Not irritant

Verify the formulation's effectiveness and purity. The formulation's various constituents have the following effects.

Table no: 05

❖ Conclusion:

The formulated herbal lotion containing Aloe vera has proven to be an effective, stable, and safe product for skin care. Its natural moisturizing, soothing, and antimicrobial properties make it a valuable addition to the market of herbal cosmetic products. Further studies and continuous improvement can enhance its formulation, addressing specific skin concerns and extending its application range.

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