

# Review On An Updated Review on *Murraya Koenigii* (Curry Leaves) and *Azadirachta Indica* (Neem)

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**Abstract:** Stress, pollution, and overuse of chemical-based hair products are the main causes of hair issues like dandruff, hair loss, and scalp infections. The current study employs curry leaves (*Murraya koenigii*) and neem (*Azadirachta indica*) extract to formulate and test a natural hair serum. Strong antibacterial, antifungal, and anti-inflammatory qualities found in neem aid in preserving the health of the scalp and avoiding dandruff. Antioxidants, amino acids, and other vital elements found in curry leaves fortify hair roots, encourage hair growth, and delay the onset of graying. The extracts were made with the right solvents and added to a serum base with essential oils and natural stabilizers. A number of criteria, including pH, viscosity, spreadability, stability, and antibacterial activity, were assessed for the prepared serum. According to the results, the serum was appropriate for routine hair care use because it had a pleasing look, decent consistency, and potent antibacterial qualities. According to the study's findings, a herbal hair serum that contains extracts from curry leaves and neem can be a safe, efficient, and environmentally responsible substitute for synthetic hair care products, supporting healthy hair and scalp without having any negative side effects...

**Keywords:** Anti Dandruff, Hair growth

## I. INTRODUCTION

Herbal Serum products are more popular and used to treat a variety of hair conditions. They encourage hair development, enhance hair style, and prevent hair loss. In addition to encouraging hair growth, toiletries give the scalp the moisture it needs to produce gorgeous hair. Lipid levels are maintained by hair tonics. Hair grease is one of the many cosmetics that are available now to address these issues. Individuals are born with over 100,000 terminal hair follicles on their scalp, which are destined to produce dense, long hair.

### Classification of Herbal Serum:

**Based on Purpose:** Hair Serum – For hair growth, smoothness, and dandruff control.

Skin Serum – For anti-aging, hydration, and brightening.

### Based on Main Ingredients:

Single Herb Serum – Contains one main herbal extract (e.g., Neem serum).

Polyherbal Serum – Contains multiple herbal extracts (e.g., Neem + Curry leaves).

### Based on Base Type:

Water-based Serum – Light and non-greasy.

Oil-based Serum – Nourishing and moisturizing.

### Based on Function:

Nourishing Serum

Repairing Serum Protective Serum



**History:**

**Curry leaves:**

Carl Linnaeus originally described *Bergera koenigii*, a tree in the citrus family Rutaceae, in 1767. It is sometimes referred to as curry tree, curry bush, or delicious neem. It is indigenous to mainland Southeast Asia, southern China, and the Indian subcontinent. It has also been brought to Australia and other parts of Southeast Asia. In Bangladesh, Sri Lanka, and India, its leaves are utilized in a variety of culinary preparations.

**Neem:**

The fabled Indian medicinal tree, neem, has flourished alongside human settlement throughout the nation and has long been an essential component of Indian culture. The history of Indian civilization is closely intertwined with the history of the Neem tree. The Indian peasants have long regarded the neem tree as a friend and protector. Indians have long relied on this tree to improve their health and treat a wide range of illnesses. It has also been utilized as a natural insecticide and fertilizer for fields, as well as for the preservation of food and grains. Compared to other trees, it has been utilized for a much greater variety of purposes!

**Pharmacognosy :**

**Neem : :**

**1. Neem :**

**Biological Source:** Neem consists of the dried or fresh leaves, bark, seeds, and oil obtained from *Azadirachta indica* A. Juss., belonging to the family Meliaceae.

**Synonyms:** Margosa tree, Indian Lilac

**Geographical Source:** Neem is native to India and widely distributed in tropical and subtropical regions of Asia, Africa, and the Middle East.

**Chemical Constituents:**

Azadirachtin

Nimbin

Nimbidin

Nimbolide

Flavonoids, Tannins

Fatty acids (Oleic, Linoleic, Stearic)

**Pharmacological Actions:**

Antimicrobial

Anti-inflammatory

Hair growth promoting

Antioxidant

Cleansing and detoxifying





## 2. Curry leaves:

**Biological Source:** Curry leaves consist of the fresh or dried leaves of *Murraya koenigii* Linn., belonging to the family Rutaceae.

**Synonyms:** Curry leaf tree, Meetha neem (Hindi), Karipatta (Marathi)

**Geographical Source:** Widely grown in India, Sri Lanka, and Southeast Asia. Cultivated in tropical and subtropical regions.

### Chemical Constituents :

Alkaloids: Mahanimbine, girinimbine, koenimbine

Carbazole alkaloids: Murrayanine, mahanine

Volatile oil: Containing  $\beta$ -caryophyllene,  $\alpha$ -pinene, sabinene, linalool

Flavonoids: Quercetin, kaempferol

Vitamins & Minerals: Vitamin A, calcium, iron

Other: Tannins, carbohydrates, glycosides

### Pharmacological Actions :

Antioxidant

Antidiabetic

Antimicrobial

Hepatoprotective

Anti-inflammatory

Anticancer

Cardioprotective

Hair growth promoting Uses



**Uses :**

Used traditionally in Ayurveda for treating dysentery, nausea, diabetes, and hair loss.

Commonly used as a spice and flavoring agent in Indian cuisine.

Curry leaf extract and oil are used in hair tonics and serums for promoting hair growth and preventing greying.



**Benefits of Neem and Curry Leaves in Hair Serum :**

1. Prevents hair fall by strengthening hair follicles.
2. Promotes healthy hair growth through improved scalp nutrition.
3. Reduces dandruff and scalp infections due to antimicrobial properties.
4. Prevents premature graying with antioxidant action.
5. Soothes itchy and irritated scalp.
6. Improves hair texture, making it soft, smooth, and shiny.
7. Rich in vitamins and nutrients (A, B, C, E) for follicle health.
8. Protects and nourishes hair from environmental damage.
9. Enhances overall scalp and hair health, promoting stronger, healthier strands.

**Advantages :**

1. Reduces hair fall by strengthening follicles.
2. Promotes hair growth and improves scalp health.
3. Prevents dandruff and scalp infections due to antimicrobial properties.
4. Prevents premature graying with antioxidant effects.
5. Conditions hair, making it soft, smooth, and shiny.
6. Nourishes follicles with essential vitamins and nutrients.
7. Soothes scalp irritation and reduces itching.

**Properties of Hair Serum**

**Lightweight and Non-Greasy** – easily spreads and absorbs without leaving residue.

**Smooth Texture** – provides silkiness and soft feel to hair.

**Protective Film Formation** – coats hair shaft to prevent damage from heat, chemicals, and environment.





**Moisturizing**– helps retain hair moisture and prevents dryness.

**Frizz Control** – reduces tangling and manages flyaways.

**Nourishing** – delivers vitamins, nutrients, or actives to hair and scalp.

**Shine Enhancement** – makes hair glossy and healthy-looking.

**Easy Application** – typically leave-on and convenient for daily use.

## II. CONCLUSION

The evaluation tests confirmed that the hair serum had a proper pH, good spreadability, pleasant appearance, and was free from microbial contamination. The prepared hair serum can be considered a natural, cost-effective, and efficient alternative to chemical-based hair care products. The formulation of the hair serum using natural ingredients like curry leaves and neem extract was found to be stable, safe, and effective for hair care. The active herbal ingredients aid in promoting hair growth, preventing dandruff, and reducing hair loss.

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