



Evaluating hair Growth activity of Herbal Hair Oil

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ABSTRACT: HERBAL REMEDIES HAVE ATTRACTED BIG INTEREST DUE TO THE FACT THAT THEY ARE A PLEASANT PASTIME AND HAVE FEWER OR FEWER NEGATIVE EFFECTS THAN ARTIFICIAL PILLS. THE GOAL OF THE GIFT LOOK INCLUDES INSTRUCTIONS ON HOW TO MAKE NATURAL HAIR OIL. IT USES AMLA, METHI SEED, CURRY LEAVES, JASMINE OIL, COCONUT OIL, ALMOND OIL, NEEM OIL, BLACK CUMIN OIL, ITS ASSESSMENT FOR BOOM IN HAIR BOOM PAST TIME. HERBS & NATURAL PILLS ARE CLINICALLY PROVEN TO BOOST HAIR GROWTH. HAIR LOSS TROUBLE IS OF EXTRAORDINARY DIFFICULTY TO BOTH MEN AND WOMEN & THE TROUBLES RELATED TO HAIR LOSS ARE HAIR FADING, DANDRUFF & FALLING OF HAIR. VARIOUS ARTIFICIAL DRUG TREATMENTS ARE TO BE HAD FOR HAIR LOSS WHICH NO LONGER DEALS WITH PERMANENTLY & INDICATES SEVERE FACET CONSEQUENCES. THE PRIMARY GOAL OF THIS PAINTING IS TO INCREASE THE AMOUNT OF NATURAL HAIR OIL COMPONENTS. THIS COULD SOLVE THE PROBLEMS ASSOCIATED WITH HAIR FALL & DIFFERENT HAIR DISEASES.

(HERBAL HAIR OIL, HAIR LOSS, EMBLICA OFFICINALIS, AZADIRACHTAINDICA, MURRAYAKOENIGII)

I. INTRODUCTION

II. Cosmetics are substances used to enhance the human body's appearance or odour. Cosmetics include skin-care creams, lotions, powders, perfumes, lipsticks, fingernail and toenail polish, eye and facial makeup, permanent waves, colored contact lenses, hair colors, hair sprays and gels, deodorants, baby products, bath oils, bubble baths, bath salts, butters and many other types of products. A subset of cosmetics is called "make-up," which refers primarily to colour products intended to alter the user's appearance. Many manufacturers distinguish between decorative and care cosmetics [1-2].





III. In the last three-four decades, the use of cosmetics has increased exponentially not only among females, but also among males who are also engaging in their use. Hair dyes, hair oils, and creams are as popular with men as females. Almost every country now has laws governing the regulation of manufacturing, labeling, and sale of goods. Using cosmetics in such a way that the use of cosmetics harmful to health is prevented. Beauty and cosmetics are as ancient as mankind and civilization. So, they use various beauty products with herbs to look charming and young. Indian herbs and its significance are popular worldwide[3]


IV. Hair is a protein filament that grows from dermal follicles. Mammalian hair is one of their most distinguishing features. Hair is most commonly associated with hair development, hair Types, and hair maintenance, but it is also an essential biomaterial made mostly of protein, particularly alpha-keratin Dandruff, hair loss, dry hair, split ends, frizzy hair, dull hair, heat damaged hair, colour damaged hair, grey hair, and the issues are common in cosmetics. Many products, such as hair oils, hair shampoos, hair conditioners, hair serums, hair gels, hair masks, and hair dyes, are available on the market to help with these issues. Hair oils are applied to the hair to dress it, nurture it, and give it a more healthy aspect. They also encourage hair development that is both luxurious and long hair tonics are made from hair oils containing herbal medications. These are essentially therapeutic plant extracts in base of oil. Herbal hair oil hydrates the scalp while also reversing the effects of dry scalp and hair. It contains a variety of vital nutrients that help the sebaceous gland operate normally and promote natural hair growth. The current study was carried out with this objective in mind [4-7]

V. As the name implies, herbal extracts are herb extracts. It is an ancient methodology because its origin was discovered in the holy Vedas and in the Unani scriptures. Chemical medicines are not always magical bullets, and they may have side effects, according to Asthecognizance. The trend in vogue is herbalism and the use of natural products. Indian herbs are commonly used in the cosmetic industries.

VI. Hair oils those embraces herbal drugs are called ashairtonics. These are made from herbal extracts in an oil base. Hair oils are the hair care formulations applied for cure of hair disorders such as baldness, greying of hairs, hair falling, and dryness of hairs. [8-9]. Herbal products have been praised for hair growth-promoting activity. India's traditional medicine acclaims a number of herbal drugs for hair growth promotion. In our study, we have found that the ethanol extracts of amla ,curry leaves ,black cumin seed are useful in treating "Indralupta" (i.e., loss of hair)[10-12]

VII. Table 1.1: Representing different herbs with figures used in the preparation of hair oil.

Sr.No.	Herbs	Figures
1	Fenugreek, <i>Trigonella foenum-graecum</i> is an herbaceous annual plant in the family Fabaceae grown for its leaves and seeds which are used as an herb or spice. The fenugreek plant may have a single stem or be branched at the stem base. The plant's leaves are small and trifoliate with oval leaflets green to purple in colour [13-14]	 A wooden spoon filled with yellow fenugreek seeds, surrounded by fresh green trifoliate leaves on a dark wooden surface.
2	Hair is a protein filament that grows from dermal follicles. Mammalian hair is one of their most distinguishing features. Hair is most commonly associated with hair development, hair types, and hair maintenance. However, it is also an essential biomaterial made mostly of protein, particularly alpha-keratin. Dandruff, hair loss, dry hair, split ends, frizzy hair, dull hair, heat damaged hair, color damaged hair, grey hair, and the issues are common in cosmetics. Many products, such as hair oils, hair shampoos, hair conditioners, hair serums, hair gels, hair masks, and hair dyes, are available to help with these issues. [15]	 A blue bottle of hair oil on a wooden surface, next to a coconut, a small bowl of white cream, and a cinnamon stick.
3	There are hair oils to keep your hair healthy, smooth, and silky. Using jasmine infused coconut hair oil can do wonders and create a visible effect on your scalp and strands.[16]	 A close-up of several white jasmine flowers with yellow centers, set against green foliage.
4	Curry leaves are rich in many minerals and trace minerals such as iron, zinc and copper.[17-18] It also shows antibacterial activity against <i>S. Typhi</i> and <i>E.coli</i> .[19]	 A wooden spoon dripping dark oil into a glass bowl, with fresh green curry leaves in the background.
5	Indian gooseberry oil, prepared by boiling dry gooseberry pieces in coconut oil, is considered a valuable hair tonic for stimulating hair growth[20] Amla is the richest and most concentrated form of Vitamin C along with tannins found among plants. Hair care preparations contain whole fruit as an active ingredient. The Vitamin C found in the fruit binds with tannins that protect it from heat or light loss [21-23]	 A pile of sliced, dried, light-brown amla (Indian gooseberry) pieces.
6	Neem powder has anti-bacterial properties that stop scalp damage and maintain pH levels. It hydrates our scalp and refreshes it. A monthly hair pack of neem oil to help keep the scalp healthy may be a very essential part of the hair care routine [24]	 A close-up of green neem leaves with serrated edges and small red flowers.

7	<p>Due to <i>Nigella sativa</i> seed's antimicrobial activity, it was evaluated for its natural preservative property. Jordanian <i>Nigella Sativa</i> seed was used as a preservative for date paste storage. In experiments, the post-processing development of contaminated microorganisms present in stored date pastes was controlled adequately with 100, 200, and 400 ppm of Jordanian <i>Nigella Sativa</i>. Amongst this concentration 400 ppm was found to preserve sensory quality attributes of dates, paste regarding color, flavor, texture and taste during four months of storage at room temperature. This was comparable with 400 ppm sodium benzoate as a preservative. [25-26]</p>	
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JUSTIFICATION AIM AND OBJECTIVE

AIM :-

Evaluating hair Growth activity of Herbal Hair Oil

OBJECTIVE:-

- Combination of coconut oil, jasmine flower, amla, curry leaf, methi seed, black cumin, and neem can promote hair growth by nourishing the scalp, strengthening hair follicles, and reducing hair fall.
- Herbal hair oil hydrates the scalp while reversing the effects of dry scalp and hair. It contains a variety of vital nutrients that help the sebaceous glands operate normally and promote natural hair growth.
- As the oil has enhanced penetration and reaches up to the hair follicle, it increases the circulation of the scalp. This increases hair growth and reduce greying of hair.

JUSTIFICATION:-

Penetrate the hair shaft, nourishing and strengthening it from the indoors out. Jasmine flower oil stimulates scalp blood circulation, promoting wholesome hair growth. Amla, moreover known as Indian gooseberry is rich in weight loss plan C and antioxidants that inhibit hair loss and stimulate growth. Curry leaf oil is rich in proteins or beta-carotene, which nourish and help hair follicles. Methi seeds include immoderate protein levels, which promote hair growth and prevent hair breakage. Black cumin oil consists of thymo quinone, which strengthens hair follicles and stimulates growth. Neem oil gives antibacterial homes that prevent scalp infections

PLANE OF WORK

- 1) Selection of drug
- 2) Identifying the problem
- 3) Reviewing literature
- 4) Setting research questions, objectives and hypothesis
- 5) Choosing the study design
- 6) Collecting data
- 7) Processing and any analyzing data

LIST OF INGREDIENT USED: [37]

SRNO.	INGREDIENT	FAMILY
1	Coconut oil	Cocos nucifera
2	Jasmine oil	Oleaceae
3	Amla oil	Phyllanthus emblica
4	Neem oil	Azadirachta indica
5	Methi seed	Trigonella Foenum Graecum
6	Black cumin (seed)	Nigella sativa
7	Curry leaves	Murrayakoenigii

EXPERIMENTAL**MATERIAL & METHODS**

Ayurvedic cream was purchased from Shree Ayurveda medical shop Camp Pune, Maharashtra. The turmeric powder used for lab cream formulation was Purchased from –SHREE AYURVEDA M/S. KALIDAS GANDHI, 536, Center STREET.POONA. **Composition of cream**

Ingredients of Hair oil preparation

SRNO.	INGREDIENT	QAUNTITY (%)
1	Coconut oil	30%
2	Jasmine oil	5%
3	Amla oil	20%
4	Neem oil	10%
5	Methi seed	5%
6	Black cumin (seed)	10%
7	Curry leaf	20%

FUNCTION OF THE INGREDIENT

SRNO	INGREDIENT	FUNCTION
1	Coconut oil	Moisturizes your hair
2	Jasmine oil	Offer a protective barrier against microbes.
3	Amla oil	promote healthy scalp circulation.
4	Neem oil	Antifungal, Antibacterial,
5	Methi seed	Effective against hair loss and baldness
6	Black cumin(seed)	Helps boost hair growth and slows down cell ageing
7	Curry leaf	Regenerate dormant follicles and promote long-term hair growth while reducing hair loss.

METHOD OF PREPARATION**Formulation of herbal hair oil:**

The process of herbal hair oil manufacturing involves following steps.

- **MIXING**

Different elements used within side the components of natural oil are offered in Table 1. Precisely all of the dried and sparkling herbs which includes amla, meth seed, and curry leaf are the ones factor weighing and boil for 15 min. Then separate factor are blend one with the aid of using one. Then stay factor oil section this is Coconut oil, Jasmine oil, Amla oil, Neem oil are brought one with the aid of using one. Mix collectively the herb extracted factor and oil section factor . The above content material became boiled for 15 min.

- **FILTRATION**

The oil is filtered through muslin fabric, and 30% coconut oil becomes delivered to make up the volume (one hundred ml). Finally small quantities of flavoring agent (jasmine oil) become delivered to the oil and located in amber colored bottle. [27]

- **BOTTELING AND LABELING**

After passing through the favoured inspection, oil is now filled in easily wiped and dried bottles with inside the specified volume. Bottles labelled and sealed.

Evaluation of herbal hair oil

Evaluation Parameters

The following parameters were checked to evaluate the skin cream marketed formulation and In lab formulation.

Sensitivity test:

The prepared herbal hair oil was applied on 1 cm skin of hand and exposed to sunlight for 4-5 min. [28]

Acid value:

Preparation of 0.1 molar solutions:

Continuously. The prepared 0.1 molar KOH solution was filled in the burette.

Preparation of sample:

10 ml oil was measured and dissolved in 50 ml of 1:1 ethanol and ether mixture and shaken vigorously. 1 ml of phenolphthalein solution was then added and titrated with 0.1 molar KOH solution.

. Saponification value:

To accurately weighed 1 ml of oil in a 250 ml of conical flask, 10 ml of ethanol: ether mixture (2: 1) was added. To this, 25 ml of 0.5 N alcoholic KOH was added and was kept undisturbed for 30 min. and the flask was cooled. This solution was titrated against 0.5 N HCl using phenolphthalein indicator. Similarly, the blank titration was performed without taking oil (sample). Amount of KOH in mg used was calculated using formula,

$$\text{Saponification Value} = 56.1(B-S) N/W$$

Where **B**= Volume in ml of standard Hydrochloric acid required for the blank.

S= Volume in ml of standard Hydrochloric acid required for the sample.

N= Normality of standard Hydrochloric acid.

W= Weight of the oil taken in gms for the test [29]

PH:

The pH of herbal hair oil was determined using pH meter.[28]

Viscosity:

The viscosity was determined using Ostwald's viscometer [29]

Specific gravity:

Specific gravity bottle was rinsed with distilled water, dried in hot air oven for 15 minutes, cooled, capped, weighed and noted as (a). Now the same specific gravity bottle was filled with the sample, capped and again weighed (b). Weight of the sample per milliliter was determined by subtracting the weights (b-a) [30]

Primary irritancy test:

A basic skin irritation test was performed on shaved undamaged skin of rat with a small amount of the produced herbal hair oil. For 3 to 4 hours, the test site was monitored for erythema and edema [31]

. Saponin Test

Formation of stable froth was observed by shaking oil and water in a test tube [28]

Results and Discussion

The organized method is Dark brown shadeation with pH according with human pores and skin impartial to barely acidic. The variety of ph is (7.1)Proximate evaluation and qualitative chemical take a look at had been executed to perceive plant life and to expose presence of lively materials chargeable for growing hair increase activity

Herbal oil contains several crucial vitamins required to maintain the normal functioning of the sebaceous glands and aid in hair growth. The usage of natural cosmetics has become more desirable in the non-public health system and the healthcare system as a whole. Hence, there's a tremendous clamour for the natural cosmeceutical man or woman care or non-public fitness care industry,

which is currently focusing and paying greater attention to the development of natural-based cosmetics as a whole. Nowadays, it's a rapidly growing sector with tremendous scope for growth in coming years. Use of bioactive components in beauty formulations has a significant impact on frame functions. It offers vitamins, which are important for maintaining the health and beauty of your hair. At closing it can be concluded that this natural hair oil system has substantial quality

Role of herbs in herbal hair oil

S. No	Ingredients	Importance
1	Coconut oil	Moisturizes and has anti-aging properties for dry hair
2	Jasmine flower	Improves hair growth from the roots, sweet fragrance
3	Amla	In addition to its vitamins and minerals, amla's phytonutrients increase blood circulation in the scalp, this promotes hair growth.
4	Neem	Neem oil treats scalp infections
5	Methi seed	Strengthening hair roots, preventing hair loss, and enhancing hair texture in general.
6	kalonji seed	Antifungal, Antibacterial, Anti-inflammatory.
7	Curry leaf	Vit A B2 A C Monoterpenes, Flavanoids, Antioxidant

EVALUATION OF PHYSICAL PARAMETER OF PREPARED FORMULATION

S. No	Parameter	Result
1	Acid value	4.1
2	Saponification value	56.1B-S N/w
3	pH	7.1
4	Specific gravity	0.52
5	irritancy test	No irritant
7	GRITTINESS	Smooth
8	Spread ability	Good
9	Saponin Test	Foam get appeared
10	Colour	Dark brown
11	Odour	Aromatic

LABORATORY BASED RESULTS

PH



SAPONIN TEST



SPECIFIC GRAVITY



FORMULATED HERBAL HAIR OIL



Summary

Natural hair oil with coconut oil, methi (additionally called fenugreek), curry leaf, and kalonji (additionally called black seed) is a famous combination recognized to promote hair growth and enhance the general fitness of hair. Coconut oil is rich in fatty acids that moisturize and moisturize the scalp and hair, preventing breakage. Methi is an abundant source of vitamins that promote hair growth, including protein and nicotinic acid. This vitamin stimulates blood flow to the scalp. Curry leaf is rich in antioxidants and amino acids that nourish hair follicles and promote healthy hair growth. Kalonji seeds are rich in nutrients and minerals, including zinc and vitamin E, which can help strengthen your hair and prevent hair loss. Overall, this natural hair oil combination can nourish and protect the hair, lessen hair fall, and promote a healthy hair growth process.

CONCLUSION:

Evaluating hair growth pastime of Herbal Hair Oil Overall, the formulated natural oil presents many nourishing benefits to hair together with vitamins, minerals, and important oils. The finished product is within the limits. In conclusion, oil saves your hair from harm and loss due to pollutants and unattractive hair. And offers an opportunity to supply dangerous chemical

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