

FORMULATION AND EVALUATION OF HERBAL HAIR SERUM

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ABSTRACT

Hair plays an important role within the personality of human and for his or her care we use plenty of cosmetic products. Herbal formulations always have activity and relatively lesser or no side effect. This study aimed toward reviewing the importance of polyherbal toilet article for the treatment of common hair problems like baldness, alopecia, hair fall, gray hair, dryness, and most typical dandruff. Cosmetics are being employed on an oversized scale for its various utilities in day to day life. Mankind uses various products to reinforce beauty and elegance to see young and charming. To ameliorate hair growth and assist hair loss, hair root activation is required. Herbals are still generally employed by average citizens thanks to smaller side effects and lesser

protection and safety profile. This study was intended to use different sauces to formulate herbal hair serum for general purposes (hair operation). The formulated oil was evaluated for its organoleptic properties, viscosity, pH etc. All the parameters were found to be good and within the standards.

KEYWORDS: Ice apple hair serum, Borassus flabellifer, hair problem, the hairdresser, Wine palm fruit.

INTRODUCTION

Cosmetics are substances that are applied to the body in order to enhance its appearance or odor. Cosmetic includes any article intended to be rubbed, poured, sprinkled or sprayed on, or introduced into, or otherwise applied to, the human body or any part for cleansing,

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beautifying, promoting attractiveness, or altering the appearance. Make-up is a category of cosmetics that refers to colored products that are used to alter a person's appearance. The cost increase in worldwide living standard has created a rise in demand for cosmetic products. The importance of cosmetic has increased as many people want to stay young and attractive. Serum is one of the cosmetic products with very high Concentration of active ingredient in their formula for Providing intensive nutrition to the deeper skin layer and non-greasy finish product which suitable for skin. Hair serum is the styling product that coats the surface of hair. Serum is intended to be used on wet or dry hair, serums can act as both a pre-styling treatment and a finishing product stylist-free days.^[1]

HAIR: Hair is an important part of human body. Hairs can vary in shape, length, diameter, texture and color. All mammals have hairs. Its main purpose is to regulate body temperature. It is also wants to decrease friction, to guard against sunlight. For the scalp.

Layers of Hair

- (a) Medulla: It is a center layer of hair shaft. It is not always present, can be continuous or broken. It is made up of large loosely connected cells, may contain melanin
- (b) Cortex: It is a largest & most important layer of the hair shaft. It determines the texture of the hair. All chemical & physical changes take place here. Melanin is found here-permanent color changes take place in the cortex.
- (c) Cuticle: It is the outer layer which is made up of clear overlapping scales. It doesn't contain melanin. It is 2 to 11 layers thick and it protects the cortex and also determines the hairs porosity.
- (d) hair follicle: The follicle is a pocket of skin and grows deep into the dermis and consists of papilla, germinal matrix and hair bulb. Papilla is located at the base of the follicle, where the waste products from the cell are passed back through to the capillaries. Germinal matrix is located inside the follicle, above the papilla. Melanin is produced in the cells within the germinal matrix. Once the call leaves the germinal matrix its supply of nutrients is cut off so the cells stop dividing and dies. The hair bulb has bulb shape, located at the lower end of the follicle. Keratinization occurs here.^[3]

AIM AND OBJECTIVE

Aim: To formulate and evaluate herbal hair serum.

Objective

- 1.To provide alternative to synthetic hair serum.
- 2.To carry out preparation of herbal hair serum.
- 3.To add shine to dull hair, reduce frizz, and prevent heat damage.
- 4.To improve hair condition and texture.
- 5.To carry out evaluation of herbal hair serum.

HAIR SERUM**Hair Serum**

Hair serum is a liquid-based treatment usually formulated using silicones that provide a protective layer over the hair fiber, assisting in smoothing frizz. This smooth layer then reflects the light, which is how serum gives your hair a shiny, not greasy, finish. For some people, this removes the need to use straighteners to smooth out the hair afterwards: great for cutting styling time in half and saving your hair from heat damage.

It's not common knowledge, but hair serum Isn't just used to tame frizz. The right serum for your hair type can address multiple concerns, from smoothing the hair, adding shine and detangling to repairing damage and protecting from pollution. Hair serum is also a good way to hide split ends in-between visits to the hairdresser.

BENEFITS OF HAIR SERUM**1. Adds shine**

Using hair serum boosts the shine of the hair, and makes it striking to look at. It completely polishes the hair with perfection and provides completion for silky softness and shine.

2. Help to nourish dry hair

Dry hair can be very annoying. A lack of moisture can make them look dull and lifeless. A good quality serum can cause you to get dry hair by delivering a silky finish. It provides

protection from humidity (which is the root reason behind dryness). Moreover, using the hair serum to nourish the hair doesn't make the hair look greasy.

3. Soften hair strands

Damaged hair turns brittle, which frequently makes them rough to touch. Using the hair serum brings life back to your strands, making your hair softer and silkier. Hair serum also makes the hair healthy and glossy.

4. Protect against humidity

Hair usually gets damaged and dull when coming in grips with humidity. Excess exposure to the sun also turns the hair dry and dead. Also, washing the hair regularly may create the issue of excess hair fall. That is why using the hair serum is important so as to guard the hair against the warmth and humidity present within the environment.

5. Prevents Hair fall /Breakage

When our hair becomes a tangled mess, we tend to lose a lot of hair strands because of the wear and tear that goes into detangling. Hair serum acts as a lubricant for such hair and makes detangling easy. And the result is less hair fall.

6. Makes hair manageable

Hair serums fill the follicular cracks and revive brittle and damaged hair. Hair serum makes hair more manageable which further makes it easy to style them.

7. Best for Dry Hair

The most to benefit from hair serums are those who have dry and frizzy hair. Hair serums lock in the moisture and makes hair smooth and shiny.^[5]

PROBLEMS OF HAIR

Hair is an important part of human body. The problem associated with it includes hair loss, lack of hair volume, conditioning, immature graying, dandruff, thinning of hair, dullness etc. Hairs can in shape, length, diameter, texture and color.

All mammals have hair. Its main purpose is to regulate body temperature. It also wants to decrease friction to guard against sunlight. For the scalp, hairs were known as protective covering in ancient times.^[3]

Dandruff**Dandruff:**

Dandruff is little white pieces of dead skin in someone's hair, or fallen someone's hair. It's apparently caused by a fungus called *Malassezia restricta* and *Globose*, formerly called *Pittosporum* may be a yeast causing infection of skin and scalp. It's caused by not brushing hair, allergy, not showering enough etc.

**Hair loss****Hair loss:**

Although historically as a haul among men, hair loss is additionally common among women. Female hair loss is typically caused by stress, medication, changing hormones and even menopause. Many hair styling products can contribute to hair loss.

**Split ends****Split ends:**

Over brushing hair, excessive perming, too much heat and lack of a good conditioner cause split ends. Exposure to extreme weather conditions, and hair care techniques such as blow drying, straightening, and curling may cause split ends.

**Gray hair****Gray hair:**

To many, gray hair is a badge of honor. But others would prefer to get rid of it because gray hair can be brittle and more unruly than other strands.

**Dry hair****Dry hair:**

Shampooing too often causes dry hair. Although squeaky clean hair may be a good thing, many overdo it by washing once, sometimes twice or per day which strip away all of the hair's natural oils.

**Dull hair:**

There are many causes of dull looking hair: chemical or heat styling damage and environmental soils.

Oily**Oily/greasy hair:**

Oily hair is caused scalp produces an excessive amount of natural oil called sebum. Sebum is produced by sebaceous glands, which leading to excessive amounts of oil.

**Heat damage****Heat damaged hair:**

Heat damaged hair occurs when you blow dry, flat iron, or curl your hair at the highest temperature settings over an extended period of time.

**MATERIALS AND METHODS****ICE APPLE**

Synonym: Wine palm

Biological Name: Borassus flabellifer

Family: Arecaceae

Chemical constituents: Vitamin (A, C, E, carbohydrates, sugar, nicotinamide, uracil

Geographical source

Ice apple, is native to the Indian subcontinent and Southeast Asia, including Nepal, India, Bangladesh, Sri Lanka, Cambodia, Laos, Burma, Thailand, Vietnam, Malaysia, Indonesia and the Philippines.

EXPERIMENTAL WORK**FORMULATION TABLE**

Sr. No.	Ingredients	Batch 1	Batch 2
1	Ice apple	8 ml	15 ml
2	Vitamin E	1 ml	1 ml
3	Rose water	12 ml	3 ml
4	Distilled water	8 ml	10 ml
5	Almond oil	1 ml	1 ml

PROCEDURE

- Procedure of Herbal Hair Serum Formulation
- Clean all the glassware and dry them properly as per SOP.
- Measure the accurate quantity of fruit, transfer it in beaker.
- Mix required quantity vitamin E into it.
- Now mix rose water to the above mixture of fruit and vitamin E.
- After stirring for few minutes, heat the prepared solution for few minutes.
- Add few drops of almond oil.
- After that stir the preparation with the help of magnetic stirrer.
- Transfer the preparation in measuring cylinder and adjust the final volume to 30ml.
- Transfer final solution into container.^[5]

RESULT AND DISCUSSION**1. Physical Appearance**

The physical appearance, color, odor and texture of the prepared herbal hair serum are visually tested.

Parameter	Batch 1	Batch 2
Color	Transparent	Milky
Odor	Rose type	Rose type
Texture	Smooth	Smooth

2. pH

The pH scale is used to specify the acidity or basicity of a product in order to ensure that it is safe to use. The formulation should have acidic pH 4-6. The values obtained are recorded.

Batch 1	Batch 2
6.50 cp	5.21 cp

CONCLUSION

I have performed two batches of the formulation. From these two batches second batch is found to be suitable, which provides accurate results. All the parameters showed that they are within the limits and since all the ingredients added have many advantages. This hair serum will help in maintaining good growth of hair, turning grey hair to black, essential nutrients needed to preserve the proper function of the sebaceous glands and support the growth of natural hair. In the personal hygiene and health care system, the use of herbal cosmetics has changed by several folds. Therefore, the herbal cosmeceuticals individual care or personal health care industry, which is actually concentrating and paying extra care on the production of herbal-based cosmetics, has a considerable glamour.

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