

Phytonova: A Polyherbal Therapeutic Oil Formulation

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ABSTRACT - Human hair is very important to our personalities, and we use a lot of cosmetics to take care of it. There are some synthetic medications for hair loss that display serious adverse effects in addition to not providing a lasting cure. Compared to synthetic formulations, herbal formulations always have action and have fewer or no negative effects. The purpose of this study was to evaluate the value of polyherbal hair oil in treating common hair issues such alopecia, baldness, hair loss, gray hair, dryness, and most types of dandruff. The composition contains a variety of natural substances, including coconut oil, camphor, curry leaves, almond, garlic, mehndi powder, neem, and castor oil. All natural nourishing preparations for dry scalp and hair combines herbal oil extracts traditionally used to treat hair conditions. These oils are used to treat hair problems like thinning of hair and dry or flaky scalp. Apart from their moisturizing purposes they are also used to promote hair growth, improve circulation of blood in the scalp, and prevent dandruff. The aim of present work is to formulate herbal hair oil from the leaves, flowers, fruits, seed and roots of herbal plants in coconut oil. The formulated hair oil was evaluated for different properties such as phytochemical tests, specific gravity, saponification value, skin irritation test, Peroxide value, pH, HPTLC. In future it can be used for treatment of various scalp and hair treatments and improve the hair texture.

KEYWORDS – Herbal hair oil , herbs, formulation , evaluation , result and discussion.

Table 1: Ingredients name and its uses

Sr no	Ingredients Name	Uses
1	Amla (<i>Embilica officinalis</i>)	Hair conditioner, treats scalp ailments, promotes hair growth.
2	Methi (<i>Trigonella foenumgraecum</i>)	prevent baldness, contain nicotinic acid which encourages hair growth and lecithin with energizing hair follicles
3	Hibiscus (<i>Hibiscus Rosa sinensis</i>)	Hibiscus consists of calcium, phosphorus, iron, copper, zinc, vitamin etc. used to stimulate thicker hair growth by strengthening the strands and prevents premature graying of hair
4	Neem (<i>Azadirachta indica</i>)	Neem contains several fatty acids such as linoleic acid, stearic acid, oleic acids that nourishes and revitalize rough hair to a smooth silky texture

5	Curry leaves (<i>Murraya koenigii</i>)	Antibacterial ,Antiseptic, Antifungal anti-inflammatory properties which fights against dandruff and infections of the scalp
6	Ashwagandha (<i>Withania somnifera</i>)	Ashwagandha has antioxidant and hormone balancing properties which reduces hair fall and promotes shiny hair
7	Brahmi (<i>Bacopa monnieri</i>)	Brahmi contains alkaloids which enhance protein kinase activity and relieve stress.
8	Coconut oil	Vehicle, relieve Skin Irritation etc

INTRODUCTION - One of the most vital components of the body is the hair, which affects a person's entire appearance and beauty. When it comes to hair care, we frequently use a variety of products to cleanse, alter the texture of hair, cure stressed hair, and feed the hair. One of the essential bodily elements, hair is formed from the ectoderm of the skin and functions as both a decorative structure and a sebaceous gland. The hair has no neural connections and is a dead tissue. Herbal formulation is an ancient methodology because its origin of was found in the holy Vedas and in Unani scriptures. A large number of herbal oils have been formulated till date, of which very few are reported to show maximum activity. Polyherbal hair oil not only moisturizes scalp but also reverse dry scalp and dry hair conditions. Herbal cosmetics were gaining tremendous demand in the world market. There is a wide range of herbal cosmetic products used as beauty regime to satisfy the purpose of beautification. Adding herbs in cosmetics is safer for our skin. Herbal hair oils were serving the purpose of hair treatment. Herbal hair oil not only moisturizes scalp but also reverses dry scalp and dry hair conditions. It provides numerous essential nutrients required to maintain normal functions of the sebaceous gland and promote natural hair growth.

2. Materials and Methods

2.1 Raw Materials

For the preparation of polyherbal hair oil various plant materials were collected viz., Amla, Fenugreek, Hibiscus, Neem, Curry leaves, Ashwagandha, Brahmi,alovera,onion, Coconut oil from the local market.

2.3Factors of hair loss:

There are several factors for the hair loss ; some of the main factors are given below – Acute illness.

- Autoimmune disorder
- Chemicals
- Hair dye
- Poor blood circulation
- Nutritional deficiencies
- Diabetes
- Chemotherapeutics agents
- Hair loss from childbirth
- Hair styling products
- Hair styling techniques
- Other fungal infection
- Physical trauma to scalp

3. Formulation of Polyherbal hair oil

Herbs of all the crude drugs are collected and dried under shade. The dried crude drugs were made into coarse powder by using mixer. Later on all these coarsely powdered drugs are passed through mesh number 80. Thus obtained powders are blended together to get a uniform mixture. Now coconut oil is added and mixed well. Now the contents were boiled for 15 min and were filtered through muslin cloth. To the filtrate coconut oil was added to make up the volume. Finally small amount of flavouring agent was added to the oil and it was placed in amber coloured bottle.

Table 2: List of ingredients used for Polyherbal hair oil preparation

Sr No.	Ingredients	Part used	Quantity
1	Amla	Fruit	9gms
2	Fenugreek	Seed	9gms
3	Hibiscus	Flowers	9gms
4	Neem	Leaves	9gms
5	Curry Leaves	Leaves	9gms
6	Ashwagandha	Root	9gms
7	Brahmi	Leaves	9gms
8	Coconut oil		100ml

3.1. Evaluation of Polyherbal hair oil

1. Organoleptic Property

1. Color: Detected by naked eyes.
2. Sensitivity: Applied to the skin and exposed to the sunlight for 5 minutes to check for any irritation over skin.
3. Sedimentation: Keep the whole preparation aside for overnight and check for sedimentation.
4. Grittiness: Rubbed to the skin and observed.
5. Wash ability – After applying herbal oil to the hair, it was washed with tap water
2. Ph – Ph of the herbal oil was detected using ph meter. Take the formulated oil in the beaker individually now deep the pH meter in beaker and weight for 1 minute till the readings come, as the pH meter show reading note it down individually . Before using pH meter deep it into the water.

3. Viscosity:- Ostwald's viscometer was used to measure viscosity. Measurement of Viscosity Ostwald's Viscometer was used to measure the prepared herbal hair oil's viscosity at room temperature. After adding oil to the viscometer, the oil is suctioned into the upper reservoir and allowed to return to the lower reservoir. Measured is the amount of time the liquid takes to move between two engraved markers, one above and one below the upper reservoir.

4. Specific gravity:- Using a specific gravity bottle or a pycnometer, the specific gravity of the prepared oil was ascertained. Two specific gravity bottles should be taken, cleaned with distilled water, dried in an oven for fifteen minutes, cooled, then sealed with a cap and weighed. Now pour the sample into the same specific gravity bottle, screw on the cap, and weigh it once more. Subtract the weight (b-a) to find the sample's weight per millimeter.

5. Acid value –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

6. Saponification value - After precisely weighing 2g of oil, it was added to a 250ml iodine flask. After adding 25 milliliters of 0.5M alcoholic potassium hydroxide, the mixture was refluxed for 30 minutes on a water bath. As an indicator, phenolphthalein was added, and 0.5M HCl ('a' ml) was used for titration. A similar blank ('b' ml) was carried out without the sample. Saponification Value: $28.05(b-a)/w$ Where, w= weight in grams of the solution.

4. RESULT AND DISCUSSION

One of the most well-known hair treatments is herbal hair oil. Herbal hair oil treats dry scalp and hair conditions in addition to hydrating the scalp. It supports the growth of natural hair and offers a variety of vital nutrients needed to keep sebaceous glands functioning normally. Several herbs were used to prepare the herbal hair oil, depending on how important they were to the recipe. The evaluation of the herbal hair oil included measures such as sensitivity test, viscosity, pH, acid value, saponification test, and refractive index. As a result, the current study revealed that the synthesized herbal hair oil satisfies optimal standards. Its effectiveness is established by additional standardization and biological screening.

Table No.2 Result of evaluation test

Sr.No.	Parameters	Observation
1	Colour	Greenish brown
2	Odour	Characteristic
3	Specific gravity	0.94
4	Viscosity	0.961 Poise
5	Ph	6.8
6	Acid value	4.5
7	Saponification value	112.05
8	Irritation test	No irritation
9	Refractive index	1.402

5. CONCLUSION:-

The use of herbal cosmetics by humans has increased during the past few decades. Natural cosmetics are safer to use than traditional beauty products. The current experimental investigation has demonstrated that we can create an organic polyherbal hair oil that works well for treating a variety of hair problems, including dandruff, hair loss, lice treatment, and psoriasis on the scalp. This oil is made from multiple herbal constituents. The personal hygiene and health care system were greatly improved by the use of herbal hair oil in cosmetics. One of the most popular hair treatments is herbal oil. Utilizing several herbal components, each with unique benefits when combined well, will have a positive impact on hair growth.

The primary goal was to create a polyherbal hair oil that would strengthen and nourish hair while also solving other issues including dryness. The herbal hair oil including ingredients like coconut oil, castor oil, almond oil, henna, neem, amla, and curry leaves was shown to be effective. It was determined that the designed polyherbal hair oil has good nourishing qualities for hair. Guidelines for using herbal ingredients to prepare herbal hair oil with little to no negative effects are provided by this research. Since all of the additional substances have numerous benefits and all the parameters indicated that they are within acceptable bounds, this oil will aid in promoting healthy hair development, turning gray hair black, preventing dandruff, and producing hair that is glossy. Hair oil has therapeutic value in the treatment of numerous different illnesses. Several metrics are used to assess the herbal hair oil, and the outcomes are also compared to benchmarks.

A variety of criteria, including pH, viscosity, specific gravity, acid value, color, grittiness, sensitivity, and sedimentation, were used to formulate and assess the product. Ultimately, it can be said that the formulas of poly herbal hair oil are quite high quality. In quality control tests, our manufactured herbal oil performed similarly to commercially available oil; nonetheless, more study and improvement are needed to raise the oil's overall caliber.

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