

Formulation And Evaluation of Herbal Moisturizing Cream by Helianthus Annuus

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Abstract-

Herbal cosmetics are preparations used to improve a person's appearance. The main goal of our work is to develop an herbal cream that has multi-purpose effects, such as a moisturizer that reduces acne and skin irritation. An herb is a plant or part of a plant valued for its aromatic medicinal properties. Moisturizer is a semi-solid formula used to reduce skin problems and fight wrinkles. In our production we used herbal ingredients like aloe vera, tulsi, neem, beal, amla, sunflower oil. The cream was made from beeswax, liquid paraffin, borax, methylparaben, distilled water, rose oil, neem, tulsi, beal, amla, aloe-vera, sunflower oil etc. Moisturizers are semi-solid preparations that are used to reduce the chances of developing skin problems and fight wrinkles. The main objective of the research is the preparation of moisturizing creams with different herbs and the effectiveness of the prepared moisturizing cream is evaluated. Herbalism, or botanical medicine, often used to describe herbal medicine, is the use of medicinal plants for their therapeutic or medicinal value.

Keywords: Herbal Moisturizer, Medicinal Plants, Hydration.



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Introduction:

In the sphere of personal care, the use of herbs in cosmetic product manufacturing has grown dramatically in recent years, and there is a strong market demand for herbal cosmetics. Herbal cosmetic items or herbal medicine plants. Cosmetics may also be referred to as botanically derived items. Chemicals called cosmetics are applied to the human body in order to purify it. Beauty, attractiveness, and appearance modification without compromising bodily function or structure. The following primary categories can be used to classify herbal cosmetics.

1. To make the skin of the face look better.
2. To maintain and promote hair growth.
3. For acne, pimples, and skin care, particularly for teenagers
4. Perfumes, powders, shampoos, soaps, etc
5. Various products.

Among the groups that were mentioned in the upcoming years, skin care will account for the majority of cosmetic demand, particularly for specialist items utilized in cosmetic face implants. Both men and women utilize cosmetics on a regular basis, such as colognes, gels, and creams. Creams can be used to cleanse the face in a variety of situations. The goal of moisturizing care is to preserve the skin's health and integrity. Giving the illusion of health to a person.

Moisturizer:

A liquid that is used to soften skin, particularly those of naturally dry skin types, moisturizer is a cosmetic product that lubricates, protects, and moisturizes the skin. They decrease evaporation by raising the skin's water content. The purpose of humidifiers is to provide or replenish moisture. The market is filled with several kinds of humidifiers. The majority of moisturizers on the market are used the majority of moisturizers on the market contain artificial thickeners, surfactants, pigments, emulsifiers, adhesives, and scents. There is a common necessity to switch from the harmful synthetic chemical to natural herbs.

The ideal characteristics of a Moisturizer:

1. it should be non-inflammatory and non-allergic.
2. it shouldn't be irritating and poisonous.
3. It should be simple to apply to the skin and leave a pleasing sensation behind. It ought to be able to leave the skin feeling smooth as opposed to tacky.
4. It ought to lessen skin dryness and make the dull aspect of skin better.

Advantages:

- The primary benefit of using an Herbal Moisturizer is that it improves skin hydration without causing any adverse reactions.
- It lessens the likelihood of future skin issues.
- Not as greasy as other ointments.
- Using moisturizer keeps your skin looking fresh.
- Compared to synthetic cosmetics, they are highly effective when used in modest quantities.
- Moisturizing can lessen the visibility of additional imperfections.
- Calm delicate skin
- Delay the aging process.
- Aid in the battle against acne.
- Defense against skin damage.

Disadvantages:

- Long-term therapy is necessary for herbal drugs because their effects wear off more slowly than those of allopathic dose forms.
- The majority of natural medications are difficult to find.
- Taste and odour are difficult to disguise.
- Not quite as stable as ointments.

Allergens, over-moisturization, and fire danger

- Stability is inferior to creams.
- Because they are less hydrophobic than other semisolid preparations, there is a higher chance of contamination.
- The medication and/or excipients may cause skin irritation or contact dermatitis.

Sides effects of Moisturizers:

1. The majority of emollients can be used safely, effectively, and without causing any negative effects. But it can also burn, sting, cause redness, or irritate.

Notify your pharmacist or doctor right away if any of these side effects persist or worsen.

2. If your doctor has recommended this drug, keep in mind that they have determined that the likelihood of positive side effects outweighs the benefit to you. Many users of this medicine report no significant adverse effects.

Topical Drug Delivery:

In the past few decades, medications have been applied topically, parenterally, sublingually, rectally, orally, inhaled, etc. to treat various illnesses. Topical administration is the application of a medication-containing mixture to the skin. to address the pharmacological action or activity of the medicine on the skin's surface or within the skin in order to treat the skin symptoms of a disorder or common disease, such as psoriasis. Semi-

solid medicines in all their forms are the most commonly used for topical administration; nevertheless, foams, sprays, medicinal powders, solutions, and even medicated toothpastes can be employed.

Advantages of Topical Drug Administration:

- Practical and simple to operate.
- Reduce the risk of gastrointestinal distress.
- Inhibit first-pass metabolism.
- Provide an alternative to oral delivery.

Drug and Excipients Profile:

1. Tulsi:

Family: Lamiaceae

Biological Source: fresh and dried leaves of *Ocimum* species like *Ocimum sanctum* L. and *Ocimum basilicum* L. etc.

Biological Name: *Ocimum tenuiflorum*

Kingdom: Plantae

Part Used: Leaves



Fig.1 Tulsi Medicinal Use of Tulsi:

1. Tulsi helps to cure fever
2. It helps to cure skin problems like blackheads, premature ageing, acne etc
3. Tulsi used to treat heart disease.

2. Neem:

Family: Meliaceae

Biological Source: It consists of the leaves and other arial parts of *azacardia Indica*

Biological Name: *Azadirachta indica*

Part Used: Leaves



Fig.2 Neem

Medicinal Use of Neem:

1. Use to treat Inflammation.
2. Use to cure Skin Problem Like Acne.
3. Used as an Antiseptic.

3.Aloe-Vera:

Family: Asphodelaceae

Biological Source: Dried latex of leaves

Biological Name: Aloe barbadensis miller

Kingdom: Plantae

Part Used: Leaves



Fig.3 Aloe-Vera

Medicinal Uses of Aloe-Vera:

- 1.Used as anti-microbial.
- 2.Use to cure skin injuries.
- 3.Use as an anti-inflammatory.

4.Beal:

Family: Rutaceae

Biological Source: Bael consists of the unripe or half-ripe fruits or their slices or irregular pieces of Aegle marmelos Corr. belonging to family Rutaceae.

Biological Name: Aegle marmelos

Kingdom: Plantae

Part Used: Leaves, Fruit.



Fig.4 Beal

Medicinal Use of Beal:

- 1) Soothes inflamed Skin

- 2) used for constipation diarrhoea, diabetes & other condition.
- 3) It can also be beneficial to heal skin rash and itchy skin bumps.

5.Amla:

Family: Euphorbiaceae

Biological Source: This consists of dried, as well as fresh fruits of the plant Emblica Officialis Gareth Phyllanthus emblica Linn Belonging to family Euphorbiaceae.

Biological Name: Phyllanthus Emblica

Kingdom: Plantae

Part used: leaves



Fig.5 Amla

Medicinal Uses of Amla:

- 1)Improving our skins look and health.
- 2)Used to treat Acne.
- 3)Vitamin C and antioxidants present in amla helps brighten the skin.

6.Sunflower:

Family: Asteraceae

Biological Source: Sunflower seeds are harvested from the flower head of the sunflower plant.

Biological Name: Helianthus annuus

Kingdom: Plantae

Part Used: Seeds



Fig.6 Sunflower

Medicinal Uses of Sunflower:

- 1)Helps to improve the protective function of the skin.
- 2) Take care of hydration.
- 3) Open the pores.

7. Rose Oil:**Family:** Rosaceae**Biological Source:** The petals of different Rosa species especially Rosa centifolia L. and Rosa damascene Mill.**Biological Name:** Rosa centifolia L**Kingdom:** Plantae**Fig.7 Rose Oil****Medicinal Uses of Rose Oil:**

1. It is used as an essence.
2. It is used to nourish skin.
3. Helps to keep the skin hydrated.

8. Methyl paraben:**Chemical formula:** C₈H₈O₃**Molar mass:** 152.15 g/mol**Appearance:** Colourless crystals or white crystalline powder**Uses:**

1. It avoids bacterial and fungal growth
2. It is used as a preservative

9. Borax:**Chemical formula:** Na₂ [B₄O₅(OH)₄]-8H₂O**Molecular Mass:** 381.37 g/mol**IUPAC Name:** sodium tetraborate decahydrate **Uses:**

1. Use as a moisturizer.
2. Use as a buffering agent.
3. It is used to prevent bacterial growth

10. Liquid paraffin**Chemical Formula:** C_nH_{2n+2}**Molecular Mass:** 0.00**IUPAC Name:** 2-(3,4,5-trihydroxyphenyl) chromenylium-3,5,7-triol: chloride **Uses:**

1. Use as laxative.
2. Use as a lubricant.

11. Bees Wax:**Chemical Formula:** C₁₅H₃₁COOC₃₀H₆₁2**Molecular Mass:** 677.2215**Scientific Name:** Cera Ala**Uses:**

1. Use as Emulsifier and Emollient.
2. Emulsifying Agent.

Experimental Work:



Fig.8 Extraction of Amla, Tulsi, Neem, Beal

Extraction Process

Preparation of Tulsi Extract:

Tulsi leaves were collected and washed with distilled water and dried in a hot air oven. Then, after proper drying, the leaves were powdered. Then 25 g of Tulsi leaf powder + 100 ml of water was taken in a volumetric flask. The solution was then heated in a water bath at a temperature of 80-100°C for 5-10 minutes, then the solution was filtered with filter paper and transparent Tulsi leaf extract. The extraction of Tulsi is carried by maceration Process.

Preparation of Neem Extract:

Collect fresh neem leaves and wash them with distilled water. Dried in a hot air oven and then powdered. Take 25 g of neem powder in 100 ml of water Still it for 2 days then the solution was then heated at 100 °C for 5-10 minutes. Then filter it with filter paper and you will get a clear solution. The extraction of Neem is carried by maceration Process.

Preparation of Beal Extract:

Collect the Beal powder. combine 25gm of Beal powder with 100ml of water still it for 2 days then the solution was then heated at 100 °C for 5-10 minutes. Then filter it with filter paper and you will get a clear solution. the extraction of Beal is collected by maceration process.

Preparation of Amla Extract:

Collect the amla powder combine 25gm of amla powder with 100ml of water still it for 2 days then the solution was then heated at 100 °C for 5-10 minutes. Then filter it with filter paper and you will get a clear solution. the extraction of amla is collected by maceration process

Formulation of cream:

Take liquid paraffin and beeswax and heat them in a borosilicate glass beaker (oil phase) to a constant temperature of 75 °C. Borax and methyl parabens at 75°C were dissolved in distilled water in another beaker, maintaining the temperature of the water bath at 75°C. The aqueous phase of the solution must be stirred with a glass rod until all solid particles are dissolved. While continuing to stir, slowly pour the heated water phase into the heated oil phase. After combining the two components Immediately add extracts of neem, Tulsi, Beal, Amla, AloeVera gel, and Sunflower Oil. keep stirring with a glass rod to get a smooth cream. Rose oil should be added for Fragrance. after the cream is formed, dish with this cream.



Fig.9 Formulation of Cream

EVALUATION PARAMETER:**1.Physical Parameters:**

In this test colour, odour, texture, and state of cream are observed.



Fig.15 Physical parameters of herbal cream

2.Irritancy:

mark an area (1 cm²) on the back of the left hand. Cream was then applied to the area and the time noted. After a break of up to 24 hours. it is checked for irritation, redness and swelling.

3.Washability:

The washability test was performed by applying a small amount of cream to the hands and then washing with tap water.

4.Phase Separation:

The Prepared cream is stored in a tightly closed container at room temperature protected from sunlight and monitored for 24 hours for phases.

5.pH determination:

Basically, we are talking about how acidic different compounds are. pH (cream)) is often between 4 and 7. A digital pH meter or pH paper was used to measure the results of this test.

6.Spredability test:

Spread ability is done for all the Four formulations that is F1, F2, F3 and F4. The less time it takes to separate both slides, the better the spread ability. Therefore, according to the statement, F2 had better distribution.

7. Viscosity:

Viscosity Of Cream was done by using Brooke Field Viscometer.

RESULT AND DISCUSSION:

Table 1: Stability study of Herbal cream

Sr.no	Properties	F1	F2	F3	F4
1.	Colour	Faint Yellow	Yellowish	Faint Yellow	Yellowish
2.	Odour	Pleasant	Pleasant	Pleasant	Pleasant
3.	Texture	Smooth	Smooth	Smooth	Smooth
4.	State	Semi-Solid	Semi-Solid	Semi-Solid	Semi-Solid
5.	Irritant Effect	Nil	Nil	Nil	Nil

6.	Erythema	Nil	Nil	Nil	Nil
7.	Edema	Nil	Nil	Nil	Nil
8.	Washability	No Washable	Washable	Washable	Washable
9.	Phase Separation	Phase separation	No Phase separation	Phase Separation	No Phase separation
10.	Spread ability Time(sec)	4	5	3	4
11.	PH Determination	7.35	7.36	6.66	7.10
12.	Viscosity	8550cps	8556cps	8480cps	8440cps

Result:

Scientists have made a special cream from several different plants. They tested the cream to see if it was any good, looking at things like how it felt, how thick it was, and if it caused irritation. It was also checked whether the cream is easy to wash off and whether it separates in different parts.

Discussion:

We made a special cream with different herbs. It is easy to wash off and does not feel greasy. It spreads well and the formula is good. It does not stand out and does not cause skin irritation. It is safe to use and will not harm your skin.

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