

# Formulation and Evaluation of Herbal Hair Oil

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**Abstract**—Beauty and Cosmetic concept is as ancient as mankind and civilization. So, they use various beauty products that have herbs to look charming and young. Herbal cosmetic is one of the most effective areas of cosmetic technology. Herbal cosmetics are developed by the combination of bioactive ingredients and pharmaceutical products. Hair plays a vital role in personality of human and we use lots of cosmetic products for the care of hair. Now a day's side effect is a major problem after using any beauty product due to which herbal products are preferred because of having less probability of any types of side effects. The present work was aimed to formulate herbal hair oil for general purpose using various herbs. The formulated herbal hair oil was evaluated by various parameters such as viscosity; PH, Sensitivity test etc were determined and are reported in this paper.

**Index Terms**—alopecia, Herbal hair oil, baldness, Aloe-Vera, Coconut Oil, Banyan tree root

## I. INTRODUCTION

Cosmetics are substances are used to enhance the appearance of human body. The various herbal ingredients are used in the formulation are Aloe, Tulsi, Amla powder, Shikakai, Methi, Coconut oil, Banyan tree root, curry leaves. All ingredients provide essential nutrients such as Vitamin, Anti-oxidant, protein, terpenoids, and essential oils to maintain normal function of sebaceous gland.<sup>1</sup>

The synthetic chemical compound replaced with many Ayurvedic herbs, the safety and efficacy of the natural herbs could not find suitable match. Herbal drugs obtained from herbs are believed to be much safer in the treatment of various diseases. The hair problems like hair fall, Dandruffs, split ends, grey hair etc, to overcome these problems, we use lots of cosmetics. Among these, hair loss is a common problem having affected both the sexes of all races to different extents .In traditional Indian system of medicine many plants and herbal formulations are

reported for hair growth as well as brightness of hair. Hair oils are hair care formulations used for treatment of hair disorders.<sup>1</sup>Herbal hair oil not only moisturizes scalp but also converse dry scalp and dry hair conditions.<sup>2</sup>Herbal hair oil are formulated with herbal extracts in an oil bases. The formulated hair oil is evaluated for its organoleptic properties, viscosity, pH, Sensitivity test etc. All parameters were found to be within the standard.<sup>2</sup>

In our study extraction of Aloe, powder of Tulsi, Amla, Shikakai, Methi, Banyan tree root, curry leaves and coconut oil are used with different concentrations. Amla rich in vitaminC, tannins and minerals such as phosphorous, iron and calcium which provides nutrition to hair and also causea dadarkening of hair.<sup>4</sup> Banyan tree roots contain carbohydrates, flavonoids, amino acids, steroids, saponins and tannins which prevent from hair loss. Aloe vera rich in glycosides, amino acids, resins, vitamins and minerals which gives hair look healthier, softer and shiny. Curry leaves contain composition of organic compounds, alkaloids, flavonoids, carbohydrate and sterol which mask hair and make it shiny. Coconut oil rich in triglycerides of saturated fatty acids which promotes the hair growth.<sup>2</sup> Fenugreek (Methi) rich in trimethylamine, trigonelline, Quercetin and which reduce the dandruff and promotes the hair growth.<sup>12</sup>

## II. MATERIALS AND METHODS

All the required raw materials were procured from local market, Sonai.

Procedure for preparation of Hair Oil<sup>12,2</sup>

- 1) Accurately weigh all the dried and fresh herbs such as Aloe, Amla, Tulsi, Coconut oil, Banyan tree.
- 2) The herbal products were mixed in coconut oil, the above content was boiled for 2 hrs. With continous stirring.

- 3) Boiled mixture was subject for filtration through clean cloth.
- 4) After filtration coconut oil was added to the filtrate to make up the volume.
- 5) Then add curry leaves water added as flavouring agent and finally oil placed in dry Plastic bottle and labelled.



Figure: Formulation of Hair Oil

**Evaluation parameters**

The formulated Hair oil was evaluated by Biological and Physical evaluation method.

**Specific gravity:**

- a) Specific gravity bottle was rinsed with distilled water, dried in hot air oven for 15 minutes, cooled, capped, weighed. (Weight a)
- b) Now the same specific gravity bottle was filled with the sample, capped and again weighed. (Weight b)

Table 1: Plants used for preparation of herbal hair oil<sup>2, 12</sup>

Common name, biological source, and family	Parts used	Uses	Figure
Coconut oil C. nucifera , Aceraceae	Kernel oil	Used as vehicle, Promotes hair growth and strengthens the hair	

- c) Determine the weight of sample per milliliter by subtracting the weight (b-a).

Viscosity: It is an index of resistance of a liquid to flow, the higher the viscosity of a liquid, the greater is resistance to flow. The viscosity was determined using Ostwald viscometer.



Figure: Ostwald's Viscometer

PH: The pH of herbal hair oil was determined using pH meter.

Sensitivity test: The prepared herbal hair oil was applied on 1 cm skin of hand and exposed to sunlight for 4-5 min.

**Organoleptic Property**

- Color: Detected by necked eyes
- Grittiness: Rubbed to the skin and observed
- Sedimentation: Whole preparation keeps aside for overnight and checks sedimentation.

<p>Aloe A. barbadensis , Liliaceae</p>	<p>Leaf pulp</p>	<p>Moisturizer, softening of hairs</p>	
<p>Tulsi O. sanctum , Labiatae</p>	<p>Fresh dried leaves</p>	<p>Anti- dandruff ,Anti- bacterial, Strengthen hair</p>	
<p>Amla E.officinalis, Euphorbiaceae</p>	<p>Dried as well as fresh fruits</p>	<p>Controls premature graying of hairs</p>	
<p>Shikakai A. concinna , Leguminosae</p>	<p>Fruit</p>	<p>It fights in contrast to dandruff and anticipate lice.</p>	
<p>Methi (Fenugreek seeds) T.foenumgraecum, Fabaceae</p>	<p>Dried ripe seeds</p>	<p>Treat hair fall and strengthens the hair, Hair growth</p>	
<p>Banyan tree Ficubenghalensis, Moraceae</p>	<p>Dried or fresh root</p>	<p>Treat hair loss and strengthen the hair</p>	
<p>Curry Leaves Murrayakoenigii, Rutaceae</p>	<p>Fresh leaves</p>	<p>Hair mask and gives bouncy and shiny hair</p>	

C. nucifera:Coccus nucifera, A. barbadensis :Aloe barbadensis,, O. sanctum: Ocimum sanctum  
E.officinalis :Emblca officinalis, A.concinna :Acacia concinna , T. foenumgraecum :Trigonella foenumgraecum

Table 2: Formula for Herbal Hair Oil

Ingredients	Quantity
Aloe ( <i>A. barbadensis</i> )	10gm
Tulsi ( <i>O. sanctum</i> )	5gm
Amla ( <i>E.officinalis</i> )	5gm
Shikakai ( <i>A.concinna</i> )	5gm
Methi ( <i>T. foenumgraecum</i> )	5gm
Banyan tree root ( <i>Ficubenghalensis</i> )	5gm
Curry leaves ( <i>Murrayakoenigii</i> )	Q.S
Coconut Oil ( <i>C. nucifera</i> )	100ml

C. nucifera:Coccus nucifera, A. barbadensis :Aloe barbadensis,, O. sanctum: Ocimum sanctum,E.officinalis :Emblca officinalis, A.concinna :Acacia concinna , T. foenumgraecum :Trigonella foenumgraecum

Table3: Evaluation of Herbal Hair Oil<sup>1, 2</sup>

Evaluation Parameter	Inference
Sensitivity test	Non sensitive
Irritation test	Non irritant
pH	7.6 (Slightly acidic to neutral)
Grittiness	Smooth
Color	Pale yellow
Odour	Pleasant
Viscosity	9.3
Specific gravity	11.4

### III. RESULT AND DISCUSSION

Color and Odor of the oil sample were typical of their constituents.

The pH of oil was found to be 7.6 which was relevant with human skin.

### IV. CONCLUSION

In general,the herbal formulation provides good blend of vitamins, antioxidants, terpenoids, and essential oils.All the values in the evaluation of finished product showed thatthey are within the acceptable limits.Hence, it is concluded that the oil is significant in maintaining good growth of hair,protection from dandruff,turning grey hairs to black. And results in shiny hairs.

### REFERENCES

- [1] Preparation and evaluation of herbal hair oil, Rahathunnisa begum1 & Afzalunnisa begum2, 2018, Volume 6 (2019):266-269.
- [2] 2.Evaluation and Preparation of herbal hair Oil with some fresh herbs, Mr.Saurbh Rajkumar Jadhav,Mr.Nihar nitin katkar, Mr.Hrishikesh Waman Sawant,Miss.kadambari Arun Jogale.2021,Volume 6,Issue 3 May-June 2021:906-916.
- [3] Preparation and evaluation of poly herbal hair oil, B. Ramya Kuber\*, Ch. Lavanya, Ch.Naga Haritha, S. Preethi, G. Rosa.2019, 68-73.
- [4] Preparation and evaluation of herbal hair oil, T. Usha Kiran Reddy\*, G. Sindhu, S. Rajesh, B. Aruna, K. S. Sandhya Rani IAJPS 2017, 4 (06), 1540-1546.
- [5] Formulation and evaluation of polyherbal hair oil. International Journal of Green Pharmacy, Joshi, A.A., Dyawarkonda, P.M.2006, 11 (1): S135.
- [6] Perfumes, soaps, detergents and cosmetics Bhatia, S.C.2001,639: 641.
- [7] Preparation, evaluation and hair growth stimulating activity of herbal hair oil, Banerjee, P.S., Sharma, M., Nema, R.K. Journal of Chemical and Pharmaceutical Research,2009,1(1): 261-267.
- [8] A Hand Book of Cosmetics, Mithal, B.M., Shah, R.N. 2000, 1st Edition, 141-142.
- [9] Hair care and herbal drug, Ansari S.H. and Ali M.Indian J Nat Prod. 13(1): 3-5, 1997.

- [10] Plants used for hair growth promotion: A review, Rathi V., Rathi J.C., Tamizharasi S. and Pathak A.K. *Phcog Rev.* 2(3): 165-167, 2008.
- [11] Development and evaluation of herbal formulations for hair growth. *Indian Drugs*, Dixit V.K., Adhirajan N. and Gowri C. 38 (11): 559-563, 2001.
- [12] Formulation and evaluation of herbal hair oil for alopecia management *Planta Indica*, Patni P., Varghese D., Balekar N. and Jain D.K. 2(3): 27-30, 2006.
- [13] In vivo and in vitro evaluation of hair growth potential of *Hibiscus rosasinensis* Linn., Adirajan N., Ravikumar T., Shanmugasundaram N. and Babu M. *J Ethnopharm* 88: 235-239, 2003.
- [14] Development and Evaluation of Herbal Formulations for hair growth, *E- Journal of Chemisrty*, Purwal, L., Gupta, S. B. N. and Pande, M.S. Jan 2008, Vol-5, NO-1, 34-38.
- [15] *A Text book of Pharmacognosy*, Shah C S, Qudry J S, 11th Edn., B.S. Shah Prakashan, Ahmedabad, 1996; 119.
- [16] *Trease and Evans Pharmacognosy*, 15th Ed., W.B. Saunders Harcourt Publishers Ltd Evans W C, d., 2002; 292.