

Review on Development 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: Citrus sinensis, Flaxseed, Castor oil Painting, Cosmetic, Herbs, Effective ,etc

I. 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. Citrus Synensis, Zingiber officinale, Nigella sativa, hibiscus, almond oil, vitamin E, aloe Vera, rose water, these are the ingredients of the hair serum

Citrus Synensis, has amazing benefits for your hair. When used daily, these scrubs will make your hair smoother and shinier. Nigella sativa is a period-flowering plant native to Mediterranean countries and India, commonly known as black cumin. Castor oil painting, also known as castor oil. Almond oil helps with its hair-nourishing and skin-softening properties

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.

- Straight
- Wavy
- Curly
- Coily

ADVANTAGE OF HAIR SERUM

- Protects hair from environmental influences.
- Hair serum can effectively soften, smooth and smooth hair.
- Control frizz.
- Increase smoothness.
- Improve straightness and sharpness
- 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 skin irritation.

SIDE EFFECT OF USING HAIR SERUM –

- Normal use and excessive use can cause problems Hair becomes unhealthy and eventually becomes dry.
- This is what happens when you apply serum to your scalp For inflammation.
- The silicone contained in hair serum is Long hair is harmful to your hair.
- 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:

- 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.
- 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.
- Multipurpose: Hair serum solves many hair problems, not just a single problem. No wonder it is called the complete solution to all hair problems. Just a few drops will nourish your hair and transform its appearance.
- Adds shine to your hair. Hair serums form a layer on many hairs that acts as a light reflector, adding shine. Hair serums are made up of amino acids and protect hair that has been colored or chemically treated.

II. MATERIALS AND METHOD



Fig 1: CITRUS SINENSIS

Citrus sinensis- Citrus sinensis is used for long and strong hair to reduce hair loss, promote hair growth, prevent dandruff and prevent gray hair. Supple hair, UV cut hair care, control of sebum production. Citrus sinensis, commonly known as orange or sweet orange It is a small evergreen tree originally cultivated in tropical Asia. It has both antiseptic

and anti-inflammatory properties, and that's what it is. Ideal for people prone to dandruff and other dental crown problems.

Botanical name: Citrus sinensis Family - Rutaceae

Synonym – Orange or sweet orange

Biological source – It is obtained from the orange peel which is dried or fresh outer part of the pericarp of ripe or nearly ripe fruits of citrus sinensis.

Chemical constituents – limonene, (S)-linalool, pectin

Uses – Anti-oxidant, anti-inflammatory, Orange oil as



Fig 2: ZINGIBER OFFICINALE

Ginger- Ginger (*Zingiber officinale*) is traditionally used to prevent hair loss and stimulate hair growth. Several Companies produce shampoos containing ginger extract that they claim prevent hair loss and promote hair growth



Fig 3: LINUM USITATISSIMUM

Flax (*Linum usitatissimum*) 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

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



Fig 4: NIGELLA SATIVA

Nigella sativa -The Nigella Sativa content caused more than 76% hair loss. Botanical name : Black cumin

Family: Ranunculaceae **Synonym:** Black caraway

Biological source: native to eastern Europe (Bulgaria and Romania) and wester Asia (Cyprus, Turkey, Iran and Iraq)

Chemical Constituents : The volatile oil (0.4-0.45 %) contains saturated fatty acid which includes: nigellone that is the only component of the carbonyl fraction of the oil, Thymoquinone (TQ), thymohydroquinone (THQ)

Uses: indigestion, loss of appetite, diarrhoea, dropsy, amenorrhoea and dysmenorrhoea and in the treatment of worms and skin eruptions.



Fig 5: TRIGONELLA FOENUM GRASEUM

Trigonella foenum graeseum- Seeds are often used as a natural home remedy for hair loss and other related ailments such as: B. Use- Dandruff and dry, itchy crown of the head. Beauty publications and other popular media claim there's a secret to this. Thick, shiny hair will grow.

Botanical name: *Trigonella foenum-graceum* Family – Leguminous

Synonym – Methi, Methika, Alholva, Chandrika. **Biological Source –** It is obtained from the dried seeds to *Trigonella foenum-graecum*.

Chemical constituents- Vitamin B, alkaloids, flavonoids, saponins, etc

Uses – Hair growth stimulant, antibacterial.



Fig 6: HIBISCUS

Hibiscus powder - Stop hair loss. Keeps your hair healthy and shiny. Helps with abnormal graying. Add thicker hair Volume. Treats dandruff. Avoid curling, blanking, and breakage. help with split ends

Botanical name: *Hibiscus Rosa sinensis*

Family – Malvaceae

Synonym – Hibiscus, *Hibiscus mutabilis*, Roselle. **Biological source –** It is obtained from the petals of flower of *Hibiscus Rosa sinensis*.

Chemical constituents – Vit. A, C, amino acids, alpha hydroxyl acids, etc.

Uses – Hair growth stimulator, anti-dandruff, colouring Agents.



Fig 7: CASTOR OIL

Castor oil- Moisturizes and moisturizes hair. Like other natural canvases, castor oil paintings moisturize the skin hair and crown. Healthy and shiny hair. Contains antibacterial and antifungal active ingredients. Rich in vitamin E. Strengthens hair. growth.

Botanical name: Ricinus communis Family – Euphorbiaceae

Synonym - Ricinus oil.

Biological source - Castor oil is the fixed oil obtained by the cold expression of the seeds of Ricinus communis.

Chemical constituents – 80% riconeic acid, fatty acids such as isoricinoleic, linoleic, stearic and isoosteric acids.

Uses – Hair growth stimulator, anti-dandruff, anti- inflammatory, provides required nourishment to hair



Fig 8: VITAMIN E

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

Formulation table-

Ingredient	Plant parts	Quantity%
Citrus sinensis	Pill of fruit	70
Zinziber officinale	Pill of fruit	5
Linum usitatissium	Root	5
Nigella sativa	Seed	8
Trigonella foenum-graceum	Seed	10
Hibiscus	Powder	5
Castor oil	-	0.5
Vitamin E	-	-

Herbal hair serum formulation-

A. Collecting plant parts

Colorful factory items such as citrus sinensis and flax were collected for the production of herbal hair serum. usitatissimum, Nigella sativa, Zingiber officinale, Trigonella foenum-graecum, hibiscus smear paint Medicine Factory Garden, **Samarth Institute of Pharmacy, Ghargav, Shrigonda, Ahmednagar , India. B.**

Formulation:-

Citrus sinensis peel, ginger root, flax seeds, and Nigella sativa, Trigonella foenum-graecum, and Hibiscus- Fettpaint were specifically counted and assigned. 500ml of water.

The relevant contents were boiled for 15 minutes.
After boiling 15 times, let it cool and filter.
Castor oil and vitamin E were added to the filtrate.
I stored the cured serum in a spray bottle.

Physical appearance-

- The physical appearance, colour and feel of the herbal hair serum were visually tested. Test of homogeneity A clean and dry glass slide was smeared with hair serum and the coverslip was sealed. Appearance below in light of some coarse particles/homogeneity was investigated. The herbal hair serum was tested by visual inspection homogeneity and tested for lumps, flakes or aggregates
- PH TEST -The viscosity pH cadence was calibrated using the pH 4 and pH 7 buffer results. the electrode was also wet in the hair of serum and left until the pH normalizes after many drops.
- Viscosity- Density measurements were made using a spindle #6 Brookfield viscometer (RVDV-II PRO). tea cup, Hair serum was placed in 50 ml and the density was measured by color cycles, ie. 10, 20, 50, 100.
- Spreadability- Spreadability was measured using a plate method similar to that commonly used to assess and measure spreadability of half-plants. solid drugs. One gram of hair serum was pressed between two vertical plates measuring 20 × 20 cm, upper which was 125 g. The spread circle was measured after 1 minute.

Prevalence was calculated using the following method the formula ,

$$S = H \times W/D$$

Where S = scattered,

M = weight in the film (relative to the top slide), L = length moved by the glass, and

T = time (in seconds) required for complete separation of slides.

- Solidity -The herbal hair serum was stored for three months at two different temperatures of 4 ± 2 °C and 30 ± 2 °C with a relative humidity of 65 °C. Compared with the original pH and density, the pH and density of the plant hair serum were determined after three months.

II. CONCLUSION

The herbal hair serum has been successfully formulated and was evaluated by trial and error. Produced medicinal plant hair serum provides various critical nutrients which are essential for maintaining healthy hair and scalp condition, according to research and presented results. This contains natural components that help take care of the hair and development. Antioxidant properties of herbs components including orange peel powder, hibiscus powder and vitamin E work mainly by stopping premature graying of hair. Castor, fenugreek and Flax seeds are effective hair growth stimulants. Hibiscus powder can also be used as a dye in that case. Compared to synthetic chemicals the components are not dangerous. Human days are now really interested in herbs. Because of its strength, effectiveness and increasing use in cosmetics, medicinal plants the business has a promising future.

ACKNOWLEDGEMENT

We gave ourselves the opportunity to explore Thankful Honorable Dr.Amol Khedkar Sir, Principal SAIKRUPA institute of Pharmacy, Ghargav .We also thank Ms. Sujata Veer mam#021;an for his guidance and help learning process. In addition, we are grateful to SKIOP College and Department of Botany at ghargav to check the ingredients we need.

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