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## PREPARATION AND EVALUATION OF FACIAL TONER

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### ABSTRACT

Face toners are skincare products designed to cleanse, hydrate, and balance the skin's pH after cleansing. This abstract explores the formulation, benefits, and application of face toners. It examines the key ingredients typically found in toners, such as astringents, hydrating agents, and anti-inflammatory compounds. The study highlights the efficacy of toners in removing residual impurities, tightening pores, and preparing the skin for subsequent skincare steps. Additionally, it addresses the variations in toner formulations tailored to different skin types, including oily, dry, and sensitive skin. Face toners have become an integral part of modern skincare routines, offering multifunctional benefits that extend beyond simple cleansing. This study provides a comprehensive review of face toners, focusing on their formulation, mechanisms of action, and dermatological benefits. Toners are typically formulated with a variety of active ingredients, such as witch hazel, salicylic acid, glycolic acid, hyaluronic acid, and botanical extracts, each contributing to specific skin benefits. The primary functions of face toners include the removal of residual dirt and oil, minimization of pore appearance, and restoration of the skin's natural pH balance. The primary goal of making herbalface toner is to maintain the tonicity of the skin. There are a variety of herbal facetoners available on the markets that have some side effects, such as itching and inflammation.

**KEYWORDS:** Face Toner, antioxidant, Herbal cosmetics, Rose Water, mint, Lemmon Oil, Glycerin, Antimicrobial.

## INTRODUCTION:

This introduction delves into the multifaceted role of facial toners in contemporary skincare, exploring their mechanisms of action, benefits, and the advancements in their formulations that meet the evolving needs of consumers. Understanding the integral role of toners can help individuals select the right product for their skin type, optimizing their skincare routine for healthier, more radiant skin. A key advantage of facial toners is their ability to prepare the skin for subsequent skincare steps, enhancing the absorption and efficacy of serums, moisturizers, and treatments. Formulated with diverse ingredients like witch hazel, salicylic acid, glycolic acid, hyaluronic acid, and plant extracts, toners can be tailored to different skin types and concerns, from oily and acne-prone to dry and sensitive skin. Facial toners have long been a staple in skincare regimens, evolving from basic astringents to sophisticated formulations that address a variety of skin concerns. Traditionally, toners were used primarily to remove leftover traces of makeup and cleanser, while tightening the skin and minimizing the appearance of pores. However, modern toners have expanded in function and formulation, offering benefits such as hydration, pH balancing, and delivery of active ingredients. A face toner is a liquid solution designed to assist in tightening pores, cleansing the skin's surface of dirt and excess oil, and restoring the pH balance of the skin. It is typically used after cleansing and before moisturizing, helping to prepare the skin for subsequent skincare products. Face toners can have various properties such as moisturizing, soothing, or astringent, depending on their composition. They are beneficial for all skin types, including oily, dry, and sensitive skin, and can help alleviate skin problems like acne and irritation.

## ADVANTAGES OF FACIAL TONER:



Facial toners offer numerous advantages that enhance overall skin health and appearance. Here are some key benefits:

**1. Restores pH Balance:** Cleansing can disrupt the skin's natural pH level, making it more alkaline. Toners help to restore the skin's optimal pH balance, promoting a healthier skin barrier.

**2. Removes Residual Impurities:** Toners effectively remove any remaining traces of makeup, dirt, oil, and cleanser, ensuring the skin is thoroughly clean.

**3. Minimizes Pore Appearance:** By tightening the skin and reducing the appearance of pores, toners contribute to a smoother, more refined complexion.

**4.Hydration:** Many modern toners contain hydrating ingredients like hyaluronic acid and glycerin, which help to maintain skin moisture and prevent dryness.

**5.Prepare Skin for Skincare Products:** Toners can enhance the absorption of subsequent skincare products, such as serums and moisturizers, making them more effective.

**6.Controls Oil:** For those with oily or acne-prone skin, toners with ingredients like salicylic acid can help control excess oil and prevent breakouts.

**7.Soothes and Calms Skin:** Toners with anti-inflammatory and soothing ingredients like chamomile, aloe vera, and green tea can reduce redness and irritation, making them ideal for sensitive skin.

**8.Delivers Active Ingredients:** Modern toners can be formulated with beneficial active ingredients that target specific skin concerns, such as antioxidants, exfoliants, and anti-aging compounds.

**9.Refreshes Skin:** Toners provide a refreshing sensation, revitalizing the skin and leaving it feeling invigorated and ready for the next steps in a skincare routine.

**10.Improves Skin Texture:** Regular use of toners can lead to improved skin texture and tone, contributing to a more even and radiant complexion.

### DISADVANTAGES OF FACIAL TONER:

- 1.Drying Effect
- 2.Not suitable for all skin types
- 3.Environmental Impact
- 4.Sensitivity Reactions

### TYPES OF FACIAL TONER:

- 1) **Skin bracers or fresheners** :These are the mildest form of toners.
- 2) **Skin tonics** : These are slightly stronger and contain a small quantity of alcohol (up to 20%), water, and a Humectant ingredient.
- 3) **Acid toner:** These are a strong form of toner that typically contains alpha hydroxy acid and or beta hydroxy acid
- 4) **Astringents:** These are the strongest form of toner and contain a high proportion of alcohol (20–60%), Antiseptic ingredients, water, and a humectant ingredient. Effects of a toner on skin in the past, skin toner was a typical product used as a second cleansing agent for removing Residual makeup after regular facial cleansing or used for removing excess sebum secreted from facial skin to prepare the skin before nourishing treatment. Toners may be categorized into alcoholbased or non-alcohol-based toners for various skin types such as oily skin, Sensitive skin, or combination skin. Nowadays, the diversity and prevalence of the products Cause skin toners to be utilized more as cosmeceutical products with several purposes; for Example, rehydrating skin, balancing skin pH, tightening skin pores, relieving irritation, and antiseptic. Vitamin C Toner preps the skin for Serum & Moisturizing by removing the last traces of dirt, makeup, or impurities after face wash or cleansing, and restoring skin nutrients that cleansers can remove.

**Application Area:**

Face and Neck

**How to use:**

1. Cleanse your face and pat it dry.
2. Place 3 or 4 drops of the toner in the palm of a clean hand.
3. Apply to your face using finger tips, avoiding eye and lip area.
4. Moisturize your skin after the toner is absorbed.
5. Use once or twice per day, preferably in the morning or evening

**Mechanism of spray action:**

Mechanism of action of the spray formulation When the button on the top of the spray bottle is pressed, it pumps the grooved button. This Pumping action forces the air from the nozzle to the dip tube. Now there is a drop in the Pressure of top of tube due to pressing the top button. After this difference pressure falls in the tube and the liquid is forced up from the tube. The liquid now leaves the nozzle through the actuator as small mist droplets due to pressure and applied on skin through force penetrating inside skin.



**Fig.2: Design of toner spray**

Dull skin conditions are common in dry skin types because the outer layer of skin peels off and accumulates. This skin condition makes facial skin look more dull, scaly, easy to peel, and looks wrinkled due to invisible pores. In addition to dry skin types, dull skin conditions can also occur in other skin types. Some of the factors that cause dull skin include the use of the wrong products, air pollution, unhealthy lifestyles, and stress. The human body has a regeneration mechanism for the skin, or in other words, the body can restore dull skin to be fresh and beautiful again. According to the skin needs time to regenerate for 14 – 28 days. However, in this study, the face toner formula used natural ingredients, namely dates, which contained the same benefits as the face toner formula, namely vitamin C and antioxidants to brighten Facial skin and ward off free radicals.

According to Preparations must have the appropriate aroma Requirements, clear colors, liquid textures and do not give a sticky impression, and give a fresh impression on the Skin. The purpose of research on antioxidants

and vitamin C in date water toner products and the feasibility of date Water toner to brighten dull facial skin in terms of sensory Tests, preference tests and clinical trials. An aroma is a form of olfactory technique using the Nose interest of clients or the public. The color of the date Water toner is influenced by the brown flesh of the dates. The requirements for toner preparations must be clear, not cloudy. Toner preparations must have a liquid texture and do not cause a sticky impression on the face when Used. The fresh impression and absorption of cosmetics at the first use are quite important assessments in Assessing preferences for the impression of use. The Sensitivity indicator uses an open patch test technique or A patch test which is carried out by applying the test Preparation to normal human skin to know whether the Reaction to the preparation can cause skin irritation or not.

Toner removes any last traces of dirt, grime and impurities stuck in your pores after you wash your face. When added to your daily skincare routine and used regularly, it can have major positive impact on the appearance and tightness of your pores.

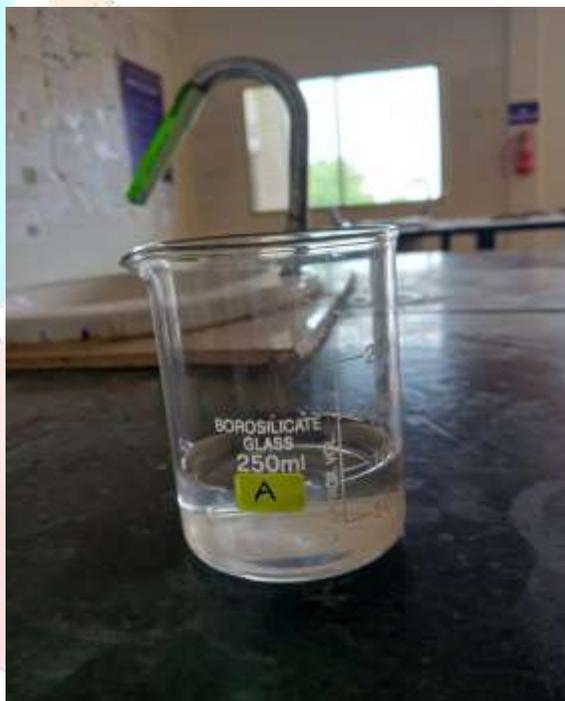
### **Advantages of spray formulations :**

Application of the toner is much easier than any other form and uniform all over the face. Finemist particles help good penetration with some pressure directly into the pores of the Skin. The hydrolysis or any chemical reaction can be avoided with the formulation in spray Form. No direct contact or contamination can occur when the formulation is in spray form. Rapid action with better efficacy, safety, and design can be provided with this form.

Sr.no	Material	Quantity(ml)
1)	Aqua	83.3
2)	Rose water	10
3)	Glycerin	3
4)	Orange peel oil	0.1
5)	Mint oil	0.1
6)	Tween 80	0.5
7)	Propylene glycol	3
8)	Di .EDTA	0.1gm

### Methods of Preparation:-

- Clean all glassware and dry them properly
- Quantities of rose Water, Orange Juice, mint juice, Lemmon oil, and glycerin were calculated accordingly.
- Measure Tween 80 and propylene glycol accordingly.
- Mix H<sub>2</sub>O with Di EDTA in phase 1
- Warm the tween and add oils till the tween become transparent which is phase 2
- Mix the phase1 into phase 2
- Pour into a spray container.
- Labeled it accordingly



**Figure no:3 formulation**

### EVALUATION

Prepared formulation of herbal face toner was subjected to following evaluation Parameter

1. Homogeneity Homogeneity was analyzed by visual inspection for the appearance and existing of any clog.
2. PH: The formulation 25 ml was taken in a beaker with graduations and now the calibrated pH Meter was made stand in the formulation for some time and reading was recorded.



**Figure No 4: Ph evaluation**

3. Viscosity: Ostwald's viscometer was used to measure the viscosity of the formulation. The viscosity of water and the formulation was recorded in centipoise.
4. Surface Tension: Stalagmometer was used to measure the Surface Tension of the formulation.
5. Skin irritation: Small amount of the toner was sprayed on left hand dorsal skin and kept for some time; result was found non-irritant on the skin.
6. Skin conditioning: The appearance of the skin after application of the toner was seen to be smooth, hydrated and supple.
7. Stickiness: The particles of the toner were found to be Not sticky in nature.
8. Skin Conditioning: The appearance of the skin after application of the toner was seen to be smooth, hydrated and glowing.
9. Spread ability: The toner was sprayed on hand and spread by cotton and smooth cloth and it was easily spread.
10. Removal: The face toner was easily washable.
11. Antimicrobial Activity: To check the antimicrobial activity, the optimized formulated toner was inoculated in a agar media plate. Along with these another agar media plate without the toner was used for comparison. The plates were kept in the incubator and were incubated for 24 hours at 37°C. After the incubation period, plates were taken out and analyzed for microbial growth.

## **RESULTS AND DISCUSSION**

The final formulation was subjected to various physicochemical evaluations. All the tests were performed according to the standard procedure. All the results were recorded and found within the standard ranges. The pH, surface tension, viscosity, skin condition, stickiness, Spread ability, removable, skin Irritation were performed and were found within the range. No any discoloration was found after light exposure to the formulation. The formulation was also effective to produce conditioning on the skin and was found non-irritant in nature. At last, the removability of toner was found to be easily removable.

The formulation was formulated by using the ingredients which are available in day-to-day life. Formulating a toner was intended to check the effectiveness of such natural substances like Rose water, Orange oil and Mint

oil, Lemon oil on the skin and to check whether they are able to produce the cleansing effect. By seeing the observations and the results, it proved to be satisfactory. The formulation showed soothing and cleansing and most importantly toning effect on the skin and it tightened the skin.

## CONCLUSION

The spray toner formulation produced excellent results. All of the items were purchased fresh from the local market and were both inexpensive and practical. The toner's objective was to achieve a cooling and toning effect on the skin, which was determined to be adequate. Similarly, the purpose of making it in toner form was to make it easier to apply and transport the formulation whenever and wherever needed.

There was no irritation or rashes after application, and had a cleansing effect. The formulation was found to be physio chemically stable and had all the features of a conventional cosmeceutical's skincare formulation. The spray formulation was more successful than any other form, such as gel or lotion, since spraying tiny particles on the skin with a particular level of power allowed the formulation to penetrate skin pores.

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