

DEVELOPMENT OF POLYHERBAL HAIR OIL

Khedkar Rohan*, Kolhe Shilpa S. and Dr. Jadhav S. L.

Vishal Institute of Pharmaceutical Education and Research Ale.

***Corresponding Author: Khedkar Rohan**

Vishal Institute of Pharmaceutical Education and Research Ale.

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ABSTRACT

The Herbal cosmetics are nowadays widely used because of less side effect with better safety and security .The present work was aimed to formulate polyherbal hair oil for general purpose using various Herb. Herbal hair oil was prepared from the hair growth .The formulated hair oil contain different Herbal plant which are traditionally utilised for hair growth plants used are allium Ceba juice, Garlic Extract ,Jatamansi ,Amla Fruits, Ashwagandha Root, Neem leaves Powder, Curry leaf, Aloe Vera Powder, Coconut Oil. The Formulated oil was evaluated and various parameters such as Viscosity, Saponification Value, pH, Acid Value where determine & reported in this article. The Formulation were also subjected to chromatographic determination and chemical test .To determine the presence of active constituent in the drug. Excellent results of hair growth were seen in formulation.

KEYWORDS: Hair oil, Herb, Cosmetics, Formulation & Evaluation.**INTRODUCTION**

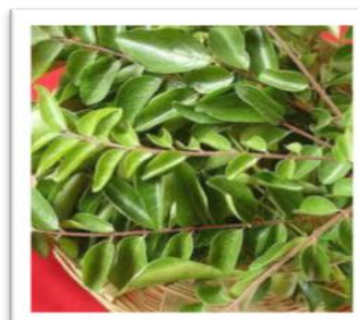
Hair has a several useful function in the animal world. It forms a protective cushion around the head & other delicate parts of the body. Hair oil are formulated to give the hair good shine & gloss .This is achive by applying a thin continuous film of an oily material on the hair surface without causing stickiness. They are mainly oils of low viscosity. Many herbs are used in hair oil are Amla, Almond, Lemon, Hibiscus, etc.^[1] Hair oil has more preferred as they promote hair growth, Improveelegnance of hair & prevent Hair fall.^[2]

Herbal cosmetics have growing demand in the world market and are in an invaluable gift of nature. There are a eide range of herbal cosmetics products to satisfy beauty regime. Adding herb in the cosmetics is very safe for our skin.^[3-5]

Herbal hair oil is not only moisturizes scalp but also reverse dry scalp and hair condition. It provide numerous essential nutrients required to maintain normal functions of sebaceous gland and promote natural hair growth. Keeping this point in consideration the present work was undertaken.

Collection of Plant Materials

The polyherbal hair oil was prepared by collecting various plant materials like, curry leaves, from herbal garden and vetiver roots, methi seeds and amla fruits were procured from local market

1. Amla**Biological source:** Dried fruits of phyllanthus Emblica**Family:** Phyllanthaceae**Use:** hair conditioner, treats scalp ailments, promotes hair growth.**2. Curry Leaves****Biological source:** Dried leaves of *Murrayakoenigii***Family:** Rutaceae.**Use:** Prevents hairfall and premature greying of hair.

3. Coconut oil

Biological source: Oil derived from dried fruits of *Cocos nucifera*.

Family: Arecaceae.

Use: moisturiser, vehicle, stimulates hair growth by unclogging pores.



4. Henna

Biological source: Dried leaves of *Lawsonia inermis*

Family: Lythraceae.

Use: hair colorant, helps in hair growth



5. Allium Cepa

Biological Source: The onion (*Allium cepa* L., from Latin *cepa* "onion"), also known as the bulb onion or common onion, is a vegetable and is the most widely cultivated species of the genus *Allium*.

Family: Amaryllidaceae

Use: It reduce hair loss by improving blood circulation in the scalp and hair. the sulphur in the juice helps in the production of essential collagen that promotes hair growth.



6. Garlic



Biological source: Garlic (scientific name *Allium sativum*) is a species in the onion genus, *Allium*. Its close relatives include the onion, shallot, leek, chive, and Chinese onion.

Family: Amaryllidaceae.

Use: Garlic could end your hair loss problems because of its high levels of allicin, a sulphur found to effectively treat hair loss.

7. Neem



Biological source: Neem consist of fresh or dried leaves and seed oil of *Azadirachta indica* j. Juss.

Family: Meliaceae

8. Aloe

Biological source: aloe is the dried juice collected by incision from the bases of the leaves of various species of Aloe Barbadensis.

Family: Asphodelaceae.

Use: It also acts as a great conditioner and leaves your hair all smooth and shiny. It promotes hair growth, prevents itching on the scalp, reduces dandruff and conditions your hair.



9. Ashwagandha

Biological source: Ashwagandha consist of the dried roots stem bases of Withaniasomnifera.

Family: Solanaceae

Use: Prevent hair loss and premature greying of hair with Ashwagandha which activates hair.



10. Jatamansi

Biological source: it consist of dried rhizomes stolons and roots of Valerianawallichii.

Family: Valerianaceae

Use: Jatamansi is one of the common herbs in ayurvedic medicine that help in getting good hair growth. This can treat your hair growth in number of ways.



Formulation of Oil

Formulation table

Sr. No.	Ingredient	Quantity (gm)
1	Amla	10 gm
2	Curry leaves	8 gm
3	Coconut oil	40 gm
4	Henna	2 gm
5	Allium cepa	10 gm
6	Garlic	5 gm
7	Neem	5 gm
8	Aloe	3 gm
9	Ashwagandha	2 gm
10	Jatamansi	10 gm

All the herbs except were dried, powdered and mixed with coconut oil. They were boiled for half an hour and were filtered through muslin cloth. was added towards the end and stored for further use.

Evaluation of Herbal Hair Oil^[6]

The formulated herbal oil was evaluated for parameters like pH, acid value, saponification value, refractive index, viscosity and organoleptic parameters^{14,15}.

pH

pH of the herbal oil was detected using pH meter.

Viscosity

Viscosity was determined using Ostwald's viscometer.

Organoleptic property

Colour, odour, skin irritation was determined manually. Oil was applied on hand and exposed to sunlight for 5mins to check for any irritation over skin.

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

Acid valu: preparation of 0. 1 molar solution: weighed 0.56g KOH pellets and dissolve in 100 ml of distilled water and stirred continuously. The prepared 0.1 molar KOH solution was fill in the burette.

10ml of oil was added with 25ml of ethanol and 25ml of ether. Phenolphthalein was added as indicator and titrated with 0.1M potassium hydroxide solution, Acid value = 5.61n/w

Where,

n= Number of ml of 0.1M KOH

w= Weight of oil

Saponification value

2g of oil was accurately weighed and transferred into a 250ml iodine flask. 25ml of 0.5M alcoholic potassium hydroxide was added and boiled under reflux on a water bath for 30mins. Phenolphthleim was added as indicator and titrated against 0.5M HCl ('a' ml). Similarly blank was performed ('b' ml) without the sample.

Saponification Value: $28.05(b-a)/w$
 Where,
 w= weight in grams of the solution.

Specific gravity: Take the specific gravity bottle, rinsed it with distilled water, dry it in oven for 15 minutes, cool, closed it with cap and weigh it (a). Now fill the same specific gravity bottle with the sample and closed it with cap and again weigh it (b). Determine the weight of sample per millilitre by substrcting the weight (b-a).

RESULTS

The prepared polyherbal hair oil using the above mentioned ingredients was evaluated for the following parameters and the results are tabulated [Table: 2]

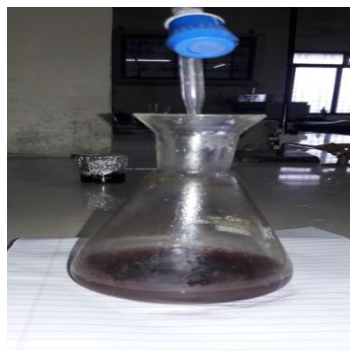
The herbal hair oil was prepared from various herbs (Table: 1) and their importance in the formulation is presented in (Table:2). The various parameter like sensitivity test, viscosity, PH, Saponification value and Acid value of herbal hair oil was evaluated (Table:3). Hence from the present investigation and biological screening establishes the efficacy of formulated herbal hair oil.

Table-2.

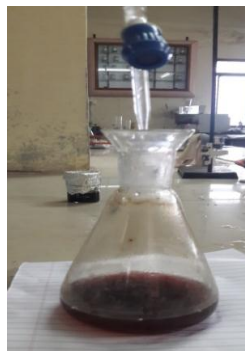
Sr.no.	Parameter	Observation
1	Colour	Green-brown
2	Odour	Characteristic
3	Specific gravity	0.9936
4	Viscosity	0.9348 poise
5	pH	6.9
6	Acid value	5.1
7	Saponification value	308.55
8	Irritation test	No irritation
9	Refractive index	1.526



Formulated oil



Saponification value



Specific gravity



Acid value



Reflux condensation



Viscosity for oil



Viscosity for water



Acid value



Acid value



Saponification value

CONCLUSION

All the parameters showed that they are within the limits and since all the ingredients added have no side effect and with positive benefit, the oil will help for improve hair growth also work as antibacterial and result in lustrous looking hair.

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