

# Herbal Hair Oil: A Review for Prevention of Hair Growth Activity.

**Nikam P. R., Bankar Shilpa.V, Sonawane Ruchita S.**

Rashtriya College of Pharmacy, Kannad, Chh. Sambhajinagar.

**Abstract:** Herbal hair oil has gained increasing recognition as natural, effective, and safe alternatives to chemical-based hair care products. This study focused on the formulation. Studies on formulation show that herbal hair oils usually have a good pH, viscosity, stability, and a lot of activity that promotes hair growth without causing too many problems. Although minor disadvantages like greasiness or irritation may occur, herbal oils are largely safe and eco-friendly. The study concludes that herbal hair oil offer a promising natural approach for maintaining healthy hair and preventing damage, providing an effective alternative to synthetic formulation. According to the study, herbal hair oils present a viable natural alternative to synthetic formulation for maintaining healthy hair and reducing damage. Many of the medicinal plants, such as hibiscus, curry leaves, fenugreek, neem, tulsi, coconut oil, shikakai, almond oil, and onion which as tremendous benefits with their results. Flavonoids, phenolics, vitamins, minerals, essential oils, and amino acids are among the many bioactive ingredients established in these plants that nourish the scalp, strengthen hair follicles, reduce dandruff, stop hair loss, and promote hair growth. The overview covers common problems associated with the hair, the structure and growth phases of hair, and how herbal compound to address problems such as dryness, dandruff, thinning, breaking, and scalp irritation.

**Keywords:** Herbal hair oil, greasiness, Flavonoids, Scalp irritation

## I. INTRODUCTION

Herbal & herbal drugs are clinically proved good for hair growth .An herbal cosmetic has a growing demand in the world and in a coconut oil base .The main objective of this work is to develop an herbal hair oil formulation that can resolve the problems related to hair fall & other hair problems .Hair are vital role in personality of human and we use a lots of cosmetic product for the care of hair.

The study aims reviewing the problem such as hair fall, hair dryness, dandruff etc. various herbal ingredients are used in herbal hair oil formulation; they provide essential nutrients such as vitamins, antioxidants.(1)Herbal cosmeceuticals for hair care utilized natural ingredients from plants, herbs and species to promote healthy hair and scalp. Hair oil is hair care product.

(2) Hair is a protein hair that grows from follicles set up in the dermis.

Herbal hair oil are formulated with natural ingredients know for their ability to Strengthen hair roots.oil such as hibiscus ,amla,and shikakai contain compound that reinforce hair strands and reduce breakage .Regular application can lead to thicker ,more resilient hair over time .Hair oil containing herbal drugs are usually called as hair tonic. (13)Hair care products are categorized into two main categories, hair tonics and hair grooming aids .These are basically the extracts of medicinal plants in an oil base .herbal cosmetics are more effective in demand because of increasing hobby of mankind closer to them additionally nature cosmetics are more effective with negligible facet consequence and components are without problems to be had. (3)

Herbal formulation have always attracted considerable attention because of their good activity and comparatively lesser or nil side effects as compared to synthetic drug .( 14) In India herbal medicines are the principal form of medicines . In India around 6000 manufactures for herbal medicines are available .According to WHO around 80% people of the world uses herbal medicines .(15) Hair oil are the cosmetics products which are applied on hair which promotes the



Luxurious hair growth, treatment of baldness, aggression of hair. Hair oil containing herbal drug are usually called as hair tonic. (24) We used vegetable hair oil for the hair treatment

.Herbal hair oil not only moisture the scalp, but also restore dry scalp and dry hair. (27) In traditional Indian system of medicine many plants and herbal formulation are reported for hair growth promotion as well as improvement of quality of hair. (21)

History. The use of herbal hair oil is deeply rooted in ancient traditions, with origins tracing back over 5,000 years to the Indian sciences of Ayurveda. The definitive Ayurvedic text, the Charka Samhita, emphasizes the importance of Oiling the hair and scalp daily to maintain hair health and prevent hair loss. This practice, known as Sneha (Sanskrit for “to oil” or “to love”), has been a Staple in hair care routines across various culture and continues to be popular today due to a growing global preference for natural and organic personal care solution.

#### **HERBAL HAIR OIL: BENEFITS.**

- Reduce Hair Fall. Hair fall can be a distressing issue for many (4)
- Enhance Hair shine.
- Promotes Healthy Hair Growth.
- Stress relief.
- Prevents dandruff.
- It is used for longer and stronger hair.
- It is used to preservation of hair colour.
- It maintaining hair health.
- Hair oil helps prevent hair loss and reduce frizz. The ends of the hair need special care, and vegetables oil pampers them throughout the diet.
- It gives natural beauty to the hair.
- It keep scalp moist.
- It maintaining hair health.
- Regular uses of hair oil cure the problem of premature grey hair.
- Potential to stimulate hair growth or prevent hair loss.
- Relaxation and wellness from massage and aromatherapy.
- Protection from surfactants and heat damage from styling.

#### **IDEAL CHAEACTERISTICS OF HAIR (4)**

- It improves hair texture.
- It protects form damage hair.
- It should provide moisturizing to hairs.
- It should provide nourishment to hairs.
- Appropriate consistency.
- Scalp Health support.

#### **PROBLEMS RELATED TO HAIR (6):**

- Oily hair
- Dandruff
- Dry hair
- Hair loss
- Dull hair
- Breakage
- Hair thinning



- Scalp irritation
- Nutritional deficiencies
- Frizzy hair

#### **CAUSES OF HAIR PROBLEMS.**

- Genetic and hormones: Predisposition to issues like pattern baldness' can be inherited, and hormonal changes (e.g., from pregnancy or menopause) can cause hair loss.
- Lifestyle and environment: Poor nutrition, stress, pollution, sun exposure, and lack of moisture can all negatively impact hair health.
- Styling habits : Excessive heat styling ,harsh chemical treatment ( like perms and Colouring) .and tight hairstyles that pull on the hair can all cause damage.

#### **Ingredient of drug and Role.**

S.N	Ingredient	Importance/Role
1.	HIBISCUS	Both the flowers and leaves are used to promote hair growth and prevent hair fall.
2.	CURRY LEAVES	Help prevent hair growing, strengthen hair, and stimulate hair growth.
3.	FENUGREEK (METHI)	Contains iron and protein essential for hair growth, and its anti –inflammatory properties soothe the scalp.
4.	COCONUT OIL	A popular base that helps nourishes and strengthens hair.
5.	NEEM	Possesses antibacterial and antifungal properties, ideal for maintaining healthy scalp and preventing dandruff.
6.	TULSI (HOLY BASIL)	Adds antifungal and antiseptic qualities for a healthy scalp.
7.	ONION	Sometimes include for its sulphur content, which is beneficial for hair growth.
8.	ALMOND OIL	Rich in vitamins and nutrients, promoting hair health.
9.	SHIKAKAI	Fighting dandruff, and strengthening hair, reduce hair fall and improve shine.

Table 1: Ingredient of drug and Role.

#### **ADVANTAGES OF HERBAL OIL (5)**

##### **Contain natural ingredient:**

Herbal oils derive their benefits directly from plants, which can be rich in vitamins, antioxidants, and anti – inflammatory properties.

##### **Gentle on skin and hair:**

Many users with sensitive skin or allergic find herbal oil to be gentler alternative to chemical- Based products for hair care , they can nourish the scalp ,reduce dandruff .

##### **Eco-friendly:**

Herbal products are generally made with biodegradable ingredients, making them a more environmentally friendly and sustainable choice than products with synthetic chemicals.

#### **DISADVANTAGES**

- Greasy Build-up: Overuse of oils can lead to greasy scalp, which may not be ideal for all hair types.
- Scalp Irritation: Some individuals may experience irritation or allergic reaction when using oils on their scalp.



- Weighty for Fine Hair: oils can weigh down fine hair, making it appear flat and greasy rather than voluminous.
- Not a cure for Hair Loss .While oils can help manage symptoms, they are not a cure for hair loss and should not be relied upon as a sole treatment.
- Dust and Dandruff Trap: Excess oil can attract dust and worsen dandruff in some cases.

## **COMPOSITION OF HERBAL HAIR OIL.**

### **1. HIBISCUS.**

Synonyms: Jaswand, Rose Mallow, tropical Hibiscus.

Biological Source: Hibiscus derived from flowers, leaves and stem of hibiscus *Rosa sinensis*.

Chemical Constituents: Flavonoids, anthocyanin's, and phenolic compound, tannins, terpenoids, alkaloids, Carbohydrates, Vitamins, Minerals, protein and Amino acids . Organic acids.



Fig.1: Hibiscus Flowers.

Scientific classification:

Kingdom	Plantae
Family	Rutaceae
Genus	Murraya
Species	M. Koenigii

Plant parts used: The hibiscus flowers and its leaves are used to make herbal hair oil.

### **Uses:**

1. Improve scalp health by providing vitamins, amino acids, and antioxidants.
2. Prevent premature greying.
3. Prevent hair fall and breakage.
4. Prevent dandruff.

### **2. CURRY LEAVES.**

Synonyms – Murray koenigii, kadi patta mitha neem.

Biological source – it is obtained from leaves of the plant of Murray a koenigii.

Chemical Constituents : Alpha terpene, elemol, alpha terpanned ,flavonoids , phenolics, vitamin , carbohydrates , carotenoids, carbazole alkaloids, murrayanine essential oil.





Fig.2: Curry leaves.

Scientific classification

Kingdom	Plantae
Family	Malvaceae
Genus	Hibiscus
Species	China rose or tropical hibiscus

Plant part used: The leaves of curry leaf plant are the used to make herbal hair oil.

#### Uses.

1. Improve hair growth.
2. Prevent hair fall.
3. Treat dry scalp.
4. Adds shine and softness.

### 3. FENUGREEK.

Synonyms. –Mathi, Trigonella foenum-gaecum and Gerrk clover

Biological source - Fenugreek is the dried seeds of the plant trigonella foenum -graecum. (8)

Chemical Constituents: Steroidal Saponins like dysgenic, alkaloids, Protein and dietary fibre, Flavonoids, amino acids like 4-hydroxyisoleucine, fixed oils, vitamins and minerals.



Fig.3: Fenugreek seeds.

Scientific classification.

Kingdom	Plantae.
Family	Fabaceae.
Genus	Trigonella.
Species	Trigonella foenum- graecum.

Plant part used: The seeds of fenugreek plant are the part most commonly used for making herbal hair oil.

#### Uses.

1. Antimicrobial dandruff treatment
2. Revives damaged hair and induces hair growth.



3. Support healthy scalp.
4. Strengthens hair and adds shine.
5. Prevents premature greying of hair.

#### 4. NEEM.

Synonyms – Margosa tree. *Azadirachta indica*, Neem

Biological source – Neem consist of fresh and dried leaves of *Azadirachta indica*.

Chemical Constituents: Triterpenoids like azadirachtin

and gedunin, polyphenols' such as quercetin and nimboesterol ,and various limonoids and flavonoids ,amino acids .



Fig.4: Neem leaves.

Scientific classification:

Kingdom	Plantae.
Family	Meliaceae.
Genus	<i>Azadirachta</i> .
Species	<i>A .indica</i> .

Plant part used: The leaves of Neem are the plant are particularly common source for extract and oil.

#### Uses.

- 1 Cleanness and strengthens hair follicles.
2. Increased blood circulation in your scalp gives you stronger
3. Fights dandruff
4. Promotes thicker, stronger hair growth.
5. Cooling and soothing effect.
6. Cure scalp problems

#### 5. TULSI (BASIL HOLY)

Synonyms: Holy basil, Indian basil, Tulsi, Krishna tulsi. Biological source: Tulsi is the fresh and dried leaves of plants.



Fig.5: Tulsi leaves.

Chemical Constituents: Essential oil, like eugenol, methyl eugenol, vitamin (A and C), minerals ,(iron ,calcium ,zinc), rosmarinic acid .



Scientific classification:

Kingdom	Plantae.
Family	Lamiaceae.
Genus	Ocimum.
Species	O. tenuiflorum.

Plant part used: The Plant tulsi used in hair oil is the tulsi leaves. Which are used to create an oil or past that mixed into oil?

#### Uses

1. Strengthening the hair roots .
2. Tulsi leaves prevent bacterial and fungal infection.
3. Hair loss treatment.
4. Coagent remedy for hair loss.
5. The plant of tulsi has many medicinal properties.

#### 6. COCONUT OIL.

Synonyms : Coco ,coconut palm. Coconut fatty acid Biological source : The oil extracted from the dried krenel (copra ) of the mature coconut palm *cocos nuci fera*.

Chemical constituents : Oleic acid ,linoleic acid, plmitic acid, myristic acid ,lauric acid.(8)



Fig.6: Coconut oil.

Scientific Classification

Kingdom	Plantae.
Family	Arecaceae.
Genus	Cocos.
Species	C. nucifera.

Plant part used: The dried kernel (copra) or the meat of the fresh coconut is used for extraction.

#### Uses:

1. Masks hair look shiner.
2. Moisturizes hair.
3. Seal hair
4. Improving hair strength.

#### 7. SHIKAKAI .

Synonyms : Sop pod , Soapnut acacia ,Saptala, Ritha .

Biological source: Shikakai is the dried pods of the *Acacia concinna* plant.

Chemical Constituents : Tannins ,and flavonoids, vitamins(A,C,D,E,K), and minerals .





Fig.7: shikakai pod.

Scientific classification:

Kingdom	Plantae.
Family	Leguminosae, Fabaceae.
Genus	Acacia or Senegalia .
Species	Concinna.

Plant part used : The pods ,leaves ,and bark of the Shikakai plant are used to make herbal hair oil.

#### Uses.

1. Shikakai is used for promotes faster hair growth.
2. Control hair fall .
3. Cleans scalp without affecting the natural pH.
4. Slow down premature graying of hair .
5. Treat dandruff and reduces white flakes .
6. Works as natural hair cleaner.
7. Boots hair growth.
8. Make hair soft and shiny.

#### 8. ALMOND OIL.

Synonyms: Prunes Amygdalus Dulcis .

Biological source: Almond oil comes from the seeds of the almond tree, Prunes Amygdalus.

Chemical constituents: Almond oil contain a blend of glycerides, Oleic acid (monounsaturated fatty acid) 62% to 86

17% to 30%, Plasmatic acid (Saturated fatty acid) 4 % to 9%.



Fig.8:Almond.oil

Scientific classification.

Kingdom	Plantae.
Family	Rosaceae.
Genus	Prunus.
Species	P .dulcis



Plant part used: The plant of Almond oil derived from the almond tree, *Prunus dulcis*.

**Used.**

1. Soothe dry scalp.
2. Almond oil is used for hair to moisture.
3. Promote Shine due to its richness in vitamin.
4. Repair Hair damage.
5. A daily Serum.
6. Antioxidants properties.

**9. ONION.**

Synonyms: *Allium cepa*, Onion, *allium ascalonicum*, Japanese leek.

Biological source: It obtained from bulb of the plant *Allium ascalonicum*.

Chemical Constituents: Sulphurous compounds, allicine quercetin, Thiosulfates, flavonoids (quercetin), polysaccharides.



Fig.9: Onion oil.

Scientific classification.

Kingdom	Plantae.
Family	Amaryllidaceae.
Genus	<i>Allium</i> .
Species	<i>A .Cepa</i> .

Plant part used : The bulbs of the onion plant are used to make herbal hair oil .

**Used :**

1. Fight hair scalp.
2. Slow down premature greying.
3. Nourishes dry or brittle hair .
4. Treats dandruff. 5. Inhibiting hair thinning.
6. Adds shine .
7. Combats hair loss.
8. Improve hair texture and health.



## STRUCTURE OF HAIR

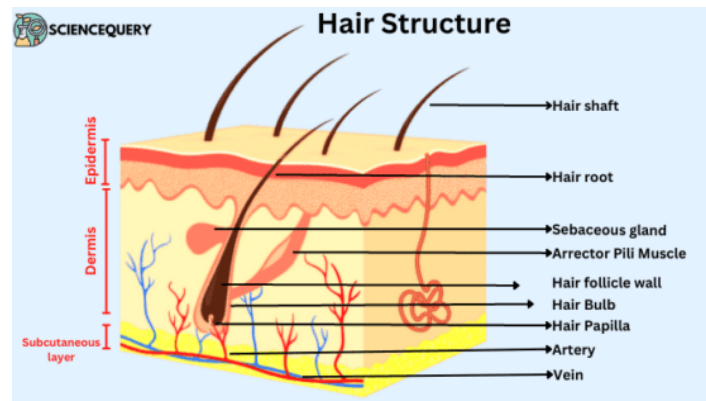


Fig.10: Structure of hair.

## COMPONENTS OF HAIR STRUCTURE

A. Hair Shaft: The visible part of the hair that extends above the skin. It is made of dead, keratinized cells and consists of three main layers:

1. Cuticle: The outermost layer, composed of overlapping scale-like cells that protect the inner layers. (17)
2. Cortex: The thickest layer, containing keratin fibers that provide strength, elasticity, and texture. This layer also houses melanin, which gives hair its color. (17)
3. Medulla: The innermost layer, which may be present in some hair types and is made of loosely packed cells. (16)
4. Hair Root: The part of the hair embedded within the skin, specifically in the hair follicle. The root contains living cells that are actively dividing and responsible for hair growth. At the base of the root is the hair bulb, which surrounds the dermal papilla, providing nourishment to the growing hair.
5. Hair Follicle: A small, tubular structure in the skin from which the hair grows. It plays a crucial role in the hair growth cycle and is surrounded by sebaceous glands that produce oils to keep hair healthy.

## Hair Growth Cycle



Fig.11: Hair Growth cycle.

Hair growth occurs in cycles, which include three main phases:

**Anagen Phase :** The active growth phase, where hair follicles produce new hair cells. This phase can last several years. (18)

**Catagen Phase :** A transitional phase where hair growth slows and the follicle shrinks. This phase lasts a few weeks.

**Telogen Phase :** The resting phase, where hair is shed and the follicle remains inactive for a period before starting a new growth cycle.



## **TYPES OF HAIR**

There are main types of hair on the human body :

- Vellus Hair : Fine, short, and light-colored hair that covers most of the body.
- Terminal Hair : Thicker, longer, and darker hair found on the scalp, eyebrows,

And other areas. Understanding the structure of hair is essential for various application Including hair care, styling, and addressing hair loss.

Each component Plays a significant role in the overall health and appearance of hair.

## **HAIR PROBLEM**

Some common hair problems are :-

1. Hair Loss : Hair loss is a miserable condition for a men and women. Each and every strand of hair is genetically designed to a cycle that includes growth, stabilization, aging and shedding. Hair loss can occur due to many reasons like genetice, hormonal changes, nutritional deficiencies, stress, or certain medical conditions
2. Dry Hair : Shampooing is one of the reason of dry hair. Use of hydrating and Nourishing ingredients in hair care routine, such as moisturicconditioning treatments, serums or oils and limiting heat styling can help to reduce dryness.
3. Dandruff : Dandruff is the commom problem among 50% of the population of world. (20) It is caused by dry skin, excessive oil production and overgrowth of yeast like fungus called *Malassezia restricta* and *Globosa malassezia* formerly called *Pityrosporum* causing infection of skins and scalp. (19)
- (A ) Dry dandruff : Dry dandruff is aslo known as pityriasis simplex capillitii, which is a common scalp condition caused by the shedding of small, dry flakes of skin. Excessively dry scalp triggers the skin cells to flake off, result in visible presence of dry dandruff. (20)
- (B) Oily dandruff : Oily dandruff is also known as seborrheic dermatitis which is a scalp condition caused due to overproduction of sebum, an oily substance. This results in excessive shedding of skin cell and forming oily flakes. Regular cleansing and a proper balanced can protect from oily dandrff.
4. Split Ends : Split ends is a common hair problem occurs due to fraying or splitting of hair strands which cause due to damage of outer layer of hair called cuticle. It can be prevented by regularly trimming hair, use heat protectants, gentle drying wide-tooth comb, deep conditioning and balanced diet.
5. Frizz : Frizzy hair occur when the hair cuticle lift and allow moisture to enter which result in a rough and unmangeable texture. It can be manged by adopting a proper hair care routine. Application of Leave-in conditioners, serums, or oils provide an extra layer of hydration and smooth the hair cuticle .
6. Oily scalp : Oily scalp caused due to production of excessive amount of natural oil called sebum. Other causes of oily scalp are hormonal changes, genetics, use of harsh hair products, frequent washing of hair (which can stimulate oil production) and certain conditions like seborrheic dermatitis.
7. Thinning hair : Thinning of hair refers to decrease in density or diameter of strands which lead to decrease in volume of hair. It cause due to different factors like genetics, hormonal changes, ageing, nutritional deficienices, certain medical conditions, or excessive styling and use of harsh hair products.
8. Hair breakage : Hair breakage is one of the common problem among many individuals. Some causes of hair breakage is excessive heat stying, chemical tratments (such as hair coloring, bleaching, or perming), environmental factors like harsh weather conditions or pollutants, nutrient deficiencies and insufficient moisture i.e, dry and brittle hair faces more breakage.
9. Scalp irritation : Scalp irritation is the feeling of discomfort, itching, or senitivity on the scalp which come with redness or inflammation. Dry skin, allergies and harmful hair products are the main resin of scalp irritation. Management of scalp irritation include reguar wasing of hair, avoiding of chemical treatments, proper hair care routine and hygiene
10. Color damahed hair : Color-damaged hair cause by processes like dyeing, bleahing, or using chemical contaning hair stying produts. Outermost layer of hair called cuticle act as a protective layer which on colouring hair allow dye to penetrate the cortex. Frequent colouring make cuticle weak which result in damage of hair. Use of harmful hair color should be reduce to prevent hair from damage.



### **TYPES OF HERBAL HAIR OIL.**

- 1) Nourishing hair oil Promotes hair strength, softness, and shine .
  - Example : Coconut oil with herbs like Amla , Bhringraj .
  - Your oil fits here – strengthens roots and nourishes scalp.
- 2) Anti-hair fall Hair OIL.
  - Targets hair loss, promotes regrowth.
  - Herbs like Bhringraj, Fenugreek, Amla help reduce hair fall.
  - Your oil also fits here- due to these ingredients.
- 3) Medicated Hair Oil
  - Contains herbs with therapeutic actions (antibacterial, antifungal, anti-inflammatory).
  - Used for treating dandruff, itching, infections.
  - Camphor gives your oil cooling and antimicrobial properties.
  - Your oil qualifies here as well.
- 4) Cooling Hair Oil
  - Soothes scalp and relieves stress.
  - Camphor contributes to this effect.
  - Your oil has mild cooling properties.
- 5) Hair Growth Oil
  - Specifically targets new hair growth.
  - Bhringraj and Castor oil are known for stimulating hair follicles.
  - Your oil supports this function Similarity: 29%
  - powerful Ayurvedic Ingredients For Healthy, Luscious
  - Hair Precautions for Herbal Hair Oil

### **Preventives for Herbal Hair oil painting**

1. For external use only – Do not ingest the oil painting.
2. Patch test recommended – Apply a small quantity behind the ear or on the inner elbow to check for any allergic response before full use.
3. Avoid contact with eyes – In case of contact, wash completely with water.
4. Store in a cool, dry place – Keep away from direct sun to save the energy of herbal constituents.
5. Keep out of reach of children – To help accidental ingestion or abuse.
6. Use with clean hands – Always use clean, dry hands or an applicator to avoid impurity.
7. Discontinue use if irritation occurs – Seek medical advice if redness, itching, or rash appears.

### **Herbal Hair Oil.**

Herbal hair oil is a formulation designed to moisturize and nourish the hair follicles and scalp and solve other hair problems. It is a liquid formulation which prevents balding and promotes thick hair growth. Hair oil should be applied regularly by spray on scalp. Commonly used ingredients like hibiscus, fenugreek, curry leaves, and tulsi are found in these formulations and provide a variety of benefits. Herbal hair oil is a natural hair care product, often rooted in Ayurvedic tradition that uses a blend of plant extracts and carrier oils to nourish the scalp, strengthen hair, and address various concerns like hair fall and dandruff. It offers a chemical-free alternative to many commercial products.



## MARKETED PREPARATION OF HERBAL HAIR OIL.



Fig.1: Navratna hrebal oil



Fig.2: Adivasi herbal hair oil.



Fig.3:Kesh king herbal hair oil.



Fig.4: Ayurvedic herbal hair oil.

## RISK AND SIDE EFFECT OF HERBAL HAIR OIL.

1. Hair oil can cause side effect like greasy hair ,dirt build –up, clogged pores ,and worsened dandruff or acne, especially if over –applied or left on for too long.
2. Excessive use can also weaken hair and scalp health ,leading ti irritation ,itching ,and potentially more haie loss.

## SIDES EFFECTS .

- 1) Allergic reaction .
- 2) Scalp irritation .
- 3) Sun sensitivity .
- 4) Dandruff and acne .
- 5) Hair texture change .
- 6) Staining .
- 7) Potential systemic effect .



## II. CONCLUSION

One of the most well known hair treatments is herbal hair oil. Herbal hair oil not only hydrates the scalp, but also helps to heat dry scalp and hair. It contains various vital nutrients that support regular sebaceous gland activity and encourage natural hair growth. In this study, dried portions of *Murray koenigii*, *Hibiscus rosa-sinensis* Linn, *Nigella sativa*, and *Trigonella foenum-graecum* were made into herbal hair oil and evaluated for their potential as an effective topical formulation for hair growth –promoting action. The results showed that herbal hair oil exhibited good pH, acceptable viscosity, and was stable at room temperature. Furthermore, the animal investigation revealed that the herbal hair oil created has a promising effect on hair growth stimulation with no negative side effect. As a result, it is a clear option for future formulation. Overall, herbal oils that are formulated provide a lot of nutritious food. Hair values such as vitamins, minerals, and essential oils. Finished products are within the limits. In conclusion, oil is useful to prevent hair from damage and loss caused by pollution and dull hair. And provide an alternative source from hazardous chemical. Incorporating herbal hair oils into your hair care routine can lead to healthier, stronger, and more beautiful hair. By choosing oils that suit your specific hair type and needs, you can enjoy the holistic benefits of these natural remedies. Regular use not only nourishes and strength and strengthens hair but also promotes a healthy scalp environment conducive to hair growth.

## REFERENCES

- [1]. Pushpendra Kumar Jain, Debjyoti Das, Puneet Jain. Evaluating Hair Growth Activity of Herbal Hair oil, CODEN (USA): IJPRIF, ISSN: 0974-4304, Vol. 9, no. 3, pp 321-327, 2016.
- [2]. Dhanashree V. Darade, Vaibhav P. Gote, Swati P. Deshmukh and Neha Y. Bansod. A review on formulation and evaluation of herbal hair oil, CODEN (USA) GBPSC2 EISSN: 2581-3250 accepted on 24 November 2023.
- [3]. Sandip C, Rushikesh B, Piyush B, Mayur B, Rutuja D, Vijayraj S and Ganesh. Formulation and Evaluation of herbal Hair oil, ISSN: 2574-7797, Received: January 19, 2024. Published date February 28, 2024.
- [4]. Suman, K.G., Kumar, B., & Mukopadhyay, S. (2022). Herbal hair oil: A review. International Journal of Health Sciences, 6(S2), 13449-13465.
- [5]. Gitanjali Kordel, Tanuja Pagare, Nikhil Jadhav, Formulation and Revolution of Herbal Hair oil, 2024 IJNRD Volume 9 issue 6 June 2024 ISSN 2456-4184.
- [6]. Sanal Kiran Sadanand, Sonawane Sonali S., Rode Abhijit R., Herbal Hair Care Cosmetic: A review. International Journal For Multidisciplinary Research. 2023; 5(3): 1- 20.
- [7]. Gupta Amit, Malviya Rishabh, Singh Tej Prakash, Sharma Pramod Kumar. Indian Medicinal Plants used in Hair care Cosmetics: A Short Review. Pharmacognosy Journal. 2010; 2: 361-364.
- [8]. Yadav N., Yadav R., Arya A. (2016) –Preparation and evaluation of poly herbal hair oil. The Pharma Innovation Journal, 5(3): 70-74.
- [9]. Hamisha, Diksha, Kumar, Kumar Rajesh, Gupta Rajesh. Review article: virgin coconut oil based herbal hair tonic. International Journal of Novel Research and Development. 2023; 8: 472-476. ISSN: 2456-4184.
- [10]. Lopamudra Sethi, Preetha Bhadra, A review paper on tulsi Plant, International Journal of Natural Science, Vol 10/ ISSUE 60/JUNE/2020, ISSN: 0976-0997.
- [11]. Siddhi S. Jadhav, Kajal S. Jadhav, Yogita V. Dalvi, Formulation and Evaluation of Herbal Liquid Shampoo, Research J. Topical and Cosmetic Sci. 9(2): July /Dec. 2018.
- [12]. Sunil Pareek, Narashans Alok Sagar, Sunil Sharma, Vinay Kumar, Onion (*Allium cepa* L.) Sept 2017.
- [13]. Pooja S. Banerjee, Megha Sharma, Rajesh Kumar Nema. Preparation, evaluation and hair growth stimulating activity of herbal hair oil. Journal of Chemical and Pharmaceutical Research, 2009, 1(1): 261-267.
- [14]. Akaram Ahmad, Vikas Kumar, G. P. Mohanta and Hasna Ali. Preparation and Evaluation Antioxidant Activity Of Mixed Herbal Hair Oil Formulation. (UP) 211- 007. (T.N) 608002.
- [15]. Boyapati Madhulatha, and Kotresh Yaligar. World Journal Of Pharmaceutical Research., Volume 8 Issue 7. 1817-1828 ISSN 2277-7105.
- [16]. Lanjewar Ameya, Maurya Soni, Sharma Devender, Gauri Anchal. Review on Hair Problem and its Solution. Journal of Drug Delivery & Therapeutics. 2020; 10(3-s): 322- 329.



- [17]. Suman ,K. G. ,Kumar , B., & mukopadayay ,s.. Herbal hair oil .A review .Intrenational Journal of Health Sciences ,2022: 6(s2): 13449- 13365.
- [18]. Damodaran Guruswamy Rajesh ,Gupta Ramkrishna .Haie loss and the Applied Techniques for Identifcation of Novel Hair Growth Promotes For Hair Re- Growth. Pharmacognosy Journal .2011; 3 (22): 1-5.
- [19]. Lodha Gaurav ,Formulation and Evalution of polyherbal Shampoo to promote Hair Growth and Provide Antidandruff action .Journal of Drug Delivery & Therapeutics .2019; 9(4-A) : 296-300.
- [20]. Hati Deepak ,Bhatnagar S .P .. Sethi KaiyanKumar ,Development and evalution of polyherbal Antidandruff Hair oil ,Pharma cognosy Journal .210 ;2 (10) : 328-334 .
- [21]. Neha N. Jagatap.Formulation and evaluation of polyherbal oil,International journal of scientific research in science and technology.ISSN;2395-602X.vol 18,published issue July-August-2021.
- [22]. M. Sekhar ,N .Vishnupriya ,R .Ramesh ,G . Suresh Kumar ,A .Divya Bharti and S .Abidha afsha ;Formulation andevalution of hair tonic from ziziphus jujuba Leaf Extract ,ISSN NO .2249-9504, 447-454,2016 .
- [23]. Gupta Diksha ,Mane Mohini ,Awhale D ivya ,Chaudhari Prachi ,Chendke Amarnath Kumar ,Oswal Rajesh .Formulation and evalutiom of herbal hair tonic ,IJCRT .2022; 10: 166-170,ISSN :2320: 2882 .
- [24]. Dr. K.Sudheer Kumar ,P.Anitha, SK,Shahin, G.Bhagya Lakshmi.Formualation and evaluation of organic poly –herbal hair oil.,world journal of pharmaceutical and life sciencies ISSN 2454-3339,wjpls 2022, vol,8,issue 9,120-126.
- [25]. Harshd Popat Kobarne ,Shubham vilas tagad ,Yogita Rajendra Kobarne ,Sanika Sunil Zaware,Assi Proff.Jayshri Subhash Kasar.Preparation and Evalution of Poil herbal Hair oilISSN 2455-3301.wjpmr,2025,11(6),288-297.
- [26]. Kumari Priyanka , Sharma shivani.Hrebal Hair tonic : A Review.ISSN:2320- 2882,Volume 12,issue 3 maech 2024.IJCRT.2024.
- [27]. Pooja Khanpara, Anish Sorathiya,chirag Sarapadadiya,Tulsi Tilva and Dr.Shital Faldu. Formulationand evalution of hair fall control herbal hair oil,International journal of pharmacognosy and life science 2023:4(20; 69-76).

