

A REVIEW ON FORMULATION AND EVALUTION HERBAL HAIR OIL

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ABSTRACT

Beauty and cosmetic concept is an ancient as mankind and civilization. Cosmetic play a vital role in human life. Herbal cosmetic is one of the most effective areas of cosmetic technology. Herbal cosmetics are developed by the coalition of bioactive ingredients and pharmaceutical products Herbs are used for beautification purpose of body. Preparation of cosmetics flavouring and colouring agent. Hair plays a vital role in personality of human and we use a lots of cosmetics product for the care of hair.

The study aims reviewing the important of herbal hail and their use in the common hair problem such as baldness. Hair fall hair dryness dandruff etc. various beauty and products are used which contain herbs to give young and charming look. Various herbal ingredients are used in herbal hair formulation. They provide essential nutrients such as vitamins antioxidant etc. Herbal hair oil has been widely used for nourishment of hair and for the protection of hair from hair fall and hair damage. Now a day's side effect is a major problem after using any beauty product due to which herbal product are preferred because of having less probability of any types of side effects.

Keywords: Cosmetic, Herbal, Antioxidant, Herbal Hair Oil, Baldness.

I. INTRODUCTION

Pharmacognosy, the branch of knowledge concerned with the medicinal drugs obtained from plants or other natural sources. It deals with the naturally occurring constituents which have medicinal activities. In Indian systems of medicine the drugs may be from plant sources, animalsources or of mineral origin which are used in natural or so called "Crude" form either singly or in combination to make compound formulations. Pharmacognosy has a close relation with Ayurveda, as both deals with the medicinal plants.

The word cosmetics is defined as that article which is rubbed, poured, sprinkled or applicable to any part of human body for the purpose of cleansing, beautifying or enhancing the appearance is called as cosmetics. Herbal cosmetics are prepared by the association of bioactive ingredients and pharmaceutical products. The word cosmetic is defined s that article which rubbed, poured,sprinkled, or applicable to any part of human body for the purpose of cleansing, beautifying the appearance is called as cosmetics. Cosmetic include skin care creams, lotions, powders,

perfumes, lipsticks, fingernail, and toe nail polish, eye and facial makeup, permanent waves, colored contact lenses, hair colors, Hair spray and gels, deodorant, baby products, bath oils, bubble bath, bath salts, butters and many other types of products

• HRBAL OIL:

Herbal oils, also known as oil extracts, are obtained from herbs and plant sources; they possess therapeutic benefits. It is well-known that synergistically a combination of nutrients, bioactive components, antioxidants and bio stimulants proved to be more effective.

• USES:

It provides natural goodness to hair. Herbal hair oil contains vitamins and micro nutrients which acts as food for your hair.

Hair oil helps in preventing hair loss and tames frizzy hair. Hair ends needs special care and herbal hair oil pampers them through their nutrients

Natural hair oils contains some rare fatty acids which makes them shinny and lustrous.

• **DRUG AND COSMETICS ACTS: 1940 AND 1945**

The Drugs and Cosmetics Rules, 1940 are the rules which the government of India established through the Drugs and Cosmetics Act, 1940. These rules classify drugs under given schedules and present guidelines for the storage, sale, display and prescription of each schedule.

II. METHODS

• **Formulation of Herbal Hair Oil :**

Different ingredients used in the formulation herbal hair oil are presented in Table 1. precisely all the dried and fresh herbs Tulsi, Hibiscus, Shikakai, Aloe Vera pulp & Fenugreek were weighed and triturate in the mortar & pestle and mixed in 6% of Almond oil. The above content was boiled for 15 min and was filtered through muslin cloth.

➤ **Evaluation of Herbal Hair Oil:**

The formulated herbal hair oil levied to physical and biological evaluation.

• **Sensitivity Test:**

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

1. Preparation of 0.1 molar solution:

Weighed 0.56 g KOH pellets and dissolved in 100 mL of distilled water and stirred continuously. The prepared 0.1 molar KOH solution was filled in the burette.

2. Preparation of sample:

10 mL oil was measured and dissolved in 50 mL of 1:1 ethanol and ether mixture and shaken vigorously. 1 mL of phenolphthalein solution was then added and titrated with 0.1 molar KOH solution.



Fig.No.01. Sensitivity Test

• **Saponification value:**

To accurately weighed 1 mL of oil in a 250 mL of conical flask, 10 mL of ethanol: ether mixture (2: 1) was added. To this 25 mL of 0.5 N alcoholic KOH was added and was kept undisturbed for 30 min. and the flask was cooled. This solution was titrated against 0.5 N HCl using phenolphthalein indicator. Similarly, the blank titration was performed without taking oil (sample). Amount of KOH in mg used was calculated using formula,

$$\text{Saponification Value} = 56.1(B-S) NW$$

Where, B= Volume in mL of standard Hydrochloric acid required for the blank. S= Volume in mL of standard Hydrochloric acid required for the sample. N= Normality of standard Hydrochloric acid. W= Weight of the oil taken in gms for the test.

• **pH:**

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

• **Viscosity:**

The viscosity was determined using Ostwald's viscometer.

- **Specific gravity:**

Specific gravity bottle was rinsed with distilled water, dried in hot air oven for 15 minutes, cooled, capped, weighed and was noted as (a). Now the same specific gravity bottle was filled with the sample, capped and again weighed (b). Weight of the sample per milliliter was determined by subtracting the weights (b-a) (Singh, 1996).

➤ **GUIDELINES:**

Building and Facilities Check whether Buildings used in the manufacture or storage of cosmetics are of suitable size, design and construction to permit unobstructed placement of equipment, orderly storage of materials, sanitary operation, and proper cleaning and maintenance Floors, walls and ceilings are constructed of smooth, easily cleanable surfaces and are kept clean and in good repair Fixtures, ducts and pipes are installed in such a manner that drip or condensate does not contaminate cosmetic materials, utensils, cosmetic contact surfaces of equipment, or finished products in bulk.

- **PERSONAL:**

The personnel supervising or performing the manufacture or control of cosmetics has the education, training and/or experience to perform the assigned functions. Persons coming into direct contact with cosmetic materials, finished products in bulk or cosmetic contact surfaces, to the extent necessary to prevent adulteration of cosmetic products, wear appropriate outer garments, gloves, hair restraints etc., and maintain adequate personal cleanliness. Consumption of food or drink, or use of tobacco is restricted to appropriately designated areas.

- **RAW MATERIAL:**

The basic raw material for the unit is good quality coconut oil, soya bean oil etc. to be utilized as base oil, other Herbal oils and perfumes, and colors. Besides, the unit will also require bottles, plastic pouches, and other packaging material. The annual requirement of raw material and chemicals is estimated to be Rs. 50.42 lakhs. The packing may be of two types for retail sale and for bulk sale. Packing material should be such so as to properly handle fragile goods.

III. LICENSE OBTAINED

Ensuring everyone has equal and fair access to drugs and medicine is the primary concern of any government. But the right to manufacture and sell drugs and medicines has to be given cautiously. Hence the government has stringent rules for granting licenses for the manufacturing and selling of drugs and medicine. The Act that governs the end to end process from manufacture to the sale of drugs in India is the Drugs and Cosmetics Act, 1940.

- Manufacturing License issued to a business that manufactures drugs inclusive of allopathic/homoeopathy medicines.

- Sale License issued for the sale of drugs. has the following bifurcations: -

Wholesale Drug License- Retail Drug License

- Wholesale License - A drug wholesaler must obtain a wholesale license. Wholesale means the sale of the drug to a person/retailer to further sell it.

IV. APPLICATION FOR A DRUG LICENCE

The following are the steps to be taken for obtaining the drug license.

- The applicant must apply online for the license as per the line of business, for which he/she must have a valid email id and contact number.

- The next step is to keep all the documents updated.

- Next is to upload the documents and the form along with the applicable fees. Upon completion of the online process, an inspector will visit the site and verify the Validity of documents.

V. DOCUMENTATION

Good documentation is an essential part of the quality assurance system and, as such, should exist for all aspects of GMP. Its aims are to define the specifications and procedures for all materials and methods of manufacture and control; to ensure that all personnel concerned with manufacture know what to do and when to do it; to ensure that authorized persons have all the information necessary to decide whether or not to release

a batch of a medicine for sale; to ensure the existence of documented evidence, traceability, and to provide records and an audit trail that will permit investigation. It ensures the availability of the data needed for validation, review and statistical analysis. The design and use of documents depend upon the manufacturer. In some cases some or all of the documents described below may be brought together, but they will usually be separate.

▪ **CURRENT GOOD MANUFACTURING PRACTICE (CGMP) REGULATION:**

FDA ensures the quality of drug products by carefully monitoring drug manufacturers' compliance with its Current Good Manufacturing Practice (CGMP) regulations. The CGMP regulations for drugs contain minimum requirements for the

methods, facilities, and controls used in manufacturing, processing, and packing of a drug product. The regulations make sure that a product is safe for use, and that it has the ingredients and strength it claims to have.

The approval process for new and generic drug marketing applications includes a review of the manufacturer's compliance with the CGMPs.

• **ICH GUIDELINES FOR STABILITY STUDY:**

➤ Designing a cosmetic stability study

A stability study should include the following considerations (each of which will be Discussed in more detail later):

Designing a cosmetic stability study

- Identify tests that will "accelerate and predict" the effects of normal conditions of Storage and use. Where relevant, consider stresses, including temperature, that will enable assessment of product integrity under anticipated product exposure conditions.
- Consider variation in process conditions.
- Consider the impact of packaging on the contained product, as well as any effects Which the product might have on the packaging.

VI. COSMETICS SCIENCE HERBAL HAIR OIL

• **Definition:**

Hair oil is an oil-based cosmetic product intended to improve the condition of hair. Various types of oils may be included in hair oil products. These often purport to aid with hair growth, dryness, or damage

• **Requirements of a Herbal Hair Oil:**

1. It should be easily removed on rinsing with water.
2. It should leave the hair non dry, soft, lustrous with good manageability and minimum Flyaway.
3. It should impart a pleasant fragrances to the hair. 4. It should not cause any side effects /irritation to skin or eye. It should not make the hand rough and chapped

• **Composition of Herbal Hair Oil :**

A composition of hair oil for stimulation of hair growth, control of hair fall, dandruff and infections thereof, comprises following active ingredients:

- Aloe Vera pulp
- Tulsi
- Hibiscus
- Shikakai
- Coconut oil
- Almond oil
- Fenugreek
- Jasmine Oil

➤ STANDARD OPERATING EQUIPMENT:**a) Weighing Balance:**

A weighing balance is an instrument that is used to determine the weight or mass of an object.

**Fig.No.02.** Weighing Balance**b) Ph Meter:**

This instrument measures acidity/alkalinity of a solution.

**Fig.No.03.** Ph Meter**c) Ostwald's Viscometer:**

A viscometer is an instrument used to viscosity of a fluid.

**Fig.No.04.** Ostwald's Viscometer**VII. PREPARATION AND EVALUATION OF HERBAL HAIR OIL****▪ HERBAL HAIR OIL:**

A nutrient rich botanical blend that moisturizes conditions and strengthens scalp and hair Strands. It stimulates healthy hair growth and is rich in ingredients that combat damage caused by the environment, pollutants and the sun. A perfect hair styling product that gives your hair a beautiful shine.

**Fig.No.05.** Herbal Hair Oil

▪ **Definition:**

"Herbal hair oils are natural oil products with essential properties to treat hair problems like thinning of hair and dry or flaky scalp."

VIII. IDEAL CHARACTERISTICS OF HERBAL HAIR OIL

The ideal requirements for good herbal hair oil may be follows:

1. It should be promoting blood circulation in the scalp.
2. It should be adding volume to the hair.
3. It should be helping in preventing severe dandruff and dry scalp.

FORMULA:

➤ **Composition of Herbal Hair Oil :**

Table-1

Sr.No	Ingredient	Quantity
1	Alover Pulp	4 gm
2	Tulsi	2 gm
3	Hibiscus	2 gm
4	Shikakai	2 gm
5	Fenugreek	4 gm
6	Coconut oil	10 ml
7	Almond oil	12 ml
8	Jasmine Oil	2 ml
9	Vitamin E	2 ml

▪ **Materials And Methods Collection of Plants:**

The parts of plants like shikakai (powder), Fenugreek (seeds) were collected from the local market. Aloe Vera pulp (Leaves), Tulsi (Leaves), Hibiscus (flower). They are dried in sunlight, converted into coarse powders. The extracts were prepared by decoction method & the prepared extracts were stored in well closed containers.

➤ **Role of Herbs In Herbal Hair Oil:**

➤ **Preparation Of Herbal Extract:**

Table -2

<u>Ingredient</u>	<u>Importance</u>
Coconut oil	Moisturerise dry hair
Almond oil	Treat hair loss and strengthens the hairs
Tulsi	Antibacterial
Hibiscus	Control pre mature graying
Shikakai	Anti-dandruff
Jasmine Oil	Conditioning agent, Provides good odour
Fenugreek	Hair growth
Alovera Pulp	Boosting scalp health
Vitamin E Oil	Preservative

➤ **Ingredient of Herbal Extract:**

Table- 3

<u>Plant</u>	Part	Quantity for 20 MG
Alover Pulp	Leaves	4% (4GM)
Tulsi	Leaves	2%(2GM)
Hibiscus	Flowers	2%(2GM)
Shikakai	Fruit Pods	2%(2GM)
Fenugreek	Seeds	4%(4GM)

IX. RESULT

Herbal oil provides numerous essential nutrients required to maintain normal function of sebaceous glands and promotes natural hair growth. The utilization of herbal cosmetics.

X. CONCLUSION

Enhanced many folds in personal hygiene and healthcare system. Hence, there a tremendous clamor for the herbal cosmeceutical individual care or personal health care industry, which is Presently focusing and paying extra diligence on the development of herbal based cosmetics. Asnowadays, it is a fast developing segment with a mammoth scope of manifold boost in coming years. Use of bioactive ingredients in cosmetic formulations have valuable effect on body Features and provide nutrients, which are essential for maintaining healthy and beautiful hairs. At last it can be concluded that, this herbal hair oil formulation has significant quality.

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