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Research Article

Formulation And Evaluation Of Herbal Anti – Aging Night Cream

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ABSTRACT

The aim of this present study is to prepare and formulate a herbal Anti-Aging cream. In this study cream were formulated based on the anti-oxidants potential of herbal extracts. The cream was formulated using natural ingredients like butterfly pea flowers, Aloe vera gel, corn flour and vitamin E capsule. Evaluation of formulation was done on different parameters like PH, Spreadability, stability, good consistency. The formulations are safe to use for skin. This herbal night cream is more stable and safe. Butterfly pea flowers contain anthocyanin which are natural antioxidant that slow down the aging process. Aloe vera gel use as moisturizer. The cream having anti-oxidants property can protect the skin and avoid aging the skin.[1]

INTRODUCTION

Skin care is the most essential part of every beauty process.[2] Cosmetics are products which are used to purify and beautify the skin. Even today, people especially in rural areas, choose natural remedies (plants extracts) for traditional cosmetics. A certain number of women are still using herbal cosmetics to beautify their skin. The best reason for using an herbal cosmetic is that it is purely made by herbs and shrubs.[3] The skin is the largest organ of the body, with a total area of about 20 square feet. Structure of the skin, The skin consists of three main layers:

Epidermis (the outer layer)

Dermis (the middle layer)

Subcutaneous or hypodermic[4]

SKIN AGEING

Skin ageing is the result of continual deterioration process because of damage of cellular DNA and protein. Skin ageing is influenced by many factors including ultraviolet radiation (UV), excess alcohol consumption, tobacco abuse and environmental pollution. Combined, these factors lead to cumulative deterioration in skin appearance and function.[5] Natural remedies are more acceptable and safer than synthetic ones. The main aim of our study is To Develop a herbal cream which can give multipurpose effect, like Moisturizer, reduce acne and skin Irritation, reduce skin problems. Butterfly pea flowers, Aloe

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Vera gel , This indicates the presence of Anthocyanins, Butterfly pea flowers contain anthocyanins, which are natural antioxidants that slow Down the aging process. Prevents skin aging Aloe Vera gel is Used as a moisturizer, to reduce Pimples and acne.[6] The function of a skin cream is to cover the skin against different environmental condition, rainfall and gives soothing effect to the skin. There are different types of creams like sanctification, cold wave, foundation, evaporating, night, massage, hand and body creams. Night creams are a wonderful solution for taking care of your skin [7] Night cream is a special type of moisturizer designed to be used before bed for optimal results. Unlike other night time skincare products, these creams are usually thicker and heavier in consistency. Night creams are an essential part of any skincare routine, as they provide many benefits that can help keep your skin looking and feeling healthy. Using a night cream can help to protect your skin from the environment and harsh chemicals by creating a protective barrier that locks in hydration. It also helps to replenish lost moisture and improve texture, while providing additional anti-aging protection. In addition, natural night creams often include beneficial ingredients such as antioxidants and botanical extracts that can reduce inflammation, restore skin elasticity, and protect against future damage. These ingredients also help to promote cell turnover for clearer, healthier looking skin.[8]

Advantages of night cream

- Night cream provides good moisturizing to the dry parts of your face. Therefore, your face is kept hydrated.
- It soothes your face.
- Night cream boosts collagen production in your skin.
- The cream also helps in better blood circulation.
- The night cream also helps in wrinkle reduction.

- It helps your skin to restore its elasticity.

Disadvantages of Night Cream

- Night creams may contain active ingredients and fragrances that may trigger allergic reactions and irritate sensitive skin. To avoid this, do a patch test before using a new night cream
- Some night creams can be heavy or greasy, potentially leading to clogged pores and acne breakouts. Opt for non-comedogenic night creams if you have oily or acne-prone skin.
- High-quality night creams can be expensive
- Always choose a night cream that is free of sulfates, parabens, and alcohol – which may otherwise irritate the skin.

why using a night cream is good for your skin.

It is said that your skin absorbs active ingredients better at night time than it does during the day. Also, your skin's cell regeneration power is higher at night when you are asleep. The night cream clears off dirt from your face, renews the face cells and prevents the tissues from being damaged. Therefore, a night cream on your face not only keeps your skin nourished but also helps to repair the damaged cells.[9]

Application of anti-ageing cream

- Improves complexion.
- Anti aging cream keeps wrinkles at bay and adds a natural glow to your skin, and reduces fine lines
- Smoothens wrinkles.
- Rich with natural oils, herbs and fruit extracts, and the cream works gently on the skin. Moisturizers and hydrates ageing and sun damaged skin.
- Neutralizes environmental damage.
- The cream visibly reduces wrinkles and neutralizes environmental damages to give back that youthful suppleness.[5]



AIM: PREPARATION AND EVALUATION OF HERBAL ANTI-AGING NIGHT CREAM.
OBJECTIVE

1. To study the different formulations of herbal face cream.
2. The main objective of our formulation is to develop an herbal face cream which can give anti-aging effect. it reduce acne and skin irritation, wrinkles etc. and also adding glow to the face.
3. The powerful antioxidants and chemical compounds found in the butterfly pea flower can brighten skin, boost collagen production.
4. To evaluate the prepared formulation.

DRUG AND EXCIPIENTS PROFILE



Figure .1

Butterfly pea flowers

Biological source

Clitoria ternatea, commonly known as butterfly pea, is a perennial herbaceous plant.

Family: Fabaceae.

Synonyms

Asian pigeonwings, bluebell vine, blue pea, butterfly pea, cordofan pea or Darwin pea.

Useful part

Flowers



Figure. 2

Aloe vera

Biological source

Aloe consists of the dried juice/ latex collected by incision of the leaves of Aloe barbadensis Miller (also known as Curacao Aloe) , Aloe perryi , etc.

Family: Liliaceae

Synonyms

Acemannan ,Aloe africana, Aloe barbadensis, Aloe apensi.

Useful part

Gel



Figure. 3

Corn flour

Biological source

Corn flour is made from corn. Corn flour is the result of grinding entire corn kernels into a fine powder.

Family: Poaceae

Synonym

maize, Indian corn, sweet corn , lemon yellow.

Useful part

Powder



Figure. 3

Vitamin E capsule

It is found in many foods including vegetable oils, egetable oils, cereals, meat, poultry, eggs, and fruits.

Synonym

d-alpha tocopherol, d-alpha tocopheryl acetate, or d-alpha tocopheryl

Numerous foods provide vitamin E. Nuts, seeds, and vegetable oils are among the best sources of alpha-tocopherol. Vitamin E may aid in improving skin health

Useful part

oil

PROCEDURE OF HERBAL ANTI - AGEING NIGHT CREAM

Collect fresh or dried flowers of butterfly pea

Remove the sepals of flowers

Take a bowl & pour Hot water.

Add Butterfly pea flower in hot water.

leave it for 2 hrs.

Flower starts to leave its colour,

Grind the soaked Flower with water.

strain the water.

Take a beaker & add corn flour.

Add strain Blue water in corn flour & mix well.

Then Boil it for 3-4 min. Stir continuously ,

Boil mixture with the help of double boiling method.

leave it for 5 min. or add aloe vera gel, vitamin E Capsule. mix it well. Cream is ready Add the cream in Suitable container.

Table 1: Formulation Table

| Sr.no. | Ingredients | Properties | F1 | F2 | F3 |
|--------|-----------------------|------------------------------------|-------|-------|-------|
| 1 | Butterfly pea Extract | Anti-ageing | 30ml | 30ml | 30ml |
| 2 | Corn flour | Skin lightening agent , Anti aging | 5gm | 6gm | 5gm |
| 3 | Aloe vera gel | Moisturize | 10gm | 10gm | 5gm |
| 4 | Vitamin E capsule | Antiaging, Anti oxident | 2cap. | 1cap. | 2cap. |



Figure.11(F1)



Figure.12(F2)



Figure.13(F3)

Evaluation Test

1. Organoleptic Evaluation The Face Cream thus obtained was evaluated for its organoleptic properties like colour, odour and state, The appearance of the cream was judged by its colour and roughness and graded [10,11]

Significance:

1. Evaluation means the study of drugs using organs of senses.
2. 2.1 refers to the methods of analysis like colour, odour, taste, size, shape and special features, such as touch, texture, etc.
3. Obviously, the initial sight of the plant or extract is so specific that it tends to identify itself.

2. PH

The pH of the cream was found to be in the range of 5.9 to 6.9 which is good for skin pH. The cream has shown pH nearer to skin required i.e., pH of formulation was found to be 6.9[12]

Significance

1. pH is an important quantity that reflects the chemical conditions of a solution.
2. The pH can control the availability of nutrients, biological functions, microbial activity, and the behaviour of chemicals.

3. stability Test

the mechanical test cream samples were inserted into centrifuge tube at a speed of 3750 RPM for half an hour 5000 to 10000 RPM for 15 Minutes then observed whether a separation exist or not[13]

Significance

stability testing is important for determining factors such as a product's shelf life, optimal storage conditions, retest period, and assuring its overall quality for consumers

4.Viscosity

The viscosity of cream was done by using Brooke field viscometer at a temperature of 25 °C using

spindle number 63 at 2.5 RPM. According to the result all three formulation show adequate viscosity [14]

Significance

1. It describes the internal friction of a moving fluid.
2. A fluid with large viscosity resists motion because its molecular makeup gives it a lot of internal friction.
3. A fluid with low viscosity flows easily because its molecular makeup results in very little friction when it is in motion.

5 . Spreadability Test

Spreadability denotes the extent of area to which the formulation readily spreads on application to skin.

The bioavailability efficiency depends on its spreading value [14]

Significance

1. Cream base should spread easily without too much drag and should not produce greater friction in the rubbing process.
2. Spreadability of gels, creams, ointments and lotions is the net result of a combination of rheological contributions, of which viscosity is just one.

6. Irritancy Test

All formulations show no redness edema inflammation and irritation and during irritancy studies these formulations are found to be safe to use for the skin .[15]

Significance

To check skin is burning or not after applying the formulation and to check whether our cream causes itching or not.

7. Wash ability

A small amount of cream was applied on the hand and it is then washed with tap water[16]



RESULT

Table 2: Organoleptic evaluation

| Sr.no. | Properties | Formulation |
|--------|-------------------|-----------------|
| 1 | Colour | Light Blue |
| 2 | Odour | Characteristics |
| 3 | Consistency | Smooth |
| 4 | State /appearance | Semi solid |

Table 3: Evaluation of Formulation Batches

| Sr.no. | Parameters | F1 | F2 | F3 |
|--------|--------------------|---------------------|---------------------|---------------------|
| 1 | PH | 6.3 | 6.6 | 6.7 |
| 2 | Stability test | Stable (room temp.) | Stable (room temp.) | Stable (room temp.) |
| 3 | Viscosity (cps) | 11810 | 13810 | 18820 |
| 4 | Spreadability test | Good | Good | Good |
| 5 | Irritancy | No irritancy | No irritancy | No irritancy |
| 6 | Wash ability | Good | Good | Good |

CONCLUSION

Nowadays herbal cosmetics are gaining popularity. Among customers there is a growing demand for herbal cosmetics in the world market and they are invaluable gifts of nature. The herbal cream was prepared from herbal extract and has different significant activity in formulation. The formulation F1, F2 and F3 are stable at room temperature and can be safely used on skin. The various parameters of herbal antiaging cream were performed such as pH, Viscosity, spreadability, irritancy. The use of bioactive ingredients in cosmetic influences biological function of skin and provides nutrients necessary for healthy skin and hair.

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