Formulation and Evaluation of Polyherbal Hair Oil

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Abstract: *Herbal cosmetics are now widely used by the general public due to the concept of low side effects and high safety. The purpose of this study is to use various herbs to formulate herbal oils for general purposes (application to hair). The blended hair oil contains a variety of herbs traditionally used for hair growth, such as hibiscus, shikekai, amla, neem, curry leaves, aloe vera and coconut oil. The evaluation of the produced polyherbal hair oil was performed based on various parameters such as the following. B. Functional phytochemicals, density, pH, viscosity, acid value, saponification value. The prepared formulation is evaluated for the primary skin irritation test of the forearm. It turns out that the above parameters are good and meet the criteria. Therefore, it can be concluded that this oil is beneficial in maintaining good hair growth, darkening white hair, providing protection against dandruff and resulting in shiny hair.*

Keywords: Herbal, Cosmetics, Evaluation

I. INTRODUCTION

Hair loss is a distressing situation for more quantity of fellows and women. Therefore it's miles of awesome significance to broaden new theories for the remedy of hair loss. A massive quantity of natural oils had been formulated until date, of which only a few are said to expose most hobby. Along with accurate shampoo and conditioner, awesome hair oil completes hair care. Hair is one of the crucial elements of the frame taken into consideration to be defensive appendages at the frame and accent shape of the integument together with sebaceous glands, sweat glands and nails. The primary a part of hair is bulb (a swelling at the bottom which originates from the dermis), root (that is the hair mendacity under the pores and skin surface), shaft (that is the hair above the pores and skin surface) 1. Hair loss is a dermatologic disorder, and the surge for coming across herbal merchandise with hair boom selling capacity is continuous. Each hair grows in 3 cyclic phases` viz., anagen (boom), catagen (involution) and telogen (rest). In conventional Indian machine of medication many flowers and natural formulations are said for hair boom merchandising in addition to development of First-rate of hair. Hair is a protein filament that grows from follicles determined withinside the dermis. Hair performs a crucial position withinside the persona of human and for his or her care we use plenty of beauty merchandise. Herbal formulations constantly have hobby and relatively lesser or no facet results with synthetic. This have a look at aimed toward reviewing the significance of polyherbal hair oil for the remedy of not unusualplace hair issues along with baldness, alopecia, hair fall, grey hair, dryness, and maximum not unusualplace dandruff. Herbal care merchandise are described as the ones components that are used for cleansing , enhancing texture of hair, converting of colour, giving lifestyles to harassed hair and offer nourishment to the hair. The diverse natural substances are used withinside the components are: hibiscus , curry leaves ,Amla , Neem, shikekai , Coconut oil. All substances offer important vitamins along with vitamin, antioxidant, protein, terpenoids, and lots of important oils to hold ordinary feature of sebaceous glands. The formulated oil became evaluated for its organoleptic properties, acid value, saponification value, viscosity, pH etc. All the parameters had been determined to be accurate and with inside the standards.

II. PLANT PROFILE

A) Hibiscus Rosasinesis

Fig 1. Hibiscus

Biological source – dried leaves of hibiscus Rosa sinesis.

Family – Malvaceae.

Uses – Nourishes and thickens hair. Emollient, mind tonic, boom of hair, blackening of hair, Luster of hair ,laxative, pores and skin diseases, menorrhagia, remedy of bronchial catarrh, antiscorbutic, depurative.

Plant component used-Leaf

B) Curry leaves

Fig 2. Curry leaves

Biological Source – The species call commemorates the botanist Johann König. The genus Murray commemorates Swedish doctor and botanist Johann Andreas Murray who died in 1791. Hence the botanical call of the curry leaves is Murraya koenigii.

Family – Rutaceae

Uses – Use prevents hair fall and untimely graying of hair.

Plant element used- Leaf

C) Neem

Fig 3. Neem

Organic sources of Neem include fresh or dried leaves and seed oils of Azadirachta indica J. Juss (Melia Indica or M. azadirachta Linn.)

Family- Meliaceae

Uses- Neem, known for its medicinal properties, is an effective hair loss herb. Due to its antibacterial, antifungal, and anti-inflammatory properties, neem is a great way to fight dandruff. It helps the hair follicles to grow stronger and also promotes hair growth. Plant Parts Used Leaves.

D) Aloe Vera

Fig 4. Aloe Vera

Organic source-Aloe vera dried leaves

Family -Liliaceae

Uses -conditioner and moisturizing effect to remove dandruff, promote hair growth and nourish hair. The combination of aloe pulp and coconut oil is rich in vitamins and minerals. Used as hair and scalp oils, these oils result in healthy, strong, dandruff-free hair (hair dandruff prevention effect).

Plant part- All plants are used.

E) Amla

Fig 5. Amla

Biological Sources-Dried fruits of Philanthus envirica.

Family-Phylanthaceae.

Use-Hair conditioner, treats scalp diseases and promotes hair growth. Amla is rich in vitamin C, tannins, phosphorus, iron, calcium and other minerals that nourish the hair and cause thick, black hair.

Plant parts used-fruits

F) Shikekai

Fig 6. Shikekai

Organic Source -It consists of the fruit of the Acacia tree. Linn.

Family –Legumenosae

Uses - It is used as a natural cleanser for sensitive scalps or to control dandruff. It promotes hair growth, strengthens hair roots and gives long beautiful hair. They are used for herbal hair oils.

Plant Parts Used – Fruit

G) Coconut Oil

Fig. 7 Coconut oil

Biological Source – Oil is derived from dried fruits of Cocus nucifera.

Family – Arecaceae

Uses – Nourishes of hair, moisturizing effect vehicle, stimulates hair growth by unclogging poers.

Plant part used – Fruit

III. MATERIALS AND METHODS

3.1 Collection of Plant Materials

Polyherbal hair oil is prepared by collection and using different plant material, this isHibiscus flower leaves, curry leaves , neem leaves, aoe vera , amla, shikekai, coconut oil collected from local areas

Formulation of Polyherbal Hair Oil

All herbal herbs are collected and dried in the shade. Shade Drying under retains active ingredient. Therefore, shading dry takes precedence over artificial dry. Dried raw pharmaceuticals were processed into coarse powder using a blender. All this powder is about medicine istransmitted through sieve number 80. Now, get flour is mixed together to get a homogeneous mixture. Now coconut oil and Aloe Vera pulp are added. This all dry powder in mix well. Now contains boiled 15min and filtered through muslin cloth.In the filtered water, coconut oil is added to give a finally prepare polyherbal hair oil and this is placed in an amber jar.

Table 1 Formula for Herbal Oil

Sr. No	Ingredients	Quantity
1	Hibiscus rosasinesis	6 gm
2	Curry leaf	6 gm
3	Neem	6 gm
4	Aloe vera leaf	6 gm
5	Amla	6 mg
6	Shikekai	6 mg
7	Coconut Oil	50 l

IV. EVALUATION OF PREPARED HAIR OIL

The blended herbal oils were evaluated for parameters such as pH, acid value, saponification value, refractive index, viscosity and sensory parameters.

4.1 Acid Value

10 ml of oil was mixed with 25 ml of ethanol and 25 ml of ether. Phenolphthalein was added as an indicator and titrated with 0.1 M potassium hydroxide solution.

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Acid value = 5.61n / w Here,
N = number ml0.1M KOH
W = oil weight

4.2 Saponification Value

2 g of oil was accurately weighed and transferred to a 250 ml iodine flask. 25 ml of 0.5 M alcoholic potassium hydroxide was added and refluxed on a water bath for 30 minutes. Phenolphthalein was added as an indicator and titrated against 0.5 M HCl ('a' ml). A similar blank was run without a sample ("b" ml). Number of saponifications: 28.05 (b-a) / w where,   W = Weight in grams of solution.

4.3 pH

The pH of herbal oil was measured with a pH meter.

4.4 Viscosity

Viscosity was measured with an Ostwald viscometer

4.5 Relative Density

Take a Relative Density Bottle, rinse with distilled water, dry in the oven for 15 minutes, cool, close with a cap and weigh (a). Then fill the bottle with the same density, close it with a cap, and weigh it again (b). Subtract to determine sample weight per milliliter weight (b-a).

4.6. Sensory Properties

Color, odor and skin irritation were measured manually. The oil was applied to the hands and exposed to sunlight for 5 minutes to check for skin irritation.

V. RESULT AND DISCUSSION

Herbal hair oil was formulated by adding the require amount of herbal ingredients as a given in formulation.

Table 2: Characteristics of herbal oil

Sr. No.	Evaluation parameter	Observation
1	Colour	Greenish brown
2	Odour	Characteristics
3	Sensivity Test	No irritation
4	Irritation Tes	No irritation
5	Specific gravity	1.072
6	Viscosity	0.095 poise
7	Saponification value	115
8	Acid value	5.5
9	pH	Neutral

Therefore, from this study, it was found that the blended herbal hair oil had the optimum criteria, and further standardization and biological screening established the effectiveness of the blended herbal hair oil. This study provides guidelines for using herbal ingredients in the preparation of herbal hair oils with minimal or no side effects. This oil maintains good hair growth, darkens gray hair and protects it from dandruff, as all evaluation parameters have been shown to be within limits and all added ingredients have many advantages. And the hair will be shiny.

VI. CONCLUSION

The main purpose was to formulate polyherbal hair oils that improve and strengthen hair through other issues such as proper nutrition and dryness. It was found that herbal hair oil contains ingredients such as hibiscus, curry tree, amla, neem, curry leaves, aloe vera, and coconut oil. This multi-herbal hair oil was made by grinding coconut oil and

blending it into a mixture. The above contents were boiled for 15 minutes. Filtered with a muslin cloth. Aloe vera reduces dandruff. The herbal hair oil produced was evaluated using an evaluation test and showed satisfactory results. It was concluded that the compounded polyherbal hair oil has excellent hair care properties.

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