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Research Article

Formulation and Evaluation of Herbal Face Toner

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ABSTRACT

In today's fast world a natural rejuvenation is a necessary step for one's healthy mind and skin. The mist toner is a Natural freshener toner as well as a good cosmetic having rejuvenating and cleansing properties on the skin. The study is aimed to formulate a natural and safe herbal skin toner that has a calming, soothing, effect on the facial skin to reduce the facial irritancy and bring freshness, also to enhance the beauty. The Cucumber and Aloe vera are used gives excellent results and safety for sensitive skin types and can be used on daily basis. The purpose behind formulating the mist is ease of spread, getting cooling and smoothening effect fast, and impart freshness to facial skin in a mild way. It is natural and safe herbal preparation which gives calming, soothing and astringent effect on the face. The natural ingredients like aloe vera, cucumber also the rose water used in the formulation. It having ability to reduce the facial irritation as well as to enhance beauty.


INTRODUCTION

The ancient days, people use naturally available resources to enhance their beauty. It is known that cosmetics are the products used to enhance and impart beauty to the user. In earlier days, naturally available ingredients were generally used as cosmetics, but with the passage of time and improvement in science, several chemicals came into existence that is said to impart or enhance beauty, thus used as cosmetics. Using these chemical-based products can impart beauty for a particular time but it harms our skin when used for

a long time. Many harmful effects have been noticed due to the usage of chemical-based products, thus now day's cosmetics industry mainly focuses on the preparation of herbal products. The face mist prepared is completely chemical-free and it will also provide a soothing effect to the skin, protect the skin from sunburn, and it also has proven anti-allergic properties. Toner is a skin care product that's applied to the face and neck after scrubbing. It is used to remove any trace of dirt and dead skin cells after scrubbing. It also helps smooth and get ready the

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skin for fresh skin care products, such as moisturizers and serums. Glycolic acid is most commonly used because it can be easily synthesized by combining chloroacetic acid with sodium hydroxide followed by re-acidification.

Effect of the Toner on the Skin

Nowadays, the diversity and prevalence of the products cause skin toners to be utilized more as cosmeceuticals products with several purposes; for example, rehydrating skin, balancing skin pH, tightening skin pores, relieving irritation, and also antiseptics.

Advantages of Toner

1. To extra cleansing and Refreshes skin. minimizes appearance of pores.
2. To restore skin's pH balance
3. To hydrates and Replenishes.
4. To refreshes skin.
5. To prevent infection and break-down
6. Remove oil and Makeup
7. Helps lock in moisture

Types of Toner

1. **Skin bracers or fresheners**= These are the mildest form of toners
2. **Skin toner**= These are slightly stronger and contain a small quantity of alcohol (up to 20%), water, a humectant ingredient
3. **Acid Toners**= These are a strong form of toner that typically contains alpha hydroxy acid and or beta Hydroxy acid

Effects of Toner on Skin-

In the past, skin toner was a typical product used as a second cleansing agent residual makeup after regular facial cleansing or used for removing excess sebum from facial skin to prepare the skin before nourishing treatment. Toners may be categorized into alcohol-based 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, example, rehydrating skin, balancing skin pH, tightening skin pores, relieving irritation, and also antiseptics.

Moreover Advantages of spray formulations are:

1. Application of the toner is much easier than any other form and uniform all over the
2. fine mist particles help good penetration with some pressure directly into the skin
3. The hydrolysis or any chemical reaction can be avoided with the formulation in spray form.
4. No direct contact or contamination can occur when the formulation is in spray form.
5. Rapid action with better efficacy, safety, and design can be provided with this form

Mechanism of Spray/Mist Action:

The mechanism of action of the face spray toner can be explained as follows:



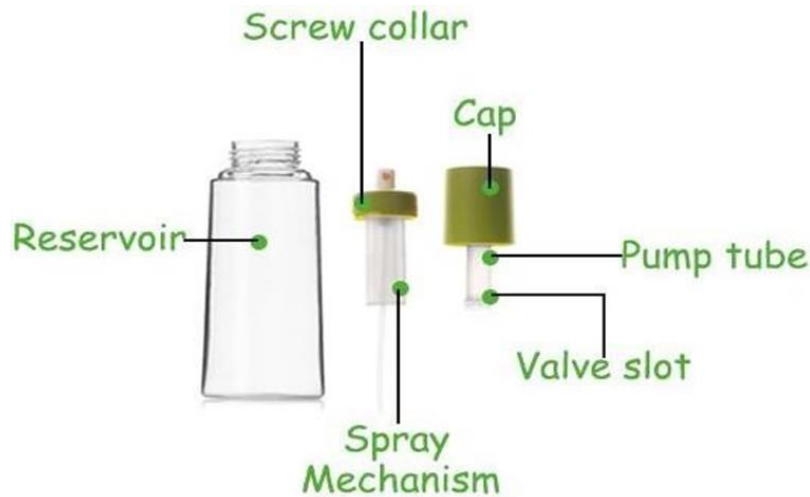


Fig: Design of a Spray

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.

Advantages Of Herbal Cosmetics

Herbs are important for their disease prevention and health promotion properties having following advantages which are described below:

1. Natural Products

Herbal cosmetics are natural and free from all the harmful synthetic chemicals which generally may turn out to be lethal to the skin.

2. Safe To Use

Natural cosmetics are protected to utilize. They are hypo-allergenic and tested and proven by dermatologists to be safe to use anytime, anywhere. Since they are made of natural ingredients, people don't have to worry about getting skin rashes or experience skin itchiness

3. Compatible with all skin types

No matter if you are dark or fair, you will find natural cosmetics like foundation, eye shadow, and lipstick which are appropriate irrespective of your skin tone. Women with oily or sensitive skin can also use them and never have to worry about degrading their skin condition.

4. Wide selection to choose from

These products are more affordable than synthetic ones. They are offered at economical prices and are sold for a cheap price during sales. An estimate of WHO demonstrates about 80% of world population depends on natural products for their health care, because of side effects inflicted and rising cost of modern medicine

5. No side effects

The synthetic beauty products can irritate your skin, and cause pimples. They might block your pores and make your skin dry or oily. With natural cosmetics, one need not worry about these. The natural ingredients used assure no side effects, one can apply them anytime, anywhere.

6. Cosmeceutical

Cosmeceuticals is fastest growing segment of the beauty industry, Cosmeceuticals are cosmetic-pharmaceutical products intended to improve the health and beauty of the skin by providing a specific result, ranging from acne-control and anti-wrinkle effects, to sun protection.

2. Review Of Literature

Piranha Agawam. , Ilva D. Rupenthal et al (2016) studied in vitro and ex vivo corneal penetration and absorption models. To develop more efficient drug carriers, reliable in vitro or ex vivo models are required in the early stages of formulation development. This review discusses the invitro and ex vivo models currently being used to study corneal penetration and evaluates their advantages and limitations with a focus on diffusion cell assemblies. In addition to the tissue used, the diffusion cell set-up can significantly influence the penetration profile and should be cautiously adjusted to simulate clinical conditions.

Mahendra Singh Rathore. , Dipak K. Majumdar et al (2006) studied Effect of Formulation Factors on In Vitro Transcorneal Permeation of Gatifloxacin from Aqueous Drops. The purpose of this research was to optimize the formulation factors for maximum in vitro permeation of gatifloxacin from aqueous drops through excised goat cornea and to evaluate the

permeation characteristics of drug from selected marketed eye drop formulations. Raising the drug concentration of the drops increased the drug permeation but decreased the percent permeation and the in vitro ocular availability. Raising the pH of the formulation from pH 5 to 7.2 increased both the drug permeation and the in vitro ocular availability.

Pravin Kondiba Pawar. , Dipak K. Majumdar et al (2006) studied Effect of Formulation Factors on In Vitro Permeation of Moxifloxacin from Aqueous Drops through Excised Goat, Sheep, and Buffalo Cornea. The purpose of this investigation was to evaluate the effect of formulation factors on in vitro permeation of moxifloxacin from aqueous drop through freshly excised goat, sheep, and buffalo corneas. Aqueous isotonic ophthalmic solutions of moxifloxacin hydrochloride of different concentrations, solutions of different pH or solutions containing different preservatives were made.

Rational Of the Study:

Need Of Work:

1. Herbal face toner is used to rehydrate the skin and balancing pH of the skin
- ii. Herbal face toner used to stimulate blood circulation and relieving irritation
- i. On daily use it has major positive impact on appearance. Fast removal of skin

Objectives: -

1. To Rehydrating the skin
2. To relieving irritation
3. To Stimulate blood circulation
4. To remove oil



2. Plan Of Work: -

- Selection of crude drug
- Preparation of material and Methods,
- Selection of effective method of preparation
- Experimental design
- Formulation and preparation of Tonar
- Comparative study,
- Result & discussion
- Conclusion
- Reference

Drug Profile: -

Selection of pure Drug

1. Tomato

Botanical Name: Solanum Lycopersicon

Family Solanaceae

Origin: Peruvian and Mexican region

Chemical Constituents: Tomato is a good source of phenolic compounds (phenolic acids and flavonoids), carotenoids (lycopene, α , and β carotene), vitamins (ascorbic acid and vitamin A) and glycoalkaloids (tomatine)

Uses:

1. Reduced excess oil
2. Remove dead skin cells
3. Tightens pores. Brighten skin
5. Fight signs of aging
6. Treat sunburns



2. Pomegranate

Botanical name Punica granatum

Family lythraceae

Origin Afghanistan and iran others are asia Africa and Europe

Chemical constituents:

The red color of the juice is attributed to anthocyanins, such as delphinidin, cyanidin, and glycosides of pelargonidin. Generally, an increase in juice pigmentation occurs during fruit ripening. Pomegranate peel contains high amount of polyphenols, condensed tannins, catechuns, and prodelphinidins.

Uses

1. Anti-Aging to skin
2. Speed up cell regeneration
3. Antimicrobial activity
3. UV protection
4. Takel dry skin
5. Natural exfoliator



Lemon Juice

Botanical Name: Citrus lemon, Burm. f

Source Citrus Plant

Synonyms: Citrus limen lemon tree

Family: Rutaceae

Chemical constituents: Phenolic compounds, mainly flavonoids eg. Diosmin, limocitrin And phenolic acids like ferulic acid, synaptic, p-hydroxybenzoic acid

Uses:

1. Boosts Collagen
2. Reduces Dark Spots
3. Skin brightening
4. Treatment for acne
5. Lightens elbow



4 Aloe Vera

Botanical Name: Aloe Barbednesis Miller

Family: Liliaceae

Synonyms: Aloe African, Curacao aloe, cape aloe

Chemical constituents: Aloe-emodin, aloin, aloesin, emodin, acemannan

Uses:

1. Fights skin ageing
2. Helps to moisture skin
3. Reduce infection and acne
4. Help soothe sunburn
5. Anti-inflammatory action.
6. Remove tan



5-Cucumber

Botanical name: Cation

Family: Cucurbitacear

Origin China, western Asia and Europe

Chemical Constituencies camegastignanes and It, cocumerin. A and B vitexin, orientis, isoscoranriv 2-0-46-(1)-poary) glede, apigenin 1-0-4- O-p- coumaroylglucoside)

1. Hydrate to skin
2. Helps with clogged and visibly enlarged porus, excess, and dryness
3. Naturally glowing to sh
4. Reduce puffiness



6-Rose Water

Botanical name: Rosa rubiginosa

Family-Rosaceae

Origin: Roses are thought to have first been cultivated in China

Chemical Constituents Flavonoids, triterpenes, tannins, phenolic acids, polysaccharides, fatty acids, organic acids, carotenoids and vitamins. Carboxylic acid (31), myrcene (32), vitamin C (13), kaempferol and quercetin (33)

Uses:

1. Anti-bacterial, antiseptic
2. Prevent wounds such as burn and cut
3. Help to soothe skin irritation
4. Reduce skin redness
5. Anti-aging properties
6. Balance Ph



7-Orange Peel Powder

Botanical name: Citrus sinensis

Family: Rutaceae

Origin Originated in a region encompassing Southern China, Northeast India, and Myanmar

Chemical constituents: Specifically, for oranges, known important volatiles include limonene, ethyl butanoate, octanal, decanal, hexanal, (S)-linalool, and many other hydrocarbons, alcohols, aldehydes, and esters

1. Orange peel powder make skin glow
2. Fight ageing
3. Eliminate blemishes 4. Hydrate skin



5. MATERIALS AND METHODS:

5.1 List of Materials:

Table 6.1: List of Materials

Sr. No.	Ingredients	Uses
1.	Tomato Juice	Protect from UV light, Provide red pigment to skin
2.	Pomegranate	Anti ageing, Anti inflammatory, vitamin c
3.	Lemon Juice	Preservatives , Antimicrobial
4.	Aloe Vera Extract	Cooling effect, Hydration to skin Moisturizer
5.	Cucumber	Antioxidant
6.	Rose water	Anti wrinkles, Antioxidant, Avoid pores in skin
7.	Orange Peel Powder	Remove acne, Skin glow

Glassware's and Instruments:

Sr No	Equipment's
1	Weighing Balance
2	PH Meter
3	Stalagmanometer
4	Oswalds Viscometer

Formula no. 1

Sr no.	Ingredients	Quantity
1	Tomato	10ml
2	Pomegranate	20ml
3	Lemon juice	5ml
4	Aloe Vera juice	20ml
5	Cucumber	10ml
6	Rose Water	Q.S.
7	Orange Peel Powder	5ml

Formula no. 2

Sr no.	Ingredients	Quantity
1	Tomato	10ml
2	Pomegranate	20ml
3	Lemon juice	5ml
4	Aloe Vera juice	10ml
5	Cucumber	10ml
6	Rose Water	Q.S.
7	Orange Peel Powder	5ml

2.1 METHODS:

Steps

- Collect the juice of ingredients.
- Measure the juice in beaker as per formula.
- Mixed it all in beaker.
- Pour into a spray container.
- Labelled and used for future research.

Evaluation Test

- 1 PH: The formulation of 25 ml are taken in beaker The PH observed is 6.5
- 2 Irritation test: the sample in small amount apply to skin non irritable to skin
- 3 Stickiness the particle of tonar to be non sticky.
- 4 Spreadability: the tonar apply to skin and spread with cotton Uniformly spread over skin.
- 5 Removal: The tonar was easily removable.

RESULT AND DISCUSSION:

The final formulation was performed various testall the result were recorded. No any Discoloration was found after light exposure to the formulation. The formulation was also Effective to conditioning on the skin and non-irritant in nature.



At last removability of mist was found to be easily removable

penetrate the small pores of the skin in a better way than any other form like gel or lotion.

Observation table:

Table 7.1:

Sr No.	Parameter	Observation
1	Colour	Reddish Pink
2	Odour	Pleasant
3	Homogeneity	Good
4	Smoothness	Smooth
5	PH	6.5

7.2 Preliminary study:

7.2.1 Identification Test

Table 7.2: Identification Test of Chloramphenicol

Sr no	Physical properties & test	Description
1	Physical state	Liquid
2	Color	Reddish Pink
3	Odour	Pleasant
4	Solubility	Very Soluble

CONCLUSION

The results from the spray toner formulation were very satisfactory. The purpose behind the toner formulation was to achieve the cooling and toning effect on the skin was found to be satisfactory. Similarly, the intention behind formulating it in the mist form was to ease in carrying the formulation and application whenever and wherever needed. And the studied formulation proved to be satisfactory from that perspective as well. After application, there was no irritability, rashes, but some cleansing effect was observed. It is suggested that the prepared formulation is physio-chemically stable, and possessed characteristics of a standard cosmeceuticals formulation for skincare. The spray formulation gave more effective form to this formulation because spraying smaller particles on the skin with a certain amount of force made the formulation

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