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Review Article

Moisturizing Body Lotion

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ABSTRACT

The HeLa cell line, originating from Henrietta Lacks in 1951, boasts unique growth characteristics, chromosomal anomalies, and genetic mutations, setting it apart from other cell cultures. This review aims to highlight its historical significance, features, and current role in cancer research. HeLa cells have been pivotal in unraveling cancer biology, providing insights into cell cycle regulation, apoptosis, and metastasis, while serving as reliable tools for drug screening and development. However, the application of CRISPR technology has stirred ethical debates and reproducibility challenges. Advances in genetic and molecular characterization have enabled access to the HeLa cell genomic map, revealing crucial cancer-related genes and epigenetic modifications. Both in vitro and in vivo approaches utilizing HeLa cells offer intricate insights into cancer nature, despite their respective limitations. Emerging technologies like CRISPR/Cas9-mediated genome editing, single-cell sequencing, and organoid models derived from HeLa cells have revolutionized cancer research. HeLa cells play a pivotal role in personalized medicine and regenerative therapies, shaping the landscape of cancer research and clinical practice. In conclusion, HeLa cells are indispensable to cancer research, facilitating significant progress in understanding the disease. While acknowledging their enduring impact, this review underscores the challenges and promising research avenues that warrant further exploration. By offering a comprehensive account of HeLa cell lineage, characteristics, controversies, and future prospects, this article aims to deepen readers' understanding of their enduring contribution to cancer research.

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Introduction: [1, 2, 5]

The need for natural materials and natural extracts in two 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 cotton wool or gauze that has been soaked in it. Different compositions are used to create aloe vera lotion, menthol lotion, and aloe vera lotion containing arrow root powder. Herbal cosmetics are those that were created when consumers' desire for herbal products and their aromatic value in cosmetics preparation led to a demand for natural products and extracts. It is used as a moisturizer, antioxidant, skin-brightening, melanin-lowering, and hyper pigmentation remedy to keep skin from drying out in

the winter. Thorough testing was done on the lotion's chemical and physical stability, including its pH, viscosity, and microbial load Underwent extensive testing. Morusabla leaves are used medicinally; its laxative and antioxidant properties have been investigated scientifically. Many researchers have examined herbal lotion formulations, and they can use this information to create new herbal cosmetic formulations using fresh herbs.

Benefits of Herbal lotion: [3, 10, 16, 18]

- Aloe vera gel has anti-inflammatory and antibacterial qualities as well.
- It has cooling qualities and is high in minerals and antioxidants that promote healing
- Easy to manufacture
- Easy to available and found in large of variety of plants
- They do not provoke allergic reactions and do not have any negative side effects.
- They are easily incorporated with skin and hair
- . Easily accessible and present in a wide range of plants
- Their herbal ingredients are more stable, pure, and effective.
- Herbal cosmetics can be handled and stored more easily and for longer.
- Inexpensive.

Components of Herbal lotion:

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

Materials and Method:

Aloe Vera gel: [7, 9, 17, 20]

Aloe Vera, a member of the Liliaceae family, is frequently utilized in lotion and cosmetic products.In addition to moisturizing and softening the skin, it provides a therapeutic effect on wounds. The antimicrobial and moisturizing qualities of aloe vera shield skin from microbial deterioration and prevent it from becoming harsh and dry. The cooling properties of aloe vera provide a refreshing sensation and prevent sunburn from developing . This drug is used as a moisturizer to treat or avoid mild skin irritations as well asdry,rough,scaly, and itchy skin.Aloe vera gel has anti-inflammatory and antibacterial qualities as well. It has cooling qualities and is high in minerals and antioxidants that promote healing.Aloe vera gel has significant anti-aging properties since it is high in beta carotene and vitamins C and E. Its antibacterial and anti-inflammatory qualities lessen fine wrinkles and skin imperfections. It also softens the skin and unclogs pores. Aloe vera gel is rich in nutrients and antioxidants that aid in healing, and it also has a cooling effect. It also soothes and hydrates the skin in an efficient manner.

Figure.1 Aloe vera

Almond oil: [5, 6]

Help to achieving smooth, silky skin. Gives your skin a lot of moisture without making it feel heavy.

Preserves our skin healthy and shields it from future harm. Make the skin clear and bright by reducing the rough and dry. Almond oil is an emollient that can help smooth and hydrate skin. Since almond oil is lightweight and non-irritating, it is usually safe for sensitive skin. It may promote immunity.

•Act as an antioxidant,

• It may have anti-inflammatory and antibacterial effects,

•Raise good cholesterol

• It may have antifungal and antibacterial qualities.

Figure.2 Almond Oil

Coconut milk: [13]

Coconut milk helps heal acne and slow down the aging process. Deeply moisturizing, coconut milk can help treat dry skin diseases like psoriasis, dermatitis, and eczema. It aids in skin maintenance and is readily absorbed. Elasticity The antibacterial qualities of coconut milk can aid in the treatment of infections and acne. Additionally, it can aid with oil removal and pore unclogging.It moisturizes the skin and effectively retains moisture. Skin cells are smoothed by its quick absorption, and the fats preserve suppleness.

Figure.3 Coconut milk

Rose water:

Rose water is a great source of anti-inflammatory qualities. It efficiently soothes skin irritation and offers a cooling sensation that reduces redness and itching. The skin is hydrated and moisturized with rose water.It has anti-inflammatory properties, improves skin texture and smoothness, and aids in preserving the pH balance of the skin.

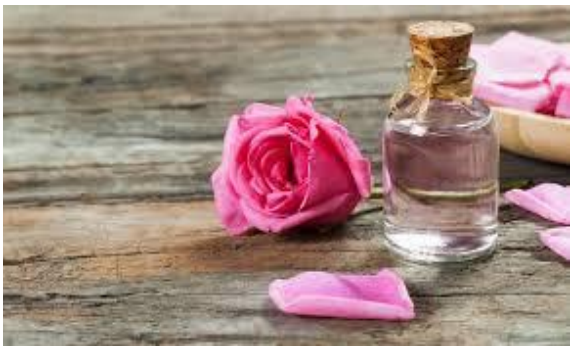

Figure.4 Rose Water

Honey:

Honey is a natural antiseptic and anti-inflammatory that helps to heal breakouts of acne and prevent extra Infections. Honey also reduces the redness and swelling of acne.

It control the accumulation of dust in the Skin pores and absorbs the impurities from the pores It reduces the dryness of skin by providing long-Lasting hydration.

Honey moisturizes the top layers of skin and helps to reduce wrinkles and fine lines.

It Use as wound-healing agent.

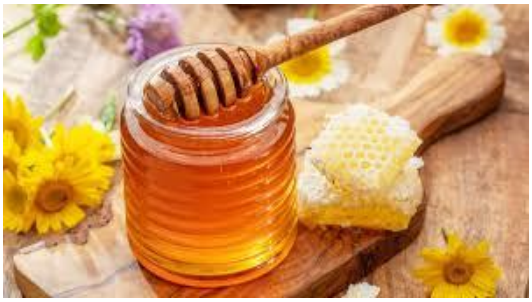

Figure.5 Honey

Vitamin E capsule:

- Strengthens your skin barrier. A strong skin barrier allows your skin to retain water and stay hydrated
- Super moisturizing
- Powerful antioxidant properties
- Treats hyper pigmentation
- Protects from UV exposure.
- Fades acne scarring.

Figure.6: Honey

Glycerin: [8]

Glycerine help the skin in retaining water, glycerin helps avoid dryness and fGlycerin can strengthen the skin's natural defenses against environmental factors and irritations.Cuts and nicks on the skin can be healed with glycerin.Glycerin can lessen the visibility of fine lines and wrinkles(8).Glycerin can make skin appear more even-toned by reducing pigmentation and dark patches. Because glycerin is non-comedogenic and oil-free, it won't clog pores and can help minimize acne.

Figure.7: Glycerin

Evaluation of Body Lotion:

Appearance: The lotion's visual attributes were noted.

1. **After Feel:**
2. Following the application of a predetermined quantity of lotion, the skin's emollience, slipperiness, and residue were assessed.
3. **Acid Value:**
4. 50 milliliters of a 1:1 alcohol and ether combination were used to dissolve 10 grams of the material. Reflux condenser-equipped, the flask was gradually heated until the sample was completely dissolved. Following the addition of 1 milliliter of phenolphthalein, the solution was titrated with 0.1N NaOH until a slight pink hue developed and persisted for 30 seconds. Acid Value = (n × 5.61) / w, where w is the substance's weight and n is the amount of NaOH used (in milliliters).
5. **pH Measurement:**
6. Standard buffer solutions were used to calibrate the pH meter. A digital pH meter was used to measure the pH of the lotion after 0.5 g of it had been dissolved in 50 ml of distilled water.

Irritancy Test:

The left hand's dorsal surface was marked with a 1 cm^2 area. This area was treated with the lotion, and for up to 24 hours, observations were recorded for edema, erythema, and irritation.

Viscosity:

A Brookfield or Ostwald viscometer was used to measure the formulation's viscosity at 100 RPM, spindle number 7, and 25°C. Three readings of the measures were made, and the average of the three was noted.

Spreadability:

The test was conducted using two conventional glass slides (20 × 5 cm). One slide was covered with the formulation, and the second slide was positioned on top of it, sandwiching the lotion over a 7.5 cm region. After that, a 100 g weight was added to form a thin coating. Any extra lotion on the slides was scraped off when the weight was removed. After that, the slides were placed in a platform at a 45° angle to cause the least amount of disruption possible. The top slide was left free to slide while the lower slide was secured. Carefully, a 60 g weight was fastened to the top slide.The time taken for the upper slide to travel 5 cm and separate from the lower slide under the influence of the weight was recorded. This process was Repeated three times, and the average time was calculated.

Accelerated Stability Testing:

Accelerated stability testing was performed on the two most stable Formulations at room temperature over 7 days. The formulations were then placed at 40°C ± 1°C for 20 Days. Observations for any changes in color or phase separation were recorded on the 0^{th}, 5^{th}, 10^{th}, 15^{th}, And 20^{th} days for both conditions.[13]

Type of Emulsion Test:

To determine the type of emulsion produced, dilution and dye solubility tests were conducted.

Sensitivity Test:

Six volunteers had a sample of the lotion applied to their forearms, and they were left for 20 minutes. After this time, any irritation that developed was noted.

Washability Test:

After applying a small amount of the lotion to the hand, it was left to be rinsed off for ten minutes under running water. It was noted how long it took for the lotion to be totally gone.[14]

In Vitro Permeation Studies:

Research on the in vitro penetration of TRA lotions into rabbit skin was were out utilizing in-house-built, two-chamber Franz-type diffusion cells with a receptor volume of 5 milliliters and a diffusional area of roughly 0.788 centimeters square. The research made use of abdominal full- White New Zealand male rabbits weighing 3–4 kg had thick skin that was meticulously removed after putting the bunny to sleep. Extraneous tissue and any subcutaneous fat were carefully removed utilizing scissors and forceps. After being cleansed with phosphate-buffered saline (PBS) at a pH of 7.4, the skin was preserved. 500 ml of regular saline in a refrigerator set between 18 and 20°C.

Conclusion:

Compared to synthetic bases, Herbal ingredients provide better alleviation for dry skin and can partially replace them. Promoting natural cosmetics is crucial for cosmetologists. The skin's inherent qualities aid in reducing negative effects on its surface, and these herbal formulations are simple to apply to the skin, enabling efficient absorption. Due to the distinct and noteworthy advantages of herbal substances, there is an increasing demand for herbal formulations on the international market. The creation and assessment of a herbal lotion were the main objectives of this study.

The antioxidant benefits of a variety of natural herbs, each with unique qualities, make them very advantageous in skincare compositions. The results show that herbal lotions successfully prevent skin problems and that herbal cosmetics are safe and harmless. The use of cosmetics containing bioactive

ingredients, which boost the skin's biological activity and provide essential nutrients for skin health, is growing in the personal care sector.

Conflict of Interest:

No Conflicts of interest

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