

Anti-aging and Brightening Vitamin C face Serum

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Abstract

Beauty products play an important role in skin care. Herbal products have good activity and no side effects so they attract people very quickly. The most visible organ that may be influenced by environmental variables is the skin. The skin is harmed by shifting lifestyles as well. Our serum contains benefits of citrus *Aurantium Dulcis* and *Camellia sinensis* extract that helps the skin, reduce dark spot and even out tone. Green tea is packed with antioxidants, anti-inflammatory compound and skin soothing properties.

The face serum's P^H , viscosity and stability were assessed physically. This outcome demonstrate that the consistency, color and appearance did not alter. This face serum ability to swiftly reach the skin's deep layer. It's essential to find a balance that suits your skin's needs and tolerance. Always patch test new product and consult with a dermatologist for personalized recommendation

Using the serum effectively involves take a few drops and gently pat it onto your face and neck avoid rubbing too hard. allow to serum fully absorb about 1-2 minutes before applying other product. Always apply sunscreen in the morning, as vitamin C can make skin more sensitive to sunlight.

Keywords: Green Tea Extract; Orange Peel Extract; Vitamin C Serum; Antiaging

1. Introduction

Herbal cosmetics are products formulated using plant-based ingredients that offer therapeutic and beautifying properties. They are preferred for their natural origin, minimal side effect and eco-friendliness. An herbal vitamin C serum is a natural skincare product enriched with plant-based source of vitamin C, orange peel extract, aloe Vera. Green tea is a powerful natural ingredient packed with antioxidants, vitamins that promote healthy, glowing skin and boosts collagen production, keeping skin firm and youthful. Green tea contains catechins and flavonoids that protect skin from free radicals, reducing signs of aging

Face serum is concentrated skincare products designed to deliver active ingredient deep into skin. They play a crucial role in any skincare routine because of their lightweight texture and ability to target specific skin concerns. Serums have smaller molecules than creams, allowing them to penetrate deeper into the skin for maximum effectiveness. Vitamin c serum is one of the most powerful skincare products due to its antioxidant properties and ability to improve skin health in multiple ways. Vitamin C inhibits melanin production, helping to fade dark spots, hyper pigmentation and dullness. It promotes a radiant and even complexion. It neutralizes free radicals caused by UV rays, pollution and environmental damage, reduces oxidative stress and preventing premature aging. ^[1-2]

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1.1. Vitamin C faces serum benefits

- Soothes irritated skin.
- Absorb quickly into skin.
- Protect your skin from free radicals and future damage.
- It improves the appearance of fine lines and wrinkles.
- feels light on skin.
- Minimize the skin pores.
- Hydrates and nourish the skin.

1.2. Uses of vitamin C face serum

- Anti-aging benefits
- Reduce acne
- Reduce dark spot
- Lightens skin

2. Herbal Ingredients used for Vitamin C face serum: [4-5]

2.1. Orange Peel

Orange peel is highly beneficial for the skin due to its rich content of antioxidants and natural exfoliates that promote healthy, glowing skin orange peel is a powerhouse ingredient in skincare that rich in vitamin. Vitamin C is an essential component of beauty products for the skin it brightens and heals.



Figure 1 Orange Peel

2.2. Green Tea Extract

Green tea extract is a rich source of antioxidants, polyphenols and catechins that can benefit in the skin in various ways. Here is some of the importance of green tea extract in skin care: Green tea extract helps to protect the skin from damage caused by radicals, reducing the appearance of fine lines and wrinkles. Green tea extract has anti-inflammatory property which can help soothe and calm irritated skin.



Figure 2 Green Tea

2.3. Aloe Vera Gel

Aloe Vera gel is widely used for skincare because of its soothing and moisturizing and healing property. It hydrates the skin without making it greasy. It also cools and soothes sun burnt skin and helps reduce redness and inflammation. Aloe Vera contains antibacterial properties that help to fight with acne it also reduce redness and swelling caused by pimples.



Figure 3 Aloe Vera

2.4. Rose Water

Rose water as a toner to help balance skin pH and hydrate the skin. Rose water as a face moist to help soothe and calm irritated skin. mix the rose water with other skincare ingredient such as and vitamin E that help hydrate and nourish the skin. Some people may be allergic to rose water, so it's essential to patch test before using it on skin.



Figure 4 Rose water

2.5. Almond Oil

Almond oil is popular carrier oil extracted from almond, rich in nutrients, vitamins and minerals. Almond oil's smooth, non-greasy texture makes it excellent massage oil.



Figure 5 Almond Oil

2.6. Vitamin E

Vitamin E is a powerful antioxidant that offers several benefits for the skin. It acts as a natural skin conditioner, preventing dryness. it strengthens the skin barrier to retain moisture. it is commonly found in creams, oils, and serum for dry skin. Vitamin E neutralizes the free radicals caused by sun exposure. it also reduces the risk of premature aging and sunburn.



Figure 6 Vitamin E Capsule

2.7. Glycerin

Glycerin is widely used in skincare due to its humectant’s properties, meaning it attracts and retains moisture. Here are some key benefits and uses of glycerin for the skin:



Figure 7 Glycerin

2.8. Benefits of Glycerin for Skin

- Hydration: Keeps skin soft and moisturized by drawing water from the environment.
- Barrier Protection: Forms a protective layer, preventing moisture loss.
- Healing & Soothing: Helps heal dry, cracked, and irritated skin.
- Anti-Aging: Reduces the appearance of fine lines and wrinkles by keeping skin plump.
- Acne Control: Keeps the skin hydrated without clogging pores, making it suitable for acne-prone skin.
- Brightening: Can improve skin tone and texture by promote.

Table 1 Formulation Table

Sr.No	Name of Drugs	Formulation			Properties
		F1	F2	F3	
1	Orange peel extract	30%	35%	20%	Antioxidant
2	Green tea extract	20%	15%	25S%	Antioxidant & Antiacne
3	Aloe Vera gel	20%	15%	15%	Brightnining agent
4	Glycerin	10%	15%	20%	Tonner
5	Almond oil	5%	5%	5%	Antiwrinkles
6	Vitamin E	5%	5%	5%	Anti-aging
7	Rose Water	10%	10%	10%	Antibacterial

3. Method of preparation

The emulsion (o / w) was prepared according to the formula given above. The oily component consisting of vitamin E oil; almond 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. Added vitamin c (orange peel extract, green tea extract) and 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.



Figure 8 Vitamin C Serum

4. Evaluation of face serum

4.1. Organoleptic properties

The formulation was characterized for organoleptic properties such as color, odor. The formulation is visually for its clarity and presence of any foreign particles.

4.2. Homogeneity

The formulation was tested for the homogeneity by visual inspection and touch. The homogeneity of the formulated serum was judge by visual appearance and touch. the appearance and touch of the serum was good.

4.3. Determination of PH

A pH meter was calibrated using a standard buffer solution. Nearly 1 ml of 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.

4.4. Determination of Spread Ability

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

5. Result and discussion

Table 2 Organoleptic properties

Sr. No	Evaluation Parameter	Formulations		
		F1	F2	F3
1	Colour	Yellowish	Light yellowish	Yellowish
2	Odour	Aromatic	Aromatic	Aromatic
3	Texture	Smooth	Smooth	Smooth
4	Homogenicity	Good	Good	Good

5	p ^H	4.2	4.0	4.6
6	Spreadability	Easily Spreadable	Easily Spreadable	Easily Spreadable

The Vitamin c Serum was made and evaluated based on a number of factors. Vitamin c Serum preparation was yellowish in color. The pH was within the usual range of the skin, which is between 4 to 5 during the trial, and the Vitamin c Serum did not cause any skin irritation when applied. I was prepared three formulation F1,F2 & F3.F2 formulation gives good result as compare to F1 & F2 Like P^H shows 4.6 ,good homogeneity.

6. Conclusion

The ideal percentage of vitamin C in a face serum can vary depending on individual skin sensitivity and tolerance. Generally, concentrations between 10% and 20% are common and effective for most people. Higher concentrations, like 30%, can be more potent but may also increase the risk of irritation, especially for sensitive skin types. It's best to start with a lower concentration and gradually increase if needed while monitoring how your skin reacts.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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