

A Review on Herbal Hair Serum

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Abstract: *These days, a lot of people have hair issues like dandruff, dullness, premature greying, and hair loss because of stress, pollution, and chemical product use. Hibiscus extract, neem extract, curry leaves, amla, vitamin E, and rosemary water were used to create a herbal hair serum that offered a safe and natural remedy. It is commonly known that hibiscus strengthens roots and encourages the growth of thicker hair. Natural antifungal and antibacterial qualities of neem aid in protecting the scalp and reducing dandruff. While amla nourishes and promotes the general health of the scalp, curry leaves naturally shine hair and delay the onset of graying. Rosemary water promotes new hair growth and enhances blood flow to the scalp. Vitamin E is an antioxidant that keeps oils from going rancid and gives hair more nutrients. These components work together to improve hair development, reduce dandruff, and restore natural shine, making the serum a safe herbal substitute for harsh chemical-based solutions.*

Keywords: Hibiscus Extract, Curry leaves, Rosemary water, Hair serum, rose water

I. INTRODUCTION

Hair is one of the most significant aspects of a person's appearance and has a big impact on their confidence, personality, and sense of self. In addition to being a sign of proper care, thick, glossy hair is also associated with mental and physical wellness. However, a number of hair-related problems, including thinning, split ends, dandruff, dryness, and loss of shine, are common in people's modern lifestyles. Many factors contribute to the prevalence of these issues, including exposure to harsh environmental conditions, stress, pollution, irregular food, hormonal imbalance, and frequent use of chemical-based goods.

Synthetic chemicals used in the majority of commercial hair care products on the market may produce immediate results, but they frequently cause long-term harm to the scalp and hair. As a result, there is an increasing need for natural and herbal formulations that are safe, efficient, and devoid of negative side effects. Customers like herbal remedies because they not only nourish hair but also promote long-term scalp health.

A hair serum is a carefully formulated product that coats the hair and scalp in a protective and nourishing layer. It can help with frizz control, breakage prevention, shine, dandruff reduction, and hair growth stimulation, among other things. When made with herbal extracts, the serum contains vitamins, essential oils, and natural antioxidants that fortify hair follicles and profoundly nourish the roots.

In this study formulates a natural hair serum with Hibiscus extract, Neem extract, Curry leaves, Amla, Vitamin E, and Rosemary water. Each ingredient serves a distinct function: hibiscus stimulates hair growth and density, neem offers antibacterial and antifungal properties to combat dandruff, curry leaves fortify roots and inhibit premature greying, amla supplies vitamin C and antioxidants for nourishment, vitamin E functions as a natural antioxidant that mitigates hair damage, and rosemary water enhances scalp circulation for improved growth. This mixture seeks to deliver three primary advantages: hair growth, natural luster, and anti-dandruff efficacy.

The purpose of developing this serum is to create a safe, natural, and effective alternative to chemical hair products. The formulation blends traditional herbal knowledge with modern cosmetic needs, offering users a reliable solution for maintaining healthy, beautiful, and problem-free hair.

Advantages :



- Made from natural ingredients, safe and gentle on scalp.
- No harsh chemicals, so fewer side effects.
- Promotes hair growth and thickness naturally.
- Helps in reducing dandruff and scalp infections.
- Adds shine and smoothness to hair.
- Rich in vitamins and antioxidants that repair damaged hair.
- Can be used for long-term care without risk of damage.

Classification of Hair Serum:

1. Based on Function:

- **Hair Growth Promoting Serum:** Contains actives like minoxidil, biotin, or herbal extracts (curry leaves, hibiscus, amla) to stimulate hair follicles.
- **Anti-Hair Fall Serum:** Strengthens roots, reduces breakage and shedding.
- **Frizz Control / Hair Smoothing Serum:** Provides shine, manages frizz, and smoothens hair cuticles.

2. Based on composition:

- **Scalp Treatment Serum:** Targets dandruff, itching, or microbial infections.
- Based on Composition:
- **Synthetic Hair Serum:** Contains chemical actives like minoxidil, peptides, or silicones.
- **Herbal Hair Serum:** Enriched with plant extracts like neem, amla, hibiscus, curry leaves, and essential oils.
- **Vitamin-Enriched Serum:** Contains vitamins such as Vitamin E, B-complex, or biotin.

3. Based on Physical Form / Texture:

- **Oil-Based Serum:** Usually contains carrier oils (almond, coconut, argan) for nourishment.
- **Water-Based / Aqueous Serum:** Lightweight, non-greasy, easy absorption.
- **Silicone-Based Serum:** Smoothens hair, protects against heat and environmental damage.

4. Based on Application Target:

- **Root- focussed serum :** Applied on scalp to stimulate follicle activity.
- **Hair Shaft Serum:** Applied along hair length to reduce breakage and improve shine.

Pharmacognosy of drug:

Commonly used drug in herbal hair serum:

Murraya Koenigii:

- **Botanical Name:** Murraya koenigii; Family: Rutaceae.
- **Plant Type:** Small perennial shrub with aromatic, pinnate dark green leaves.
- **Chemical constituents:** Contains alkaloids (mahanimbine), flavonoids (quercetin), carotenoids (beta-carotene), vitamins (A, B, C), minerals, and essential oils.
- **Pharmacological Properties:** Antioxidant, antimicrobial, anti-inflammatory, and hair growth-promoting effects.
- **Hair Care Uses:** Stimulates hair growth, strengthens follicles, prevents hair fall and premature graying.





2. Hibiscus rosa – sinensis :

Botanical Name: Hibiscus rosa-sinensis; Family: Malvaceae.

Plant Type: Evergreen shrub or small tree with bright, colorful flowers.

Parts Used: Leaves, flowers, and sometimes roots.

Phytochemicals:

Flavonoids: Quercetin, Kaempferol

Alkaloids: Hibiscine

Tannins: Strengthen hair and prevent breakage

Vitamin C: Antioxidant properties

Fatty acids: Linoleic acid in leaves and flowers

Pharmacological Properties:

Antioxidant, antimicrobial, anti-inflammatory

Hair growth promotion, prevents hair fall

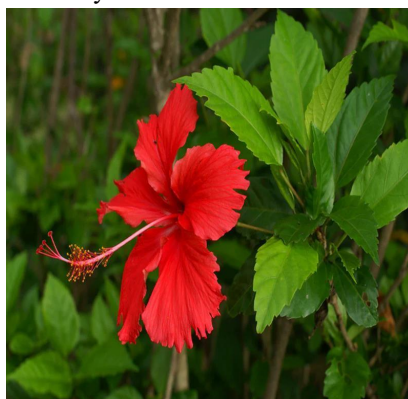
Conditions hair, improves texture and shine

Hair Care Uses:

Strengthens hair roots and prevents hair fall

Delays premature graying

Acts as a natural conditioner for smooth and shiny hair



3. *Azadirachta indica* :

Synonyms: Nimtree, Indian Lilac

Chemical Constituents: Nimbin, Nimbidine, Quercetin, Azadirachtin, Fatty acids (linoleic, oleic), Vitamins A, C, E

Biological Source: Leaves, seeds, bark, oil of *Azadirachta indica* (Meliaceae)

Uses: Antimicrobial, antifungal, anti-inflammatory, antioxidant, prevents hair fall, strengthens follicles, controls dandruff



4. *Phyllanthus emblica* :

Synonyms: Indian Gooseberry, Aonla

Chemical Constituents: Ascorbic acid (Vitamin C), Gallic acid, Ellagic acid, Tannins, Flavonoids (Quercetin, Kaempferol), Phyllembelic acid

Biological Source: Fruit of *Phyllanthus emblica* (Phyllanthaceae)

Uses: Promotes hair growth, prevents hair fall, delays premature graying, strengthens hair follicles, improves hair texture and shine, antioxidant, conditions scalp



5. *Tocopherol* :

Synonyms: Toc Source opherol, Alpha-tocopherol, Tocotrienol

Chemical Constituents: Alpha-tocopherol, Beta-tocopherol, Gamma-tocopherol, Delta-tocopherol



Biological: Vegetable oils (wheat germ, sunflower, soybean), nuts, seeds, green leafy vegetables

Uses: Antioxidant, protects hair follicles from oxidative damage, promotes hair growth, improves hair strength and shine, prevents hair breakage, nourishes scalp



6. Rose water:

Synonyms: Gulab Jal, Rose Hydrosol

Chemical Constituents: Citronellol, Geraniol, Nerol, Phenyl ethyl alcohol, Flavonoids, Tannins

Biological Source: Distilled water from flowers of *Rosa damascena* or *Rosa centifolia* (Rosaceae)

Uses: Soothes scalp, provides mild antimicrobial effect, conditions hair, adds shine, reduces scalp irritation, maintains pH balance of hair and scalp



7. Almond oil :

Synonyms: Sweet Almond Oil, Badam Tail

Chemical Constituents: Oleic acid, Linoleic acid, Palmitic acid, Stearic acid, Vitamin E (Tocopherol), Phytosterols

Biological Source: Cold-pressed oil from seeds of *Prunus amygdalus* or *Prunus dulcis* (Rosaceae)

Uses: Moisturizes and nourishes hair, strengthens hair roots, prevents breakage, adds shine and smoothness, improves scalp health, protects hair from environmental damage





II. CONCLUSION

The formulated hair serum, offers a secure and efficient hair care solution enhanced with organic components such as hibiscus, curry leaves, rosemary, neem, amla, and vitamin E. By stimulating hair follicles, encouraging hair growth, reducing hair loss, postponing premature graying, and enhancing scalp health, each substance makes a distinct contribution. To make sure the serum is safe, effective, and aesthetically pleasing, it was assessed for a number of factors, including appearance, pH, viscosity, spreadability, stability, odor, scalp safety, conditioning effect, and microbiological load. In addition to improving the texture, softness, and gloss of hair, the use of vitamin E and herbal extracts provides antibacterial and antioxidant protection. All things considered, this hair serum is a useful supplement to regular hair care regimens since it shows how natural and scientifically validated ingredients may be combined to maintain strong, healthy, and glossy hair.

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