

Formulation and Evaluation of Herbal Face Serum

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Abstract: *Wrinkles on the face and skin ageing are unfavourable effects of photodamage and UV radiation. Serum offers quick absorption and the capacity to penetrate deep layers of the skin, as well as a non-oily finish and a deep formula with a high concentration of active ingredients. The goal of this research was to create a serum using polyherbal extract based on these qualities. Face serum made of aloe vera gel, glycerin, and olive oil is a highly concentrated beauty product. Face serum made of aloe vera, glycerin, and honeybee venom is a highly potent cosmetic. When we use aloe vera, we obtain not only immediate beauty effects but also psychological satisfactions because serum has the potential to absorb quickly and enter deeper layers. Common uses for aloe vera gel include the treatment of various skin conditions, sunburn, minor cuts, insect bites, and wound healing. It also has anti-inflammatory, anti-bacterial, and anti-fungal properties. Bee venom, a defence poison made by bees, is said to promote collagen and blood vessel growth. The physicochemical characteristics, pH, globule size, and consistency of the facial serum were assessed. The results of the stability investigation revealed that the globule size, homogeneity, and visual appearance did not change.*

Keywords: Polyherbal, Anti –bacterial, Collagen

I. INTRODUCTION

Nowadays, human life often avoiding exposure to sunlight and pollution from the environment, including eating foods that are unhealthy, these factors are the main factors that stimulate the cells of the body to produce more free radicals.. The free radicals will form when exposed to sunlight the most and free radicals that accumulate in the body can cause negative effects on the skin as well such as dull skin uneven skin tone Dark spots, freckles rough skin, not smooth, etc., therefore, is an important factor that makes people turn to take care of more healthy skin, including the use of products, creams, lotions or serums to help slow down the changes that occur to the skin, slow down wrinkles. A good skin Serum may provide your skin a firmer, smoother texture, make pores appear smaller and increase moisture levels. [1] Texture is all about skin type- but the brilliant ingredients for healthy skin the same for everyone, regardless of product, texture or personal preference. [2] These products are useful in various skin conditions like psoriasis, shingles and other associated with itching, in addition- cuts, abrasions and burns are said to be benefit from topically applying the leaf's gel to the affected area. [3-5] Aloe Vera extract have antibacterial and anti-fungal activities, which may help in the treatment of minor skin infections also. [6]

1.1 Advantages

- Improves skin texture.
- Minimizes the skin pores.
- Hydrates and nourishes the skin.
- Improves skin elasticity.

1.2 Disadvantages

- The liquid or gel-like texture of a serum can be a poor match for people with chronic skin conditions like eczema or rosacea, which weaken the skin barrier.
- For these people, serums may penetrate too quickly, causing irritation.



II. MATERIAL AND METHOD



2.1 Aloe Vera Gel

Using aloe vera on the face can help **moisturize skin**. Regularly applying a small amount of aloe vera to the face can help treat various skin conditions, including acne, eczema, and sunburn.

2.2 Olive Oil

Help to decrease our acne by killing off the bacteria that causes the acne. Olive oil is also known to moisturize and hydrate your skin.



2.3 Sandalwood Oil

With its anti-inflammatory and skin-clearing properties, sandalwood essential oil can help clear acne and pimples and soothe skin.

2.4 Glycerin

According to scientific research, glycerin is absolutely safe to use on the face. Glycerin is great for the skin because it acts as a humectant, which is a substance that allows the skin to retain moisture. It can increase skin hydration, relieve dryness, and refresh the skin's surface.



2.5 Coconut Oil

It contains nourishing fatty acids and linoleic acid which help retain the moisture in the skin and help protect and hydrate your skin.



2.6 Blood Orange Essential Oil

Because of its antioxidant properties, it slows the rate of skin damage experienced from UV exposure and pollution



2.7 Grapeseed Oil

Using grapeseed oil can moisturize to dull, dehydrated skin, even out your skin tone, and reduce the appearance of fine lines and wrinkles.

2.8 Licorice

Licorice is super beneficial for those struggling with atopic dermatitis, or general skin conditions involving redness and irritation (like acne and eczema).

A. Collection of Plant

Part For the medication of herbal hair serum, colorful factory accoutrements were collected viz., aloe vera powder, sandalwood, grapeseed oil, licorice, coconut oil, olive, orange from the medicinal factory Garden of Samarth Institute of Pharmacy, Belhe, Junnar

B. Formulation Table

Ingredients	Standard formula for (100ml)	Working formula (30ml)
Aloe vera Gel	50%	10gm
Olive oil	9%	1.8ml
Sandalwood oil	0.1%	0.03ml
Glycerin	25%	5ml
Coconut oil	3%	0.6ml
Blood orange essential oil	Q.s	Q.s
Grapeseed oil	2%	0.4%
Licorice	2%	0.4%

C. Formulation

The emulsion (o / w) was prepared according to the formula given above. The oily component consisting of Olive oil, sandalwood oil, between 20 and coconut oil is mixed together for 10 minutes to obtain a uniform solution. At the same time the water phase was prepared by mixing aloe vera gel, glycerin, and a small amount of distilled water uniformly. The oil phase is added to the liquid phase by drop wise under mechanical vibration at 2500 rpm to obtain oil in water based on biphasic emulsion.

III. EVALUATION OF FACE SERUM

3.1 Physical Evaluation

The Colour and appearance of the formulation was observed visually. The formulation procedure uniform distribution of extracts. This test was confirmed by visual appearance and by touch

3.2 pH Value

A pH meter was calibrated using a standard buffer solution. Nearly 1 ml of the face serum was properly weighed and

dissolve in 50 ml of distilled water and finally its pH was calculated. The skin has an acidic range and the pH of the skin serum should be in the range of 4.1-6.7.

3.3 Determination of Spreadability

2 gm of serum sample was placed on a surface. A slide was attached to a pan to which 20 gm weight was added. The time (seconds) required to separate the upper slide from surface was taken as a measure of Spreadability.

3.4 Microbial Examination of the Product

In this method, the mixed culture is diluted directly in tubes of liquid agar medium. The medium is maintained in a liquid state at a temperature of 45°C to allow thorough distribution of the inoculum. The inoculated agar medium is transferred into petri plates, allowed to solidify and incubated. In the series dilution technique, the original inoculum may be diluted by using sterile water or saline solution so that the concentration of the microbes gradually become less. Mix 1 ml dilute in 20 ml of liquid nutrient agar medium at 45°C. Shake the liquid agar nutrient agar medium & pour in a sterile petri plate, solidify and incubate it.

3.5 Stability Studies

Formulation and development of a pharmaceutical product is not complete without proper stability analysis carried out on it to determine physical and chemical stability and thus safety of the product. The stability studies is carried out as per ICH guidelines. Short term accelerated stability study was carried out for the period of few months for the prepared formulation. The samples were stored at different storage conditions of temperatures such as 3-5°C, 25°C RH=60% and 40°C±2% RH=75%.

3.6 Cyclical Temperature Test

These test is not carried out at any fixed temperature and humidity. In this test, temperature was changed cyclically every day. At room temperature and frizzing temperature to stimulates the changes in temperature

IV. CONCLUSION

The aim of study was to formulate various herb as into a serum form nourishing and glowing activity on face skin. Within the serum Aloe vera and oil are mainly used. The burn plant gel from the inner central a part of the leaf often incorporates a superb action in acne, pimples and other skin problems, burns thanks to heat, sun exposure and in treatment of radiation dermatitis. Aloe vera is rich in vitamins and minerals that have an honest moisturizing capacity and anti-aging effects to keep up healthy- and fresh-looking skin. The Spreadability was found to be good. No residues were form and was easy to clean out. The gel stimulates cell growth and in and of itself enhance the restoring of harm skin. So, this serum will be used treat skin related problem

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