



Formulation And Evaluation of Herbal Hair Serum

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ABSTRACT:

Today, humanity uses various products to enhance beauty and elegance and look youthful and attractive. In mammalian systems, hair follicles are known to be the most important organs that determine appearance and sexual differentiation and strong thermal protection and protection. This generation is beginning to suffer from extreme hair loss. This is due to many life-related changes such as: Examples: using different hairstyling/coloring styles, eating junk food, fatigue, etc. Hair is one of the most important parts of the body with protective functions. The main objective of the current research is to develop an herbal hair serum for general purpose only. Herbal supplements are still commonly used by average people because they have fewer side effects are less safe, and have less protective effects. Current reviews found the herbal formulation to be effective in improving hair consistency. Average citizens still use herbal preparations for lower side effects and safety profile and lower protection. A current review has shown that herbal preparations are effective in increasing hair consistency.

Keywords: Flaxseed, Almond oil Painting, Cosmetic, Herbs, Effective etc.

INTRODUCTION:

The increasing price of hair serums due to global living standards has increased the demand for cosmetics. Human hair commonly affects attachment to the anagen, telogen, and catagen phases of many inflammatory skin diseases. More and more people want to say that young and attractive cosmetic companies make cosmetics, and pharmaceutical companies make medicine, and the importance of cosmetics is increasing. Cosmeceutics are skin care products that combine cosmetics and medicine. The hair serum is one of the cosmetic products with a very high content of active ingredients that nourishes the deeper skin layer and provides a suitable non-greasy final product for the skin. Flaxseed, almond oil, vitamin E, aloe Vera, rose water, these are the ingredients of the hair serum Flaxseed, has amazing benefits for your hair. When used daily, these scrubs will make your hair smoother and shinier. Castor oil painting, also known as castor oil. Almond oil helps with its hair-nourishing and skin-softening properties.

The cost increase in worldwide living standard has created a rise in demand for cosmetic products. The importance of cosmetics has increased as many people want to stay young and attractive. Cosmeceuticals refers to the combination of the cosmetics industry with the pharmaceutical industry. Cosmetics companies

produce cosmetics and pharmaceutical ones produce medicines. Cosmeceuticals are skincare products that combine cosmetics and medicines. 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.

The cosmetic word derived from Greek word “kosmesticos” means to “adorn”. According to drug and cosmetic act 1940 and rules 1944 cosmetics are any article intended to be rubbed, poured, sprinkled, sprayed on, introduced into or otherwise applied to the human body or any part thereof for cleaning, beautifying, promoting, attractiveness or altering the appearance. The word cosmetics stems from its use in ancient Rome. The material used to promote appearance or enhance beauty called as cosmetic. Cosmetics are used to promoting appearance. Now adays makeup plays important role for both women and men. Cosmetics are available in the different form’s creams, lipsticks, perfumes, eye shadow, nail polish, hair serum etc. Herbal cosmetics are the formulations which contain one or more herbal ingredients used to cure various problems. Herbs use as maintain and enhancing human beauty.

Indian herbs and its significance popular worldwide. Herbal cosmetics demand growing in world market day by day. The science of Ayurvedic had utilized many herbs and floras to make cosmetics for beautification and protection from external affects the herbal cosmetics does not cause large side effects on human body. Hair is simple structure made from root and shaft. Root enclosed in hair follicle submerged into skin, hair shaft is port of hair present above the skin. Hair is made up of Tough protein called as keratin. Keratin is large molecule made up of smaller unit called amino acid. Hair follicle is point from which hairs grows. At the end of Follicle network of blood vessels supply nutrition to hair help to grow called papillae. The most important Sebaceous gland that secret oil help keep hair condition. The hair bulb has special calls known as melanocytes, which produce pigment called as melanin. Melanin gives color to hair. The part of hair seen above the skin called have shaft. Hair Shaft made up of dead cells, keratin cells. Keratin makes hair both strong and flexible. These helices are connected by strong bonds between amino acids. The bonds make hairs strong.

HIGHLIGHT OF HERBAL HAIR SERUM:

Hair serum is a styling agent that coats the surface of the hair. Hair serum is a liquid hair care product. It's thicker than water. Hair serums are silicone-based styling products that coat the surface of your hair to give it extra shine, moisture, and softness.

Hair serums are applied to wet hair, which is suitable for using hair serums.

1. Straight
2. Wavy
3. Curly
4. Coily

ADVANTAGE OF HAIR SERUM:

- 1) Protects hair from environmental influences.
- 2) Hair serum can effectively soften, smooth and smooth hair.
- 3) Control frizz.
- 4) Increase smoothness.
- 5) Improve straightness and sharpness
- 6) To protect against damage

DISADVANTAGE OF HAIR SERUM:

If you continue to use it for a few days, your hair will become heavy, flat and lack luster. Accumulation on the scalp can cause dryness, peeling, and sk in irritation.

SIDE EFFECT OF USING HAIR SERUM:

1. Normal use and excessive use can cause problems Hair becomes unhealthy and eventually becomes dry.
2. This is what happens when you apply serum to your scalp For inflammation.

3. The silicone contained in hair serum is Long hair is harmful to your hair.
4. Avoid applying to the scalp as much as possible. It can become oily and cause inflammation.

BENEFITS OF USING HAIR SERUM:

To know the benefits of hair serums before finalizing your product. The main benefits of hair serum are as follows:

- 1) Protect your hair- Hair serum forms a layer on top of your hair. Therefore, it provides excellent protection against heat, sunlight, damage, dirt, dust and environmental pollution. Hair serum prevents hair damage.
- 2) Hair care- It nourishes the hair and makes it manageable. Hair serum fills the cracks in the hair follicles and nourishes brittle and damaged hair.

NEED:

- Flaxseed ,almond oil, vitamin E, aloe Vera, rose water, these are the ingredients of the hair serum
- Flaxseed, has amazing benefits for your hair. When used daily, these scrubs will make your hair smoother and shinier.
- Almond oil helps with its hair-nourishing and skin-softening properties.

DRUG AND EXCIPIENTS:

❖ **Aloe Vera-**

The aloe vera plant has been known a used for the centuries for its health, beauty, medicinal and Skin care properties. The name of aloe vera derives from the Arabic word. “Alloeh” meaning shining better substances While “vera” in Latin means true 2000’ years ago the Greek scientist regarded aloe vera as the universal panacea. Aloe vera is a popular medicinal plant with antioxidant and antibacterial properties.



Fig 1. Aloe vera

Botanical name – Aloe barbadensis miller

Synonym:- Aloe barbadensis Mill. Aloe barbadensis var. chinensis Haw

Biological source:- Aloes is obtained from the dried juice of the leaves of aloe barbadensis miller.

Family:- Liliaceae

Chemical constituents: Barballiin, Aloin, Isobarbaloin, aloe-emodin, and aloesone, Aloinoside A&B, resins.

Uses:-Anti-inflammatory ,Anti-aging ,Treats dry skin ,,Treats stretch mark.

❖ **Flax (Linum usitatissimum)**- Flaxseed is a periodic plant of the family Linaceae with several natural compartments: Circulatory effects of Y-glutamyl on mediator-mediated hair growth. Applying black seed oil was effective Enough to promote hair growth. This shows that it is a herbal hair oil painting.



Fig 2. Flaxseed

Botanical name: Linum usitatissimum

Family – Linaceae

Synonym- Linseed, flaxseed

Biological source – It consists of the dried fully ripe Seeds of Linum usitatissimum Linn. Omega-3 fatty acid, lignans, etc.

Uses – Anti-inflammatory, anti-oxidants, hair growth Stimulator.

❖ **Tocopherol (Vitamin E):** Vitamin E helps maintain healthy hair as it contains natural antioxidants that help maintain a Healthy crown and hair. Hair growth. Hair growth. Antioxidant vitamin package may help reduce and release Oxidative stress destroys hair follicle cells on the top of a person's head .



Fig 3. Vitamin E

❖ **Prunus Dulcis (Almond oil):** Applying almond oil deeply hydrates the scalp and Fortifies the hair follicles, resulting in thick, lustrous, and Beautiful hair. Almond oil might assist you in getting rid Of dandruff. It has anti-bacterial

characteristics that heal Dry skin and exfoliate the scalp of dead skin cells. It is a Vitamin B derivative that is recommended to persons who Have issues like hair thinning. Almond oil includes biotin, So massaging your hair with it is a good way to give it a Healthy dose of the vitamin to encourage hair development And stop hair thinning. According to studies, using almond Oil topically can help prevent sun-induced skin damage And reduce the ageing process. Almond oil can assist with Cellular protection by reducing DNA damage from UV Rays and prevent the chemical and structural changes they Can make.



Fig 4. Almond Oil

❖ **Rose water :** Rose water is a mild astringent which may help to reduce oiliness and dandruff. It has anti- inflammatory properties, which may make it beneficial for certain scalp conditions, like psoriasis and eczema. Many women with curly hair swear by rose water's ability to calm down frizz and add shine.



Fig 5. Rose Water

MATERIAL AND EQUIPMENT:

Apparatus	Beaker Stirrer, Measuring Cylinder (10 ml, 20 ml,100 ml)
Instruments	Weighing Balance Digital pH meter. Wastwald viscometer .
Chemicals	Liquid paraffin light , Water, Sorbitol
Ingredient	Flax seed extract , Aloe vera extract.

Table No.1 Material and Equipment**EXPERIMENTAL WORK:**

Decoction method: Decoction is a method of extraction by boiling herbal or plant material (which may include stems, roots, bark) to dissolve the chemicals of the material. It is the most common preparation method in various herbal medicine systems

Procedure for flax seeds extraction preparation :

- 1) Soaking flaxseed in warm water
Water-to-seed ratio 7:1 (mL/g), pH 6.0, temperature 70°C, extraction cycle 4, soaking time 60 min
- 2) Separation of liquid fractions containing mucilage from flaxseed
- 3) Pooling of the fractions and concentration under reduced pressure
- 4) Mucilage recovery
- 5) Store it in clean jar with close container.

Formulation Table:

Sr.no	Ingredient	F1	F2	F3	F4	F5
1	Aloe vera	1ml	1ml	1ml	1ml	1ml
2	Flax seed extract	1ml	2ml	3ml	4ml	5ml
3	Almond oil	5ml	4ml	3ml	2ml	1ml
4	Vitamin E	1ml	1ml	1ml	1ml	1ml
5	Rose Water	1ml	1ml	1ml	1ml	1ml
6	Liquid paraffin light	1ml	1ml	1ml	1ml	1ml

Table No.2 Formulation Table**PREPARATION OF HERBAL HAIR SERUM:**

- 1) Clean in all the glassware perform the work and dry them as per the sop.
- 2) Measure the sufficient amount of Flax seed extract and aloe vera extract than transfer in breaker.
- 3) Mix the required quality of vitamin E in extract. Solution.
- 4) Now mix the Almond oil in the above mixture of the flaxseed aloe vera and vitamin E.
- 5) Liquid paraffin lights is the mix of the above mixture heat them several time.
- 6) After that the stir the preparation of the stirrer.
- 7) After that the heat the above solution In cool and the filter out in muslin cloth and add the perfume.
- 8) Transfer the above solution and preparation transfer the measuring cylinder adjust the volume of final volume.

Transfer the final solution in container.**EVALUATION OF HERBAL HAIR SERUM:**

The following parameter are used to evaluate the prepared Herbal Hair Serum :-

- **Physical Appearance:** Physical appearance was evaluated by observation on the of the formulated herbal hair serum are following
Texture.
Colour.
Smell.
- **PH:** The pH test will be determined by using Digital pH meter. Dipper of digital pH will be deep into the sample of serum formulation and the pH value will be recorded. The pH of the formulation should having acidic pH as the skin is around the 4-6.



Fig 6. Determination of ph by digital ph meter

- **Viscosity :**

Viscosity of the formulation is determined by Brookfield Viscometer at 100rpm, using spindle type model S6 4.5 ml of the serum. The serum will placed in a big mouth container with the spindle dipped in it for about 5 minutes before the measurements.



Fig 7. Viscosity of Hair Serum

- **Sreadability Test :**

Spreadability was measured by a parallel plate process typically used to assess and measure the spreadability of Semisolid preparations. One gram hair serum was pressed between two horizontal plates of dimension 20×20 cm, the Upper of which weighed 125 g. The spread diameter was measured after 1 min. Spreadability was calculated using the Following formula:

$$S = M \times L / T$$

Where,

S= Spreadability,

M= Weight in the pan (tied to the upper slide)L= Length moved by the glass slide T = Time (in sec) taken to separate the slides completely

RESULT:

Sr.No	Parameter	Result
1.	Physical appearance	
	Colour	Yellow
	Odour	Rose Type
	Texture	Soft
2.	PH	4.80
3.	Viscosity	225
4.	Speadability	Easily Spreadable

Table No.3 Result**DISCUSSION:**

The Present work of herbal hair Serum was evaluated for its organoleptic properties, physical properties and its Evaluation. The prepared formulation of herbal hair serum showed non- irritant effect on hair It also has nourishment And smoothness effects.

The formulation was found in yellowish colour with oily consistency and smooth texture.

The herbal hair Serum are prepared in Five formulation F1,F2,F3,F4 and F5 the observation of F1,F2,F3,F4 and F5 among that the F5 was found better than other four formulations.

CONCLUSION:

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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