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Formulation and Evaluation of Herbal Skin Care Cream Containing Aloe Vera & Turmeric

Ms. Sakshi Sachin Khanvilkar, Mr. Nitin. M. Gawai, Mr. Kunal. R. Hake
Student B. Pharm Final Year Sem VIII, Mahadev Kanchan College of Pharmaceutical Education and Research, Mahadev Baug, BAIF Rd, Uruli Kanchan, Maharashtra 412202, India

Abstract: ***Feet are also important organ of our body used to perform activities like walking, running and jumping but are often neglected. They need to be taken care. The main motive of our formulation was to formulate and to develop the anti-crack herbal gel containing aloe vera gel and hibiscus extract having healing and antimicrobial activities. Various ingredients having anti-inflammatory property were incorporated and microbial studies were carried out for the effectiveness of the gel. It was found that developed product is safe and effective against cracked heels without any side effect. The effectiveness of the gel was seen on volunteers cracked heel by applying for 15 day. Feet need to be taken care of comfort, beautification, and protection from various microorganisms. The object of the present work is to formulate and develop foot care cream with herbal ingredients having various activities like healing and antimicrobial. The various herbs have been reported to having antimicrobial activities. It has been concluded that the product has been good foot care proper.***
Objective: ***Formulation and evaluation of Herbal Skin Care Cream Containing Aloe Vera & Turmeric.***
Keywords: Aloe Vera gel, extract of Neem, coconut oil, herbal Herbal Skin Care Cream, anti-bacterial.

I. INTRODUCTON

The majority of the time, cosmetics are utilized to both adorn and purify the skin. The word " cosmetics" comes from the Greek verb "kosmesticos," which meaning to embellish. Since then, cosmetics have been defined as substances that are applied to the skin in order to enhance beauty or promote appearances. The use of herbal cosmetics for skin beauty has persisted since antiquity. A form of moisturizing cream called Herbal Skin Care Cream has long been used to calm and shield dry or sensitive skin. Beeswax, mineral oil, and several other oils, including rose oil, are commonly used as emulsifying agents, together with water and lipids. Since it feels cool on the skin when applied, the term " Herbal Skin Care Cream " was coined. It is thought to have been invented in ancient Greece, when ladies used it to moisturize and clean their skin. Herbal Skin Care Cream is frequently applied to the face, hands, and body nowadays as a moisturiser and makeup remover. The term "herbal cosmetics" refers to products that have been specially created with one or more herbal substances to solely deliver certain cosmetic benefits on top of a base of other legal cosmetic ingred are a few examples of plant-based active ingredients that cosmetic manufacturers added to over-the-counter skin care products to claim therapeutic benefits beginning in the 1990s (1).The purpose of a skin cream is to protect the skin from various environmental factors, including weather, and to provide calming effects. There are many various kinds of creams, including hand, body, cleansing, cold, foundation, disappearing, night, and massage creams (2).Herbal Skin Care Cream has the dual benefits of chilling the body and providing hydration to dry skin while also clearing pores of dirt. It might just be washed away and diluted. They don't irritate the skin when applied to its (3).Herbal Skin Care Cream is an emulsion that produces a cooling effect when applied to the skin because the water in the emulsion evaporates slowly. They are typically made by emulsifying water and oils. In the past, vegetable and animal fats were used to make Herbal Skin Care Cream (4).

A. Benefits of Herbal Cosmetics

- Natural elements have the least detrimental effects on the skin or other bodily components.
- Comparatively safer.
- Due to its use in customs and culture, consumers have a greater placebo effect.
- Formulation flexibility.
- Population data demonstrate ancient consequences.
- Simple accessibility.
- It helps to beautify and cleanse the body without causing any negative side effect

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B. Herbal Skin Care Cream properties

- Emollient
- Hydrating
- Non-comedogenic
- Occlusive

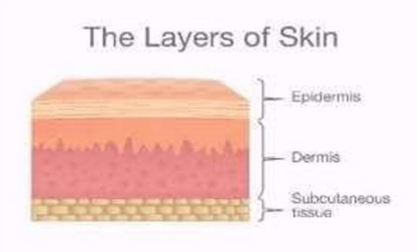

Fig.no.01

C. Advantage of Herbal Skin Care Cream [3]

- Friendly- skin.
- Nourishing and moisturizing
- Everyone can use it conveniently &Aromatherapy.
- The reduction of danger.
- Prevent drug levels from fluctuating in the presence of intra- and interpatient variability.
- No particular expertise or risk is needed to apply the product.

D. Disadvantages of Herbal Skin Care Cream

- Weak scientific support.
- Varying degrees of efficacy.
- Narrow scope.
- Reduced shelf life.
- Drugs with larger particle sizes can't be absorbed through skin pores as easily.

E. What are Cracked Heels?

- Cracked heels are THE most common foot problem.
- Often referred to as fissures.
- For most people, cracked heels are a cosmetic problem, however,
- When the fissures or cracks are deep, they are painful to stand on and the skin may bleed, which can become infected in severe cases.

F. Common Causes That Can Cause Crack's & Skin Dryness.

Fig.no.02

II. EMULSIFICATION TECHNIQUE

Emulsification is a process used in the formulation of cold creams to create a stable and homogeneous mixture of water and oil-based ingredients. In herbal cold creams, natural emulsifiers are often preferred over synthetic ones to maintain the product's natural profile. Here are a few common emulsification techniques used in herbal cold creams.

A. Method

The cream was prepared by using the cream base that is bee's wax, extract of neem, borax, coconut oil, distilled water, rose oil, Aloe Vera gel. The emulsification process and herbal extracts were used to make the cream. We have created three batches of our herbal cream utilizing the emulsification technology, designated F1, F2, and F3. All three batches were assessed based on various criteria, including spread ability and appearance.

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1) Emulsification Technique in Herbal Skin Care Cream

Emulsification is the process of combining two immiscible liquids such as oil and water on to a stable and uniform mixture. Herbal Skin Care Cream is emulsion of oil in water with the oil being the primary ingredient.

There are several technique for emulsifying cold cream but one common method is to use an emulsifying agent, such as beeswax or borax which helps to stabilize the emulsion and prevent separation of the oil and water phases. Here is a basic recipe for making Herbal Skin Care Cream using the emulsification techniques.

Ingredients -

- ½ cup of coconut oil
- ¼ cup of beeswax
- ½ cup of distilled water
- A few drops of essential oil (optional)

Instructions -

- In a double boiler, the melt the coconut oil and beeswax together until fully combined.
- Remove from heat and slowly stir in the distilled water, whisking continuously until the mixture becomes creamy and emulsified.
- Add a few drops essential oil if desired and stir to combine.
- Pour the mixture into clean, airtight jar and store in cool, dry.

It's important to note emulsion can be sensitive to temperature and other environment factors. So it's important to follow the recipe carefully and store Herbal Skin Care Cream properly to maintain its stability.

2) Benefits of Emulsification Technique -

- Stability
- Enhanced Texture
- Improved Moisturizer
- Controlled Release of Ingredients
- Customizable Formulations
- Compatibility with Additional Ingredient

III. PROFILE OF HERBAL DRUG AND EXCIPIENT

1) Borax

Fig.no.03

- Borax is used in the cosmetic industry to exfoliate dead skin cells and eliminate skin microorganisms.
- Emulsifiers were produced by the chemical reaction, which rendered Herbal Skin Care Cream oil and water components less likely to separate on standing borax. Borax-based Herbal Skin Care Cream were therefore more reliable

2) Aloe Vera

Fig.no.04

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- The strong concentration of natural lubricants in Ayur herbals cream with aloe Vera creates a dense layer of moisture on the epidermis, slowing the rate of water loss from the skin.
- Aloe Vera contains natural moisturizing agents that help to hydrate and soothe the skin. It is also rich in antioxidants, which can help to protect the skin from damage caused by free radicals. Additionally, aloe Vera has anti-inflammatory properties, which can help to reduce redness and irritation on the skin.

3) Beeswax

Fig.no.05

- Skin moisturising, acne clearing, healing of dry skin, reduction of stretch marks, anti-inflammatory properties, and liver protection.
- A beeswax-based emulsion that served as a thickening and emulsifier was described to us. Emulsifying agentslike beeswax are employed

4) Coconut Oil

Fig.no.06

- Coconut oil is an excellent moisturizer that helps to keep the skin hydrated and prevents moisture loss.
- It forms a protective barrier on the skin, preventing dryness and maintaining softness.
- Nourishing
- Antioxidant activity:-These antioxidants help to protect the skin from damage caused by free radicals and environmental stressors

5) Neem Oil

Fig.no.07

- Neem oil is a versatile and popular ingredient in skincare products due to its numerous beneficial properties.
- When used in a Herbal Skin Care Cream formulation, neem oil can provide several benefits for the skin.

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6) Rose Water

Fig.no.08

- Fragrance
- Rose water is often used in cold cream formulations as it has a number of benefits for the skin. Some of the benefits of rose water in Herbal Skin Care Cream include:

IV. METHOD AND METHODOLOGY

A. Collection of Material

Aloe Vera leaves, Neem Leaves, Coconut Oil was collected from local area in Prem Nagar, Dehradun and Beeswax, Borax, Rose oil, Distilled Water was collected from Pharmaceutics lab.

B. Extraction Process

flask, and shaken.

Aloe Vera gel :

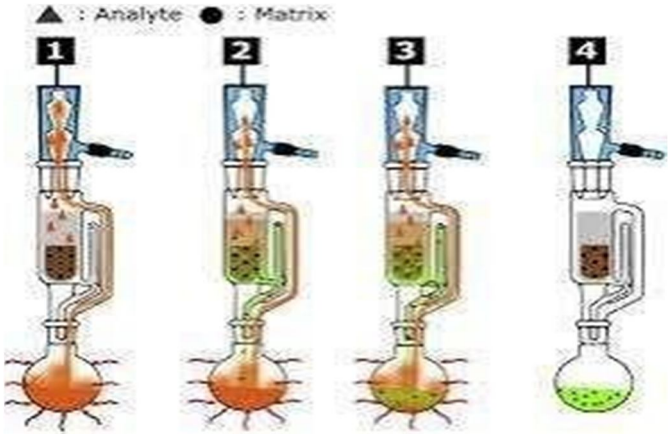
Take a fresh aloe Vera leaves & washed with purified water. Then the outer part of the leaf were dissected using a sterile knife. Remove the aloe Vera gel, using the sterile knife. Then it is blend in blender to form aloe Vera gel (15).

Extraction of Neem leaves:

Take Neem leaves and washed with purified water & dried in hot air oven. After proper drying leaves was powdered with help of blender. Then take 2gm neem leaves powder and add 20ml dimethyl sulphoxide in a volumetric

Fig No 04: Before application of foot cream

Fig No 05: After one week application of foot cream



for 1 day on mechanical shaker. Then the solution was heated on a water bath at 80 to 100 °C and then filtered using muslin cloth to remove impurities. Then the filtrate, which is a clear solution or clear extract of Neem leaves, was used in the further formulation [14]

Table of Aloe Vera & Turmeric Herbal Skin Care Cream

Sr.NO	Ingredient	F1	F2	F3
01	Beeswax	1gm	1gm	1gm
02	Aloe-Vera	15gm	20gm	25gm
03	Coconut Oil	10ml	10ml	10ml
04	Neem Oil	0.02ml	0.02ml	0.02ml
05	Borax	0.8gm	0.8gm	0.8gm
06	Rosewater	23.2ml	18.2ml	13.2ml

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Fig No. 11– Formulation of cream

V. RESULT AND DISCUSSION

Table: - 1

- Physical observation

The cream was observed for the color, odor, texture and appearance are

S.N	Parameter	F1	F2	F3
01	Color	Yellowish Green	Yellowish Green	Yellowish Green
02	Odour	Pleasant	Pleasant	Pleasant
03	Texture	Smooth	Smooth	Smooth
04	Appearance	Semi-Solid	Semi-Solid	Semi-Solid

Table:-2

- Wash-ability observation

The cream was applied on the hand and observed under the running are observed as

SN	Formulation	Wash-ability
01	F1	Easily Washable
02	F2	Easily Washable
03	F3	Easily Washable

Tabl:- 3

- PH observation

About 0.5gm of cream was weighed and dissolved in 50ml of distilled water and its PH was measured using digital PH meter its result as listed below

SN	Formulation	PH
01	F1	7.57
02	F2	7.52
03	F3	7.51

Table:- 4

- Spread ability observation:-

The spreadablity test observed as

SN	Formulation	Spread ability
01	F1	Easily spreadable
02	F2	Easily spreadable
03	F3	Easily spreadable

Table:- 5

- Viscosity observation:-

To evaluate the viscosity stability of a substance or formulation, ensuring its consistency and performance over time.
According to the results all formulations showed adequate viscosity the result are

SN	Formulation	Viscosity
01	F1	48880cp
02	F2	48890cp
03	F3	48870cp

Table : 6

- Stability Studies:

Stability studies observation on the day of preparation, after 1 month of preparation and after 2 months of preparation.

Stability Study	On the day of preparation	After 1 month of preparation	After 2 months of preparation
Appearance			
Irritancy	Non-irritant	Non-irritant	Non-irritant
PH	6	6	6
Colour	No colour change	No colour change	No colour change
Odour	No bad odour	No bad odour	No bad odour

Results: -

i) We develop three formulation F1, F2, F3 but F3 showed good appearance, pH, adequate viscosity and no phase separation was observed. Additionally, the F3 formulations were simple to wash and exhibited no erythema, redness, or irritation during the irritancy tests. The optimum formula is F3, which is stable at room temperature.

ii) The developed cream consisting of ginger, Aloe barbadensis, cocoa butter was found to be safe and effective for the treatment of cracked heels.

VI. CONCLUSION

By using Neem oil, Aloe Vera, coconut oil cream showed a anti-bacterial effect and all these herbal ingredients showed significant different activities. Based on results and discussion it can be safely used on skin. From the above results it is concluded that the formulated cream showed good consistency and spread ability, homogeneity, pH, and there is no phase separation during study period of research. From the above study it can be concluded that the herbal Aloe-Vera Herbal Skin Care Cream is safe to use as it is developed from herbal extract. Natural remedies are more acceptable in the belief that they are safer with fewer side effects than the synthetic ones. So, the values of herbs in the cosmeceutical has been extensively improved in personal care system and there is a great demand for the herbal cosmetics nowadays. An herbal cream which is nontoxic, safe, effective and improves patient compliance by the utilization of herbal extracts would be highly acceptable. F3 formlaulat on herbal ingredients showed best Anti-bacterial activities. Based on the results, we can suggest that the F3 formulations were stable and can be safely used on the skin. It can be concluded that herbal creams without side effects having anti-inflammatory property can be used as the provision of a barrier to protect the skin.

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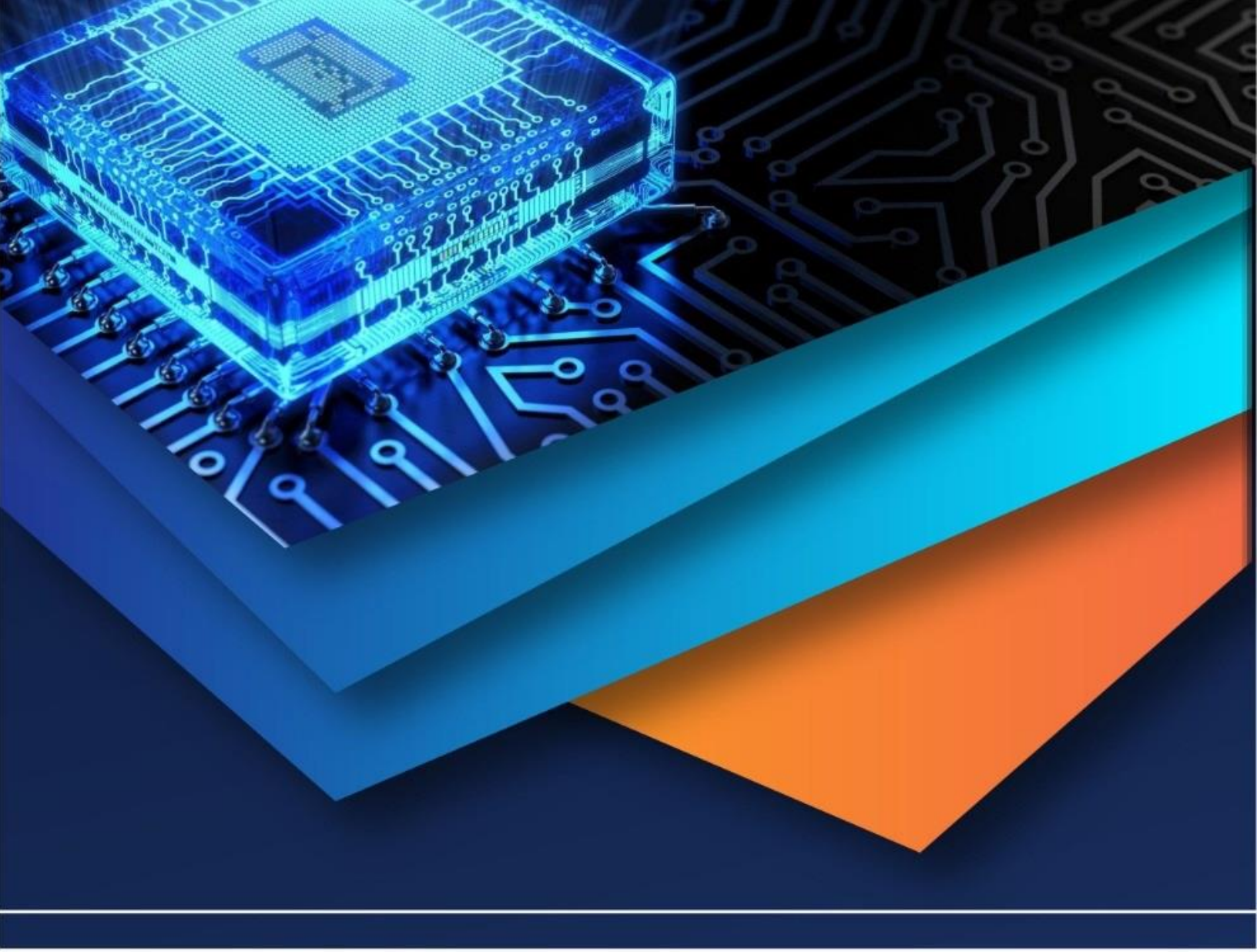

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