



# FORMULATION AND EVALUATION OF POLY HERBAL HAIR OIL

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## Abstract:

Pharmacognosy is the scientific study of the physical, chemical, and biological characteristics of unprocessed pharmaceuticals, as well as their history of production, collecting, market preparation, and storage. Human personality is greatly influenced by hair, and it can be treated by utilizing cosmetics. Allopathic hair oil is never safer than herbal hair oil. Clinical studies have shown that herbal remedies and herbs promote hair growth. Both men and women are quite concerned about hair loss, and the primary issues that come along with it are dandruff, hair falling out, and hair fading. A priceless gift from nature, herbal cosmetics are in high demand on the global market. Herbal hair oils reverse dry scalp and dry hair problems in addition to moisturizing the scalp. With the use of various plant materials, including Amla, Hibiscus, aloe Vera, Jasmine, Fenugreek, Onion, Curry leaves, Black cumin, Almond oil, Coconut oil, etc., the current research work intended to formulate herbal oil for application in hairs. The herbal oil was created was assessed, and several criteria, including the Acid value, viscosity, saponification value, pH, and skin irritation, among others, were determined and reported in this.






**Key Elements:** Cosmetics, herbs, Herbal hair oil, Healthy Hair, Preparation, evaluation, results and discussion.





## Introduction:

The value of Indian herbs is well known around the world. Herbal cosmetics are priceless natural gifts that are in great demand all over the world. As protective appendages and integument accessory structures, hair is among the most important body components, along with sebaceous glands, sweat glands, and nails. Dermatological conditions that cause hair loss include an ongoing search for all-natural hair-growth-promoting products. Each hair grows in three cycles. Stages: telogen (regeneration) (rest), catagen (involution), and anagen (growth). The anagen process might take two to six years to complete. During the catagen process, the hair's growth activity rises, and it moves on to the following stage. For two to three weeks, there is a catagen phase. Hair oil moisturizes the scalp and encourages hair growth, resulting in healthy hair. There is a long history of using several of these plants to address hair issues. It is an old practice because the holy Vedas and the writings of the Unani religion revealed where it originated. As the awareness indicated, the chemical Medicines may have adverse effects and do not always function as miracle cures. The fashionable fad Shifts in Favour of using natural goods and

herbalism. Indian herbs are a thriving source of food. Applied in the cosmetics industry. One of what distinguishes animals is their hair. Most typical Although attention to hair is primarily directed towards hair development, hair kinds, and hair maintenance, hair is also significant a biomaterial made mostly of proteins, particularly alpha keratin. The most common issues with cosmetics are dandruff, hair loss, dryness, split ends, frizz, dullness, heat damage, colour damage, grey hair, etc. Amla is generally a good source of vitamin C and contains a sizable quantity of pectin, which is rich in minerals including calcium, iron, and phosphorus. Hibiscus contains calcium, phosphorus, iron, vitamin B1, riboflavin, niacin, and vitamin C, which are used to promote the growth of thicker hair and delay the onset of greying. Methi contains a high protein food source that gives hair the necessary protein nutrients. Pharmaceutical goods and bioactive substances are combined to create herbal cosmetics. This study set out to create and assess a polyherbal hair oil made of herbs such curry leaves, amla, neem, tulsi, and hibiscus in coconut oil.

### 1.1 Drug profile: -

Sr. no	Drug	Common Name	Family	Biological source	Chemical Constituents	Uses
1		Coconut oil	Palmae	Cocos nucifera L	fatty acids, caprylic acid C -8:0 (8%), capric acid, C-10:0, (7%), lauric acid C-12:0, (49%), myristic acid C-14:0(8%)	Moisturizers dry hairs
2		Curry leaves	Rutaceae	Murraya koenigii (L.) Spreng	linalool (32.83%), elemol (7.44%), geranyl acetate (6.18%)	Help moisturize the scalp and remove the dead hair follicles.
3		Tulsi	Lamiaceae	Ocimum sanctum	methyl cinnamate (70.1%), linalool (17.5%), β-elemene (2.6%)	Speed up hair growth
4		Hibiscus flowers	Malvaceae	Hibiscus rosasinensis	Anthocyanins and polyphenols (protocatechuic acid and quercetin).	Improves hair growth
5		Hibiscus leaves	Malvaceae	Hibiscus rosasinensis	Anthocyanins and polyphenols (protocatechuic acid and quercetin).	Deeply Conditions Hair Strands.

6		Fenugreek	Fabaceae	Trigonella foenum-graecum	Carbohydrates, proteins, lipids, alkaloids, flavonoids, fibers, saponins, steroidal saponins	Revives damaged hair.
7		Almond oil	Rosaceae	Prunus Amygdalus Dulcis	Oleic acid as the main compound, and an important amount of tocopherol and phytosterol content.	Treat hair loss and strengthen the hairs
8		Amla	Phyllanthaceae	Phyllanthus emblica L	Amla involves ellagic acid, gallic acid, emblicanin A and B, phyllembin, quercetin.	Stimulate hair growth.
9		Neem	Meliaceae	Azadirachta indica	Azadirachtin and the others are nimbolinin, nimbin, nimbidin, nimbidol, quercetin.	promote healthy hair growth.

### 1.2 Advantages of polyherbal hair oil: -

1. Enhances the lustre of hair
2. Feeds the hair shafts
3. Addresses flaking.
4. Promote hair regrowth

### 1.3 Objectives of polyherbal hair oil: -

1. Hair's inherent sweetness.
2. A soothing massage to promote healthy scalp.
3. Defends against hair loss.
4. Manage your frizzy hair.
5. To encourage hair regrowth.

**1.4 Aim of study: -**

1. This study's primary objective is to create and assess a polyherbal hair oil with a variety of herbs for several uses.
2. To create the herbal hair oil.
3. To lessen the impact of chemical formulation adverse effects.
4. To make hair's texture better.
5. To make the hair darker.
6. To stop hair thinning.
7. To soften, shine, and silky hair

**Materials & methods:****1. Collection and authentication of plant materials:**

The details of the plant materials study are given in following table: -

Sr.no.	Herb	Medicinal use
1	Coconut Oil	Hair growth stimulant
2	Curry Leaves	Promotes Hair Growth
3	Tulsi	Improves blood circulation
4	Hibiscus Flowers	Stimulates Hair Growth
5	Hibiscus Leaves	Natural conditioner
6	Fenugreek	Revives Damaged Hai
7	Almond Oil	Strengthening And Repairing
8	Amla	Boost hair growth
9	Neem	Condition your scalp

**2. Formulation of polyherbal hair oil: -**

- Collection of herbs required for hair oil preparation.
- Herbs are as follows
- Quantity is taken as given in table: -

Sr.no.	Ingredients	Quantity
1	Coconut oil	100 ml
2	Curry leaves	20-25 leaves
3	Tulsi	14-15 leafs
4	Hibiscus flowers	10-15 flowers
5	Hibiscus leaves	10-15 leaves
6	Fenugreek	3 gm
7	Almond oil	3 ml
8	Amla	2 gm
9	Neem	10-15 leaves

### 3.Procedure: -

**Step 1:** - Herbs were collected & washed properly.

**Step 2:** - Herbs were Boiled in Coconut oil for 20 minutes.



**Fig.no.10 Herbal Drugs Used for Preparation**



**Fig.no.11. Boiling procedure of oil**

**Step 3:** -After boiling the oil was filtered

**Step 4:** - The filter oil was collected in beaker using filter paper poured in container.



**Fig.no.12. Filtered Oil**



**Fig.no.13. Collected Oil poured in container**

### Standardization/evaluation of hair oil:

It was planned to test the prepared herbal oil for factors including organoleptic pH, parameters, skin sensitivity, and skin irritation.

1. Features of organoleptic in these testing, it was suggested that the prepared formulation Assessed for olfactory, visual, and other sensory testing.
2. pH: A pH metre was used to calculate the herbal hair oil's pH.
3. Skin sensitivity: To ascertain the skin's sensibility, a skin sensitivity test was conducted.
4. Skin irritation: To measure the degree of skin irritation, a test for skin irritation was performed

## Result and discussion:

One of the most well-known hair treatments is herbal hair oil. Herbal hair oils not only hydrate the scalp, but they help repair dry scalp and hair. It offers a variety of vital nutrients necessary to maintain the sebaceous glands' regular operation and encourages the growth of healthy hair. The numerous herbs were used to make the herbal hair oil. The various characteristics of the herbal hair oil, including the sensitivity test, viscosity, pH, irritant test, grittiness test, saponification value, and acid value, were assessed.

### 1.Organoleptic characteristics:

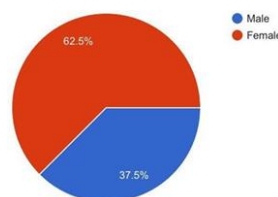
The hair oil we created was opaque and had a brownish green hue. It spreads well and has a pleasant aroma from the scent in the ingredients.

### 2.Evaluation of herbal hair oil:

S.no.	Parameter	Inference
1	Colour	Brownish green
2	Odour	Characteristic
3	pH	6.4
4	Sensitivity test	No sensation
5	Irritation test	No irritation
6	Grittiness test	Smooth

## Survey report:

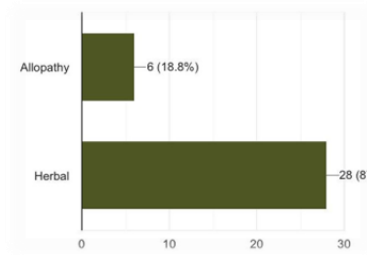
### Questions & Answers



62.5 % woman's used herbal hair oil and 37.5 % men used herbal hair oil, conclusion is most of the woman is used herbal hair oil.



### 1. Which herbal hair oil is most preferred like allopathy or herbal?



87.5 % people used herbal Hair oil & 18.8 % people use allopathy hair oil, conclusion is most of the people used herbal hair oil and they trust on herbal ingredients and herbal hair oil.

### 2. Name of herbal Hair oil peoples used?

- Ayurvedic hair oil.
- Amla hair oil.
- Coconut hair oil.
- Almond hair oil.
- Bhringraj hair oil.
- Jasmine hair oil.
- Cantharidin hair oil.
- Brahmi oil

### Summary & conclusion:

The purpose of this article is to educate readers on the many ingredients found in herbal extracts, including minerals and amino Acids might be to blame for the noticeable increase in hair growth. When compared to manufactured pharmaceuticals, all these medications not only exhibit exceptional activity but also have no potential negative side effects. It functions as sustenance for the hairs because it absorbs into the scalp more quickly. It functions as a natural hair nourisher and promotes hair development by reducing hair loss. Because of its cooling properties, this hair tonic is particularly useful for curing headaches, which relieves stress and pressure. It has shown good hair growth results without any Allergic or side effects as it is Completely constituted with naturally occurring crude drugs. The Utilization of herbal cosmetics enhanced many folds in personal Hygiene and healthcare system. Hence, there is a tremendous clamour for the herbal consequential individual Care or personal health Care industry, which is presently focusing and paying extra diligence on the Development of Herbal-based cosmetics.

### Future scope:

A worldwide industry that provides goods to both men and women is the development of hair oils. Using hair oil is not culturally taboo anywhere in the world. In fact, doctors routinely advise patients with dry scalps to apply hair oil every day. Because of the health benefits associated with utilising Ayurvedic goods, such herbal hair oil, more individuals are doing

so. As a result, starting a hair oil company in India will be profitable. Starting an oil manufacturing business in India has become a lucrative endeavour because of our deeply rooted history and love for all things natural. If you can use potent, organic, toxin-free oils to cure your customers' pain points, the amount of money you can generate from your business is virtually limitless. A fantastic strategy to grow your business is to export your hair oil to countries where there is an increased demand for genuine herbal oil goods. As well as that. Demand for the good is higher than supply. Between 2022 and 2027, the Indian market for hair oil is anticipated to grow at a CAGR of 5.43 percent. Customers are drawn to hair oils because they may stop the hair from drying and even promote density in response to the damage that pollution does to the hair on a regular basis.

## Reference:

1. K. Sudhir kumar, S. Gomathi, S Sitaram Swamay, International journal of advance research in Medical & pharmaceutical sciences, volume 1, 2016
2. Mahavir chhaged, Pritesh paliwal, sumit Dwivedi, International journal of pharmacy and life Sciences, volume 11, 2020.
3. NS Yamani, Sudha, Jyotsna, K Pratyusha, Kartheeka, Journal of pharmacogony and Phytochemistry, pg 3254, 2018
4. T. Usha Kiran Reddy, G.Sindhu, S. Rajesh, B. Aruna, K. S. Sandhya Rani, Indo American Journal of pharmaceutical sciences, pg 1540, 2017
5. Md shahinoor rahaman dulal, hasib shaikh, mohammad abu tahter, mohammad Sayeed ur Rehaman, zakia rahaman, M.A. malek, international journal of pharmaceuticals sciences and Research, volume 5, pg 1801, 2014
6. K. D. Mali, R. M. Shroff, S. D. Chaudhari, S. S. Bacchav, Indo American journal of Pharmaceutical research, pg 8041, 2017
7. Kolhe Shilpa, indore pranaya, shewale Shweta, pol akshata, hanmante leena, journal of drug Delivery and therapeutics, pg 387, 2019
8. Sapna gupta, Sumeet Dwivedi, kushagra Dubey, Hemant joshi, Formulation and evaluation of Herbal hair oil.
9. Kashyap Rakesh, Dr. Shukla Karunakar, Dr. Mahajan SC, Mr. Sharma Alok ; Formulation and evaluation Of hair oil for hair loss disorders. ISSN 2320-3862 JMPS 2016; 4(3): 13-17 © 2016 JMPS Received: 04-03-2016 ; Accepted: 31-03-2016.
10. NS Yamani, Sudha, Jyotsna, K Pratyusha, J Pratyusha and Kartheeka Formulation and evaluation of Polyherbal hair oil. E-ISSN: 2278-4136 P-ISSN: 2349-8234 JPP 2018; 7(3): 3254- 3256 ; Received: 23-03-2018 ; Accepted: 27-04-2018.
11. R. M. Thorat\*\*, V. M. Jadhav\*, V. J. Kadam. Development and evaluation of polyherbal formulation For hair growth promoting activity ,International Journal of PharmTech Research ; CODEN (USA): IJPRIF ISSN : 0974-4304, Vol.1, No.4, pp 1251-1254, Oct-Dec 2009.
12. PK. Jain1\*, D. Das2, P. Jain3 Evaluating Hair Growth Activity of Herbal Hair Oil International Journal of PharmTech Research CODEN (USA): IJPRIF, ISSN: 0974-4304, Vol.9, No.3, pp 321-327, 2016.