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Formulation and Evaluation of Herbal Face Serum of Guava and Vitamin E& C

Mr. Omkar Kakde¹, Mr. Nitin Gawai², Mr. Anmol Adsul³

B. Pharmacy Department, Mahadev Kanchan College of Pharmaceutical Education and Research, Uruli Kanchan, Pune, Maharashtra, India

Abstract: Tropical and subtropical areas such as South America, Africa, and Asia are home to the guava (*Psidium guajava* L.), a plant belonging to the Myrtaceae family. Guava leaves, which have long been used for food, medicine, and dyes, are abundant in bioactive substances including antioxidants that are good for skin health. Guava leaves are a great component of natural cosmetics, particularly face serums, because of these qualities. Concentrated active components are delivered via face serums, and adding guava leaf extracts can lower inflammation, offer antioxidant protection, and stop bacterial infections. We discuss the possible benefits of guava leaf extracts in skin care products, such as their antibacterial, antioxidant, and acne-treating properties. The impact of guava leaf extract on hair care products for dandruff removal, hair loss reduction, and antibacterial activity in oral care products is then discussed

Keyword's: Guava leaves extract, Cosmetics, face serum, Antioxidant

I. INTRODUCTION

- 1) Serums are topical medications with a thin viscosity that include concentrated doses of active ingredients. In professional cosmetology, the name is self-explanatory. The cosmetic serum's water or oil content is identical to that of any other cream.
- 2) A serum is a type of skin care product that incorporates a gel, light lotion, or moisturiser. Its active components are delivered to the skin through deep penetration. A excellent skin serum can make your skin smoother, firmer, and more hydrated while also making your pores look smaller. All skin care products, whether they are moisturising, anti-aging, anti-wrinkle, or serums, should include antioxidants, cell-based compounds, and skin-like ingredients. These components are necessary for all skin types to maintain optimal health.(1)

Serum is a concentrated substance commonly used in cosmetics. The cosmetic serum has the same level of concentration as other creams. Serum has 10 times as much organic material as cream. Therefore, take care of the aesthetic problem as soon as you can. The skin, the body's largest and most protective organ, can become dry for a number of reasons, such as UV rays, dirt, and makeup that, if left on all night, can irritate or cause allergies. Skin serums are a kind of skin care product that you can use to your skin to deliver nutrients directly to the skin. skin following washing but before to moisturizing.(2)



Figure 1 herbal face serum

II. DIFFERENT BENEFITS OF USING GUAVA LEAVES ON SKIN

A. Aids in Treating Face Wrinkles

The anti-aging properties of guava leaves help to delay the onset of face wrinkles. It helps get rid of the free radicals that are damaging your skin.

B. Lightens Dark Spots

Guava leaves also aid to lighten dark spots on your face and remove any remaining skin imperfections.

Guava leaves are a great skin-lightening component that will give you a clear complexion and skin free of spots.

C. Acne and Blemishes

Great antibacterial properties found in guava leaves aid in the treatment of acne, pimples, and other cosmetic imperfections. When used topically, guava leaves help to reduce the appearance of pimples and acne on the face.

D. Help to remove Blackheads'

Guava leaves can aid in the removal of blackheads and the reduction of big pores.

E. Reduces Face Itching

Guava leaves can help treat itching on the face if you have inflammation-related skin irritation, which is one of the main issues for many people. Guava leaves include allergy- blocking chemicals that assist to immediately relieve skin itching.(1)

III. HERBAL FACIAL SERUM BENEFITS

- 1) Enhances skin texture,
- 2) minimises skin pore size,
- 3) minimises wrinkles and free lines
- 4) Enhances skin tone,
- 5) hydrates and nourishes the skin,
- 6) increases skin elasticity
- 7) Dark circles are lessened.(3)

A. Advantages of face serum

- 1) That it keeps skin hydrated.
- 2) Aids in the removal of skin imperfections.
- 3) Anti-aging advantages.
- 4) Aids in shielding the skin from further harm.

The drawbacks of face serum

- a) Not suitable for every skin condition.
- b) May be costly.
- c) It is challenging to choose the right one.
- d) It ran the risk of being wasted if not used efficiently.(4)

IV. SERUM TYPE

A. Serum Of Oil

The most basic type of face serum is called an oil serum, which uses a carrier oil as an absorbent base for dry skin. The moisturising qualities of the oil serum have been enhanced by the use of premium oils.

B. Gel Serum

The applied skin regions feel firmer after using the gel serum. The effects of the gel serum can be enhanced by adding a water-based plant extract.

C. Water Based Serum

This is a thick, watery serum with some gum. In order to apply the hydrophilic plant extract that remains on the skin, a water-based serum should be used underneath creams or lotions. Serums with a water base are the most effective at deeply penetrating the skin and releasing the active components. Similarity: 20%

D. Emulsion Serum

The emulsion serum is a hydrating serum that delivers the active ingredients to the skin while also strengthening it. The two immiscible phases—oil and water—combine to form an emulsion. To create a stable emulsion condition, an emulsifier is utilised. The active components are efficiently delivered deep into the skin by the emulsion serum. Emulsions provide a moisturising impact that strengthens the skin's protective function.(5)

V. FACE SERUM'S BEST FEATURES

- 1) *Calms inflamed skin:* Aloe vera is believed to have antiviral and cell-regenerating properties. Aloe gel's benefits are similar to how it feels when applied to a sunburn.
- 2) *Deep hydration:* possess the special capacity to alter the skin's moisture content..
- 3) *Combat Acne and Diminish Blemishes:* Bael fruit inhibits the bacterial proliferation that is the main cause of pimples and acne. It has antioxidant properties that promote skin that looks healthy.(6)

- Guava Leaves Extract
- Vitamin E
- Glycerine
- Almond Oil
- Cabacol
- Vitamin C
- Water

VI. INGREDIENTS WORKING FORMULA

A. Classification

- 1) Kingdom – plantae
- 2) Division –Magnoliophyte
- 3) Class – Magnoliopsida
- 4) Order – Myrtles
- 5) Family – Myrtaceae
- 6) Genus –Psidium L.

VII. LEAVES OF GUAVA

Botanical Name – Psidium guajava L.

VIII. PHYSICOCHEMICAL ANALYSIS OF GUAVA LEAVES

Colour :- Green

Odour :- characteristic Taste:-Sweet Shape:-ovule(7)



Figure 2 Guava leaves

A. Procedure for Making Face Serum

- 1) Remove all greasy parts
- 2) Glycerine Iml, carbapol 940, and 5 ml of almond oil.
- 3) To get a consistent solution, mix all the ingredients for ten minutes.
- 4) At the same time, guava extract, vitamin E, and vitamin C were mixed to create the water phase.
- 5) The liquid and oil phases blend together drop by drop while being mechanically vibrated at 2500 rpm.
- 6) Finally, utilise water-based biphasic serum with oil at all times.(7)

IX. CRITERIA OF EVALUATION

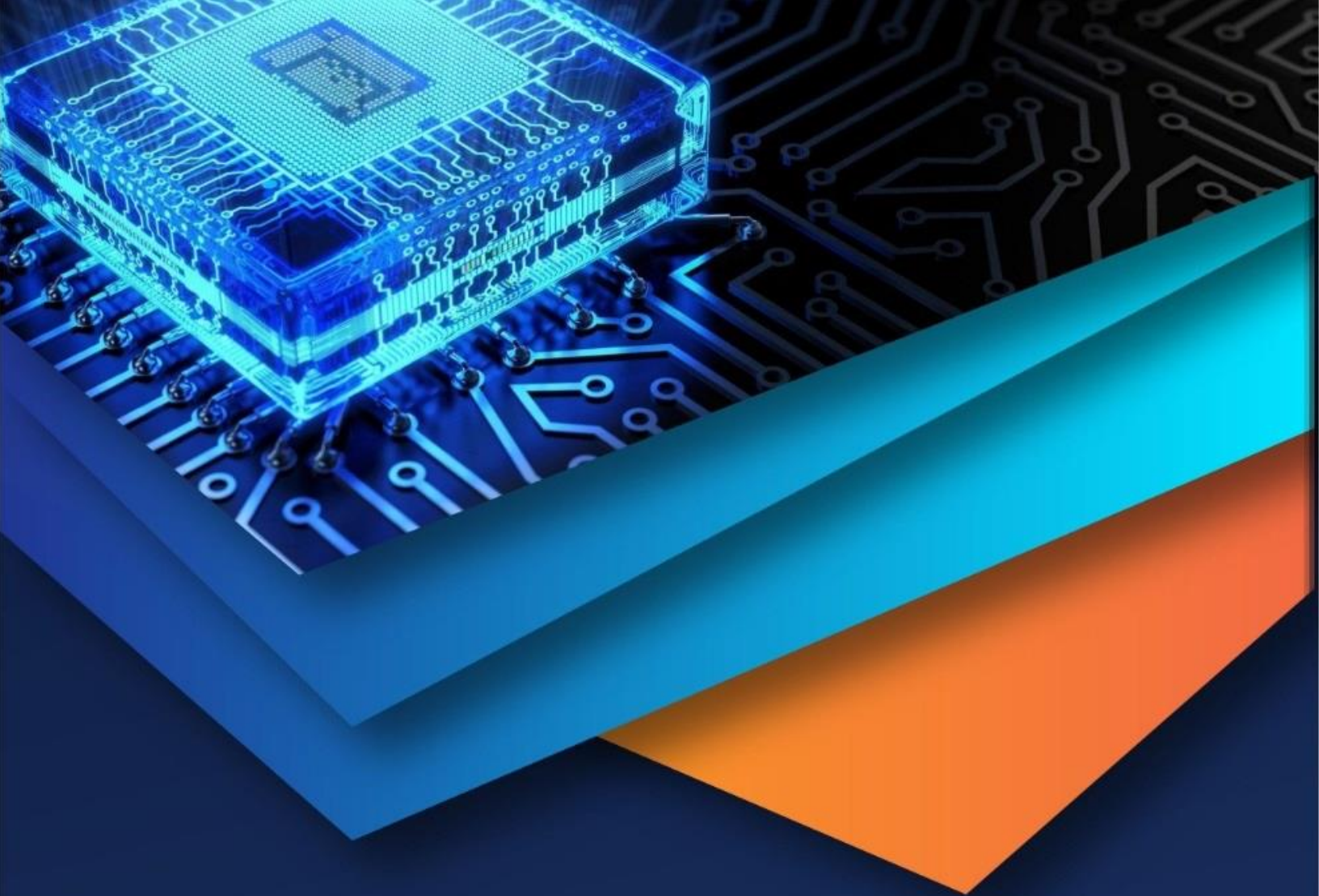
- 1) *Colour and Appearance*: The color and appearance of the face serum formulation were visible upon visual inspection; it was translucent white or generally orange in hue.
- 2) *Homogeneity*: By detecting no particle matter and by touching the product, the homogeneity of the preparation was visually verified. The product has good homogeneity.
- 3) *Serum pH*: A standard buffer solution was used to calibrate a pH meter. After carefully weighing and dissolving nearly 1 millilitre of the serum in 50 millilitres of distilled water, the pH of the mixture was determined. It was discovered that the formulation's pH was 6.4. 0%
- 4) *Globules size determination*: The produced serum was examined under a microscope to determine and validate the size of the globules. On a glass slide, a single drop of the serum was diluted with water, covered with a coverslip, and then examined under a microscope to measure the size of the globules using a stage micrometre.
- 5) *Spread ability*: Two grammes of a serum sample were placed on a surface to test the spread ability. A pan with a slide connected had a 20 g weight on it. Spreadability was measured by the amount of time needed to remove the upper slide from the surface.
- 6) *Stability Studies*: Without conducting a thorough stability analysis to ascertain the product's physical and chemical stability and, consequently, safety, the formulation and development of a pharmaceutical product is incomplete.(4)

X. CONCLUSION

The herbal serum that treats acne with botanicals was successfully developed and evaluated using a variety of standards. The high antioxidant content of guava leaves, which comes from vitamin C, will help heal acne and dark spots. It proves that It will affect the skin more when used topically. Vitamin C, which is found in guava leaves, has potent antioxidant qualities that help heal acne and dark spots. It indicates that using it topically will affect the skin more. This face serum was made using a maceration technique that involved a homogenizer and a magnetic stirrer for extraction.

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