

FORMULATION AND EVALUATION OF POLYHERBAL HAIR OIL AND ITS COMPARATIVE ANALYSIS WITH NATURAL AND COMMERCIAL HAIR OIL

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Abstract - Polyherbal hair oil helps in hair growth and its one of the finest mode of hair treatment. It is a natural hair conditioner for flaky scalp and makes hair softer. Poly herbal hair oil is a reliable hair conditioner for cooling the scalp and protects hair shafts from damage. It also improves blood flow in the scalp. Herbal formulation have no adverse effects and are clinically verified to be good for hair growth. Hair loss, Thinning of hair, Dandruff is a concern for both male and female. The objective of present work is to formulate poly herbal hair oil to resolve problem related to hair loss. Poly herbal hair oil mostly preferred in view of medical and ecofriendly. The formulated polyherbal hair oil contains different herbal plants such as curry leaves, fenugreek, aloe vera, hibiscus, small onion, neem, bhringaraj, guava leaves, gooseberry, holybasil leaves, black cumin seeds, penny wort. The herbs contains number of phytochemicals and botanicals ,the presence of these phytochemicals and botanicals in the herbal products are used in cosmetics for the body care and amend biological functions of human body resulting in healthy skin and luxuriant hair growth. The phytochemicals provides essential nutrients required for maintaining normal functions of sebaceous gland and enhance natural hair growth. The formulated poly herbal oil was evaluated and various parameters such as pH saponification value, acid value, specific gravity, refractive index were determined.

KeyWords: Polyherbal oil, hair loss, dandruff, formulation and evaluation

1.INTRODUCTION

Hairs can be defined as - “modified epithelial structure formed as a result of keratinization of germinative cells”. Hair is an epidermal appendage that lies with the dermis. Humans have hair that serves a most important role in their lives. It is a universal problem, having affected both sexes of all races to different extents for as long as mankind has existed. Hair loss is a common and ever increasing problem in cosmetics as well as primary health care practice. Hair loss is a dermatologic disorder, and the search for natural products with hair growth promoting potential is continuing. Hair loss, dandruff, hirsutism, alopecia is a common patient complaint and a source of significant psychologic and physical stress.

2. Materials and methods:

Procedure for Formulation of Polyherbal Hair Oil

The herbs were collected and then grinded well. The iron vessel was taken and heated well then the grinded sample were added to it. The grinded sample would have some water content. The water content on the sample have to be removed (Boiling is used). The coconut oil was added to the iron vessel which has grinded sample (water drained sample) and it has to be stirred continuously for 1hour – 1hour 30mins. The Black cumin seeds were added while stirring. 3-5 pepper corn and 1 camphor piece was added to the oil which contains the grinded sample. The prepared poly herbal hair oil was kept undisturbed for 24 hours and then filtered using the cloth (squeezing method).



Poly Herbal Hair oil

Sample collection and Processing:

The samples used in the preparation of polyherbal hair oil are curry leaves, fenugreek, aloe vera, hibiscus, small onion, neem leaves, bringhraj, guava leaves, gooseberry leaves, holy basil leaves, black cumin seeds, pennywort. These samples were collected from the surroundings. The collected samples were shade dried for more than a week to remove the moisture content. The shade dried samples were grinded well to the powdered form. Then the powdered samples were stored in a bottle.

Soxhlet Extraction:

The selection of the solvent for soxhlet extraction is based on the phyto constituent isolation process. The solvent should be easy to remove and inert. Normally the solvent selection is based on the increasing polarity order like the order of acetone, petroleum ether, ethyl acetate, chloroform, methanol, ethanol and water. The petroleum ether is commonly used for the extraction of the steroids and fixed oils, and also used for the removal of the chlorophyll from the leaf powder; some of the

researchers uses petroleum ether for defatting of the plant material. After defatting main solvent like alcohol or aqueous extraction was performed. Some of the plant materials the defatting is essential because the waxy substances produce the emulsification process with the solvent and interferes the extraction process. Methanol is the semi polar solvent which can extract many of the phytoconstituents and water is the polar solvent which is cheap solvent and nontoxic. Dried powdered drug were taken and maceration was done by keeping them in 95% alcohol for 7 days with occasional stirring. After filtration, double maceration was done for next three days with 95% alcohol. The solvent was removed under reduced pressure and the extract obtained was air dried.

3.Evaluation of Polyherbal Hair Oil:

Organoleptic property:

Different organoleptic properties such as color, physical state, odor, polarity, and solubility were determined manually.

Table -1: - Features and Observations of Ingredients

S.No.	Organoleptic features	Observation
1.	Color	Reddish Brown
2.	Odour	Pleasant
3.	Texture	Fine
4.	Appearance	Coarse Powder

RESULTS:

Comparative analysis:

The comparative analysis is carried out for the better understanding about the product obtained. The similarities and differences between the products taken can be identified by doing comparative analysis. the comparative analysis is done for the parameters such as pH, saponification value, refractive index, acid value, specific gravity. The results has shown the

similarities and differences between the polyherbal, natural and commercial hair oil.

Table 2: Comparative analysis of polyherbal, natural and commercial hair oil

S.N	Test Parameter	Test Method	Natural Coconut oil M2103044	Commercial coconut oil M2103045	Poly herbal hair oil M2103046	Unit
1	pH	By pH Meter	6.08	6.02	6.05	-
2	Acid value	IS 548 (Part 1) 1964	0.634	0.331	2.69	-
3	Saponification		261	258	249	-
4	Refractive Index		1.4483	1.4487	1.4501	-
5	Specific gravity		0.821	0.818	0.817	-

Phytochemical analysis

The samples were subjected to test various phytochemicals such as alkaloids, flavonoids, saponins, tannins, steroids, glycosides and phenols. And the presence and absence of phytochemicals were found and mentioned.

4.CONCLUSION

Herbal oil is one of the most well-recognized hair treatments. India has a wide variety of medicinal herbs with various cosmetic and healing properties. The herbal extracts and constituents chosen for the formulation of hair oil were reported to have antidandruff, hair thickening, and hair fall control properties, which used together elicited a synergistic effect in

promoting healthy and shiny hair growth. All the values of evaluation showed that they are within the acceptable limit. Due to the addition of Neem it also acts as antidandruff hair tonic. Amla helps in thickening and blackening of hair. Hibiscus helps in hair softening resulting in healthy growth. All these dried and powdered drugs mixed with coconut oil in sufficient quantities will give a permanent solution for hair fall and proper hair growth. In this research, the effective properties of the herbal hair pack were disclosed and further studies are required to find out more values that can be added on by this hair pack. Natural remedies are majorly being used nowadays around the world with open hands, as they are safer with minimal adverse effects as compared to chemical based products. Herbal formulations are fulfilling the needs of the growing world market. It is an attempt to formulate the herbal hair pack containing the rich qualities of different crude plants, which are essential for the different aspects of hair care. Hence, it is concluded that the formulated hair oil provide good hair growth, protection from dandruff, gives lustrous and shiny hairs as compare to marketed formulation.

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