Preparation and Evaluation of Herbal Face Toner

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Abstract: Herbal face toners have become popular in the skincare category due to their natural origin and gentle effective properties. This paper explores the formulation and benefits of herbal face toners, emphasizing their role in balancing in skin pH level, tightening pores, providing hydration. Various herbs commonly used in toner, such as aloe vera, cucumber, lemon grass are discussed for their soothing and revitalizing effects. Overall herbal face toners offer a holistic approach to skincare, catering to individuals seeking a natural and rejuvenating solution for their skin concerns.

Index Terms: Mist, face toner, cucumber, lemon grass, honey, aloe vera.

I. INTRODUCTION

A face toner is a skincare product designed to be used after cleansing and before moisturizing. Its primary purpose is to remove any leftover dirt, oil, or makeup residue from the skin as well as to balance the skin's pH level. Toners often contain ingredients such as water, alcohol, witch hazel, glycerin, and various botanical extracts. They help to tighten pores, refine the skin's texture and prepare it for better absorption of serums and moisturizers. Toners come in various formulas to suit different skin types, including oily, dry and sensitive and combination skin.

In ancient days naturally available ingredients were used for cosmetics use but now a days in improvement in science and several chemicals came in existence that said to impact beauty for a particular period of time but they can be harmful for skin when used for long time .This chemical based cosmetic product can show many harmful effect on skin . So due to this reason now a days the industries are focusing to prepare the chemical free cosmetics for skin. [1]

A herbal face toner is a natural skincare product typically made from botanical extracts, herbs, and other plant-based ingredients. It's used to cleanse, hydrates the skin. Herbal toner often contain ingredients like witch hazel, rose water, aloe vera and green tea, cucumber juice which have soothing, anti-inflammatory and anti-oxidant properties and astringent properties, making them suitable for various skin types basically for sensitive skin types.They can help to reduce redness of skin, promotes a healthy complexion, smooth irritation.

Different types of toner -

1. HYDRATING TONER - These are formulated to add moisture to the skin, often containing ingredients like hyaluronic acid or glycerin to hydrate and plump the skin.
2. EXFOLIATING TONER - These contain ingredients like alpha hydroxy acids (BHAs) to help remove dead skin cells, unclogpores and promotes skin cell turnover.They're great for improving skin texture and reducing acne.
3. ASTRINGENT TONER - These are typically alcohol based and are designed to remove excess oil and tighten pores .They can be too harsh for dry or sensitive skin types so they are best for oily or acne-pore skin.
4. PH BALANCING TONER - These help to restore the skin's natural pH level after cleansing, which can be disrupted by alkaline cleanses.
5. CALMING TONER - Formulated with soothing ingredients like chamomile or aloe vera, these toner help calm and reduce inflammation in sensitive or irritated skin.
6. BRIGTENING TONER - These contain ingredients like Vitamin C to help even out skin tone, reduce dark spots and give the skin a radiant glow. [2]

Effect of toner on skin

Toner can help balance the skin's pH levels, remove excess oil, dirt and traces of makeup and prepare the skin for better absorption of moisturizers or serums. However some toners contain alcohol or other ingredients that mat irritate or dry the skin so it's essential to choose a toner suitable for your skin type. Aherbal toners typically contain natural ingredients like botanical extracts, essential oils and plant based components. Nowadays the toner is to be utilized more as cosmetic products with several purposes like for - Gentle cleansing, Soothing and calming, hydration, antioxidant protection, and it contain anti-acne property and tightening skin pores. [3]

Why should use mist formulation

Mist formulations offer several benefits. Face mist is a skincare product containing a liquid that can be sprayed on facial skin. [4] They can provide targeted delivery, better absorption and quick action for various applications like skincare, disinfection and aromatherapy. Additionally they often have a refreshing and pleasant effect, making them popular for personal and environmental use.

II. Mechanism of action of spray bottle

On a spray bottle, the trigger lever, pump and one way valve work together to create a pressurized spray. A piston and cylinder mechanism, activated by pulling the trigger, forces liquid up from the reservoir through a nozzle. Spray bottles are an extremely useful type of machine and an excellent demonstration of basic plumbing principles. A spray bottle head is made up of only a few parts. It has trigger lever which activates a small pump. This pump is attached to a plastic tube that draws cleaning fluid from the bottom of the reservoir. The pump forces this liquid down a narrow barrel and out a small hole at the gun's muzzle. The hole or nozzle, serves to focus the flowing liquid so that it forms a concentrated stream. [5]

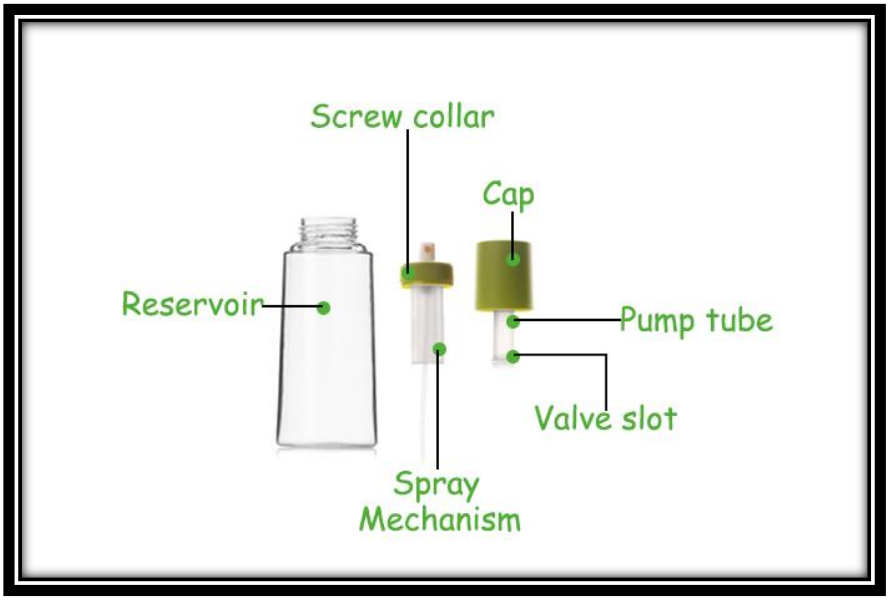


Figure 1: Mechanism of spray bottle

III. FORMULATION TABLE

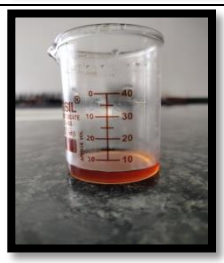
Table No. 1: Formulation table for topical spray

Sr. No.	Ingredients	Quantity	Uses
1.	Aloe Vera	20 ml	Anti-fungal
2.	Cucumber juice	15 ml	Anti-oxidant
3.	Honey	1 ml	Cleansing action
4.	Jasmine oil	2 ml	Perfuming agent
5.	Lemon grass	15 ml	Anti-bacterial

6.	Rosemary	5 ml	Tightening agent
7.	Rose water	10 ml	Astringent
8.	Tween 80	1 ml	Solubilising agent
9.	Vit. E	1 ml	Anti-inflammatory

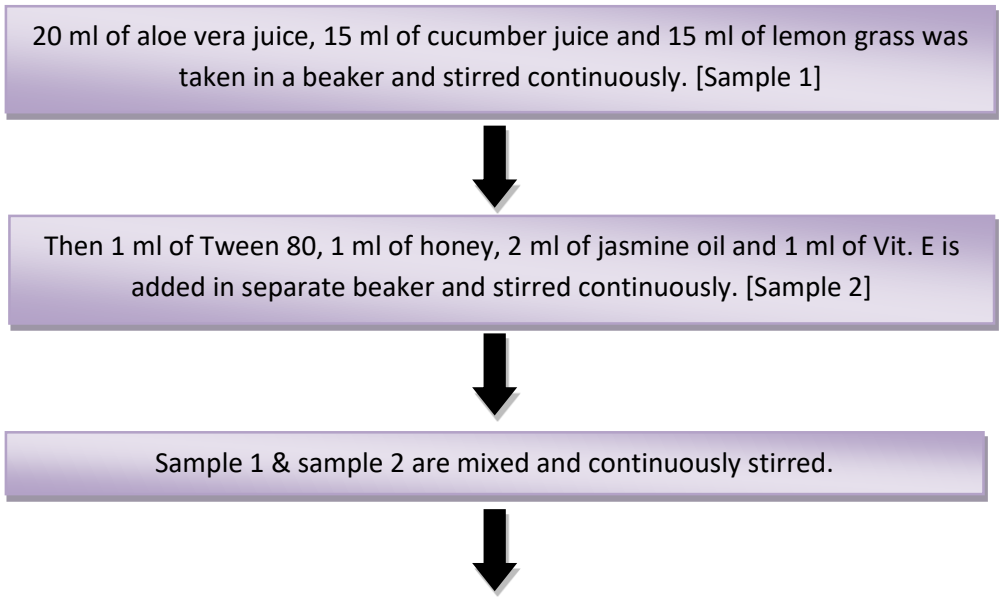
MATERIALS USED FOR FORMULATION

Table No. 2: Ingredients used in topical spray formulation

Sr. No.	Name of Ingredients	Image	Active Constituents	Purpose
1.	Aloe vera		Polysaccharides with protective effect on skin	Treat skin problems like burn, inflammation
2.	Cucumber		Ascorbic acid	Hydration
3.	Honey		Sucrose & Fructose	Pore cleanser
4.	Jasmine Oil		Indole	Healing properties & perfuming agent

5.	Lemon grass		Citral	Remove impurities & leave the skin clean & clear
6.	Rosemary		Camphor & borneol	Helps to reduce inflammation caused by acne
7.	Rose water		Flavonoids	Reduce the appearance of facial redness
8.	Tween 80		Ethoxylated sugar	Surfactant

IV. EXTRACTION AND PREPARATION METHOD



Add rosemary and stir.

Then volume was made up with rose water

Fig. 2: Final Product (Herbal Face Toner)

Figure 3 Before and After application of toner

V. DIRECTIONS FOR USE

1. Cleanse the face - rinse the face with a hydrating and gentle cleanser.
2. Apply the face toner - Soak a cotton pad with the toner and gently pat this onto the skin thoroughly. Allow to air dry before applying moisturizer or board spectrum sunscreen.
3. Twice a day - Use toner as AM/PM skincare routine i.e. apply both at morning and night. [6]

VI. EVALUATION TESTS FOR HERBAL FACE TONER

The evaluation test is mention in the given table

Table 1 : Evaluation test

Sr. No.	Physical character	Description	Result
1.	Organoleptic Evaluation	Colour, odour and consistency was recorded	Colour- Baby pink Odour- Fragrant/pleasant Consistency- Good
2.	Skin irritation	Small amount of toner formulation was sprayed on both hand dorsal skin and kept for some time.	Non-irritant
3.	Stickiness	The formulation was not found to be sticky in nature.	Not much sticky
4.	Skin conditioning	It can be applied on any skin type.	Skin was moisturised and softened
5.	Determination of pH	pH was determined by using pH meter.	pH 5.63
6.	Surface tension	The formulation was transferred in the stalagmometer and the surface tension was recorded.	54.6 dyne/cm^2
7.	Viscosity	The formulation was filled in OSTWALLD VISCOMETER and viscosity was determined.	1.7 CP
8.	Clarity test	Formulation was watched under white and black background to check the clarity.	No change in colour
9.	Pourability	This test is used to check that the final formulation is perfectly pourable or not.	Easily pourable in any container.
10.	Spreadability	Determined by spreading of 1 ml of liquid on circle of 2 cm diameter of glass plate. 50 ml weight was permitted to rest on upper glass plate for 5 min. The diameter of circle after spreading of liquid was determined.	4.1 in cm
11.	Temperature variation/ light exposure testing	The formulation was exposed in different temperature at room temperature 40-42°C for 4-5 days to check the ability of formulation.	No discolouration/no change in physical or chemical properties. Product is stable at extreme temperatures.
12.	Washable	To check whether the formulation is washable or not.	Easily removable/washable

Figure 4: Clarity test on black background

Figure 5: Clarity test on white background

Figure 6: pH determination

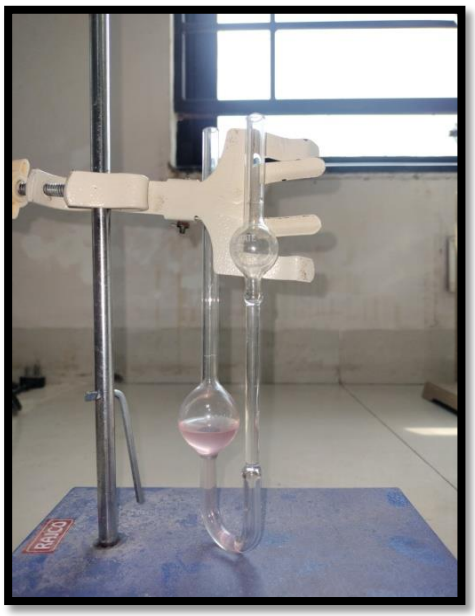


Figure 7: Viscosity determination

VII. CONCLUSION

The conclusion for a face toner could highlight its benefits such as refreshing and balancing the skin, minimizing pores and
preparing the skin for better absorption of serums and moisturizer.

The herbal ingredients used to formulate it can be beneficial for skin and leads to contributes to an effective skincare routine.

Finally it could suggest how regularly incorporating a toner can leads to long term improvement in skin health and appearance.

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IX. Reference

[1] Vibhavari M. Chatur et al. “Formulation and Evaluation of Basic Parameters of Herbal Toner Mist for Skin”, International Journal of Pharmacy and Pharmaceutical Research, Human, May 2021; Vol. 21 (2): 335-345.

[2] S., Gunjal & A, Somvanshi & S, Rajdev & Kajal, Walunj. (2022). Formulation and Evaluation of Herbal Face Toner. International Journal of Advanced Research in Science, Communication and Technology. 786-790. 10.48175/IJARSCT-4660.

[3] Sapna Mhaske et al, Formulation and Evaluation of Herbal Face Toner, International Journal of Advanced Research in Science, Communication and Technology (IJARSCT), Volume 2, Issue 5, June 2022.

[4] Venu Agrawal et al, Formulation And Evaluation of Herbal Toner by Using Leaves of Azadirachta Indica: A Review, International Journal of Creative Research Thoughts, Volume 11, Issue 8 August 2023.

[5] Monali Parbhane, et al, Formulation and evaluation of herbal toner, World journal of pharmacy and pharmaceutical sciences, Volume 11, Issue 9, 784-797.

[6] Somwanshi, Sachin & Kudale, Kiran & Dolas, Ramdas & Kotade, Kiran. (2017). FORMULATION AND EVALUATION OF COSMETIC HERBAL FACE PACK FOR GLOWING SKIN. International Journal of Research in Ayurveda & Pharmacy. 8. 199-203. 10.7897/2277-4343.083199.