

Formulation & Evaluation of Herbal Face Cream

Pawar Dipali Manik , Prof. Jadhav P. K, Dr. Surwase. K. P

Kishori College of Pharmacy, Beed

Abstract: *Aloe vera is a plant that contains aloe vera juice. Therapeutic plants that have been utilized in numerous herbal remedies for thousands of years, including Ayurveda, Siddha, and Homeopathy. Aloe vera gel is a cosmetic and medical product derived from the mucilaginous tissue in the center of an aloe vera leaf. Anthraquinone is not found in aloe vera gel. Which are responsible for aloe's high laxative properties? Anthraquinone may be present in whole leaf extract. Vitamins, enzymes, minerals, sugars, saponins, and amino acids are among the 75 potentially active ingredients in aloe vera. Face cream is a semi-solid preparation. They are commonly used to hydrate and improve complexion of skin. Main aim of this research project is to prepare a Herbal cream and evaluate its efficacy. Formulation is evaluated for various factors like pH, consistency, stability, appearance, homogeneity and organoleptic properties. Satisfactory result was achieved from the formulation...*

Keywords: Aloe Vera , Avocado Oil , Cocoa Butter , Face Cream , Evaluation

I. INTRODUCTION

If anything, we have learned in 2020, take care of yourself. One has to admit, in a fast-paced world, it is difficult to keep up with your health and lifestyle. Although we can manage as much as possible but with increasing competition, meeting the last days, thinking about work can be very stressful at times and a break is really needed.

There are many reasons why a person should decide to make a handmade cream. you may want to do something completely natural or say bye to all those parabens and synthetic perfumes. The best part is that making it yourself gives you complete control over the ingredients you add. You can easily DIY your cream with the same smooth skin and protect qualities like branded products. But on top of that, you get to make it your own to suit your skin needs. And you can make it all natural. Of course, natural does not mean weak. Herbal ingredients can be very strong and easily penetrate the skin. They can help to exfoliate skin tone, hydrate and smooth lines.

Whether you have oily, dry, flaky or sensitive skin, a moisturizer or face cream is essential. The creams are made to be rich in emollient repairs damaged cells in the skin and provide water. If you have oily skin and you think your sebum production is too high and you are not getting the necessary moisturizers, that is a myth. Sebum is a natural skin oil produced to keep us young. However, when the skin is dehydrated, excess sebum is produced and as it is oily, it clogs the pores, thus causing acne and breakouts.

skin that has become chapped moisturise dry skin

skin hydration and moisturization

UV protection is important for the skin. safeguard your skin from harm

AIM & OBJECTIVE :

Aim :

- To provide both beauty and therapeutic benefits for the skin
- Improving Skin Health and Appearance

Objective :

- To provide multipurpose effects including moisturization, acne reduction, skin irritation relief, and treatment of skin conditions like eczema psoriasis, dry skin, and wrinkles.
- They also aim to enhance skin radiance and provide a healthy glow. Additionally, herbal creams can offer benefits like cleaning, beautification, and nourishment for the skin.



- Cream
- Cream are a solid preparation for oil and water O / W Creams are made up of tiny droplets of oil dispersed in a continuous water phase. The O / W type is more comfortable and more acceptable in terms of beauty with less oil, easily washed off using Water.
- W / O Creams are made up of tiny droplets of Water dispersed by a continuous Oil Phase. W / O types are more difficult to handle and move higher as they provide an oily barrier that reduces water loss in the stratum corneum.

Uses Of Cream

- Medicinal creams have a variety of ingredients from cosmetic purposes such as
- cleansing
- beautifying
- changing the appearance
- softening
- to protect the skin against bacteria, cuts, burns, wounds on the skin.

INGREDIENTS

- Water Phase
- 30g Aloe Vera Gel
- 40g Distilled Water
- 7.5g Glycerine
- Oil Phase
- 13g Avocado Oil
- 3.7g Cocoa Butter
- 5g Emulsifying Wax
- 3g Cetyl Alcohol
- Other functional ingredients, and additives
- 0.5g Preservative
- 3 drops Lavender Essential Oil
- 2 drops Geranium Essential Oil
- 2 drops Orange Essential Oil

ABOUT INGREDIENTS :

ALOE VERA GEL

An emollient and film-forming gum resin with hydrating, softening, healing, antimicrobial, and anti-inflammatory properties. It's most well-known for its moisturizing properties. Aloe vera provides moisture to the skin tissue directly. Moisture management and an apparent capacity to absorb UV rays are two further features. It has a modest calming effect on the skin, making it beneficial for sensitive, burnt, and sun-exposed skin.



Figure 1 Aloe Vera Gel



Avocado Oil

It functions as an emollient and as a carrier oil in a cosmetic preparation, helping transport active substances into the skin. It's antibacterial and relaxing, making it ideal for sensitive skin. Avocado oil has been shown to mobilize and enhance connective tissue collagen in various studies. This will keep the skin moisturized and smooth, as well as aid in the treatment of minor skin problems.



Figure 2 Benefits of Avocado Oil

Cocoa Butter

Chocolate contains cocoa butter, it's a kind of fat. Cocoa butter is a fantastic moisturizer, but it also serves additional purposes in this recipe. It is a powerful antioxidant and is beneficial for sensitive skin. Cocoa butter is a good source of vitamin E, which has several health advantages. Vitamin E is beneficial to vision, reproduction, and the health of the brain, skin, and blood. It has a high fatty acid content, making it ideal for use as a key component in skin creams. Fatty acids aid in skin hydration.



Figure 3 Health Benefits of Cocoa butter

Preservative (Geogard Ultra)

Geogard Ultra is a broad-spectrum preservative with a proprietary formula. It works by gradually releasing gluconic acid, ensuring effective preservation. I've only come across it in powdered form.

Lavender Essential Oils

Anti-allergenic, anti-inflammatory, antiseptic, anti-bacterial, anti-spasmodic, balanced, energising, relaxing, healing, tonic, and stimulating are just a few of the medicinal benefits attributed to lavender oil. It is also supposed to aid in the cleaning of tiny wounds after washing and the regulation of skin functions. It may also act as an insect repellent.

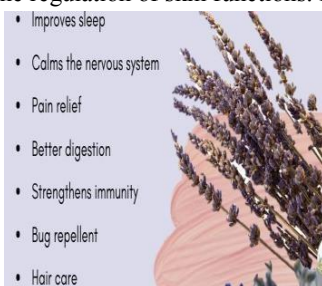


Figure 4 Health Benefit of Lavender Oil



Geranium Essential Oils



The treatment of skin diseases and to the reduction of symptoms of depression, to the development of color-correction and bug prevention, this flower remedy is the ultimate cure for many ailments. Great for treating burns and irritated skin spots. Speeds the healing of bruises Aids blood flow Helps to balance the production (or over-production) of sebum. Geranium essential oil has a lot of benefits for turning back the clock and giving you a youthful, bright appearance. It noticeably reduces wrinkles, fine lines, sagging in the face, cleanses, tones, tightens the pores, and imparts enough moisturization to rejuvenate dull, dry skin, thanks to its astringent characteristics, as well as abundant antioxidant, moisturizing, and cooling benefits.

Orange Essential Oils

Primarily used in perfumery. The anti-inflammatory, anti-bacterial, anti-spasmodic, and calming botanical characteristics of orange oil in skin care make it ideal for sensitive, fragile skin. Orange essential oil can be effective in stopping the growth of certain types of bacteria and fungi, very effective in reducing stress and anxiety levels.



METHODS OF PREPARATION :

The Herbal plant material used for the preparation of face cream is *Crocus sativus* which was obtained from the local market, Guntur. A.P., and were identified. Aloe vera was collected from Aswani medicinal garden, Hindu College of Pharmacy, Guntur. The essential oil is also purchased from the local super market. All the other chemicals are available in the College laboratory.

Preparation of Aloe vera Extract

Collected mature and fresh Aloe-vera leaf from plant and washed it with distilled water. Dried it in hot air oven. Leaf dissected longitudinally by sterile knife. The semi-solid Aloe-vera is collected. Remove fibers and impurities from it. Aloe-vera extract is obtained.

Preparation of Herbal Face Cream

Heat liquid paraffin and beeswax in a china dish at 750 C and maintain that heating temperature (Oil phase). In another china dish dissolve borax, methyl paraben in distilled water and heat this beaker to 750 C to dissolve borax and methyl paraben and to get a clear solution. (Aqueous phase).

Then slowly add this aqueous phase to the oily phase in a mortar and pestle and stir in a single direction to avoid lumps.

Then add the extract of *Crocus sativus* to the cream base and mix it.



Add few drops of Lavender oil as a fragrance to impart the aroma and mix all the ingredients properly.

Benefits of Cocoa Butter for Skin :

1. Moisturizes and softens skin :- deep hydration.
2. Anti-inflammatory :-soothes irritation.
3. Antioxidant :- protects against free radical damage.
4. Healing properties :- supports wound healing and reduces scars.
5. Improves skin elasticity :- helps prevent stretch marks

SELECTION OF RAW MATERIALS:

The materials for a formulation were selected on the basis study of different brief literature review and surfing of general and publication.

COLLECTION OF RAW MATERIALS:

Neem Azadirachta indica leaves and Butterfly Pea Flower were collected from local area.[14]

EXTRACTION PROCESS:

Extraction of Butterfly Pea Flowers: 1.Boil distilled water to about 80-90°C (not boiling, to preserve antioxidants).

1. Add the butterfly pea flowers and let them steep for 15-30 minutes.
2. Strain the liquid using a fine mesh or cheesecloth.

PROCEDURE :

Measure water and oil Phases, separately, into heat vessels Melt both the oil and the water phases in a water bath. To do so, just fill a saucepan halfway with water & bring to a simmer. Then, reduce the heat to a low setting and submerge the beakers in the water. Do not allow the water to boil at any time while your beakers are in the water bath. Keep it in the cocoa butter & emulsifying wax have melted. This should take roughly 15-20 minutes Remove the butter and wax from the water bath after they have melted. It's possible to burn yourself on the hot glass, so be cautious. Mix your water and oil phases. Simply pour your water into the oil/wax. If you pour into the water, you'll lose too much oil/wax to the sides of the beaker. You'll notice immediately that the mixture becomes creamy and cloudy. This is normal. Whisk your mixture with little hands whisk or an electric milk whisk to blend and emulsify the two major components. This will take a while, and the mixture will also need to cool. Then whisk, leave for 5 minutes and then whisk once more. Repeat this process until emulsion has thickened and no longer separates after leaving to stand for 5 minutes It's time to add the last components now that your stages have emulsified, cooled, and thickened. Put this beaker on a digital scale to weigh it. After that, gradually increase the amount of preservative until you reach the required level (1-0.5g depending on your preservative and its guideline.

EVALUATION :

Homogeneity: The homogeneity of the prepared creams was confirmed by the visual appearance and touch.

Organoleptic Evaluation: The resulting Face Cream was therefore tested for its organoleptic properties such as colour, aroma and texture. The appearance of the cream is judged by its colour and hardness and proportions.

Stability: In a test machine the cream sample is placed in a centrifuge tube at a speed of 3750 RPM for half an hour or 5000 to 10000 RPM 15 minutes and check whether the separation is present or not.

Skin Whitening: 5 volunteers were selected for the following studies. All of the preparations are put in place and monitored for a month. A one-month skin test revealed that there was no pigmentation. But skin doesn't whiten. It just clears up.

After Feel: Emolliency, smoothness and the amount of residual residue after the application of the prescribed amount of cream were found to be good.



Irritancy Test: All formations do not show red edema and inflammation and during irritation studies these structures are found to be safe for use on the skin.

Removal: All the cream formulations are applied on the skin was easily removed by washing with tap water.

RESULT :

S.No	Parameter	Result
1	Colour	Cream Colour
2	Odour	Characteristic
3	Ph	5.2
4	After Feel	Emollient
5	Irritancy Test	No Irritancy On application, so, safe for skin
6	Removal	Easily removed by tap water
7	Test for microbial growth in formulated Cream	Absence
8	Skin Whitening	Absent
9	Homogeneity	Satisfied
10	Stability Test	No separation occurs so it is form to be stable

II. CONCLUSION

From the research of study it can be concluded that the formulated cream was fit to use. The colour of the cream obtained was Cream . The cream showed the quality of softening and soothing the skin . The cream does not show any type of irritancy or allergic or redness on application so , it can be concluded that the cream is safe for human use . It was very easily removed by simple tap water . It does not show any kind of skin whitening property. No separation occurs so it can be concluded that the formulation is in stable form . It has almost no side effects pigmentation has been decreased. Herbal Ingredients present in cream tend to soothe skin and make texture better.

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