

Preparation and Evaluation of Herbal Hair oil

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Abstract:

Herbal Hair oil is the most important concept for the natural and healthy growth of hair with nil side effects. Due to better security and safety profile with lesser side effects as compared to synthetic drugs, herbal hair oil is widely used by the common people. Each drug is tested for its hair growth activity of concentration ranges between 1 to 10 % individually.

There are a lot of herbs used for the preparation of hair oil and it has significant for hair growth. The aim of present study involves the preparation of hair oil with the use of some naturally occurring herbs. These are namely Amala, Ashwagandha, Neem, Shatavari, Kapur, Pudina, Sunflower Oil, Reetha, and Til oil.

Keywords: Herbal Hair oil, Formulation, Cosmetics, Herbs, Evaluation.

Introduction:

Hair is one of the most important part of the body as it impact the beauty and overall appearance of any individual. For hair care we often use various hair care products for cleansing, modifying the texture of hair, treatment of the stressed hair and providing nourishment to the hair. Generally we are using various synthetic products for hair care and hair treatment. Sometimes these synthetic products are showing few to many unwanted side-effects instead of treating the particular problems. In order to come out from this issues we have formulated Poly herbal hair oil by using various types of oils like Amala, Ashwagandha, Neem, Shatavari, Kapur, Pudina, Sunflower Oil, Reetha and Til oil. The demand of herbal cosmetics increases day by day in world market and are in an precious gift of nature. Their area Eide range of herbal cosmetics products to satisfy beauty regime. Adding herb in cosmetics is very safe for our skin.^[1] Cosmetics are substances applied to the human body to improve its appearance or odour. Cosmetic products include eye and facial makeup, permanent waves, coloured contact lenses, hair colours, hair sprays and gels, deodorants, baby products, bath oils, bubble baths, bath salts, butters, and many other kinds of items. They also include skin-care creams, lotions, powders, perfumes, lipsticks, fingernail and toe nail polish, as well as eye and facial cosmetics. Makeup is a term used to describe a subset of cosmetics; primarily coloured products used to change the appearance of the person. The difference between care cosmetics and decorative cosmetics is made by several

manufacturers.^[2]A protein filament known as hair develops from dermal follicles. One of their most distinctive characteristics is mammalian hair. Although hair is most frequently associated with the growth, types, and maintenance of hair, it is also an important biomaterial made primarily of proteins, especially alpha-keratin. In cosmetics, dandruff, hair loss, dryness, split ends, frizz, dullness, heat damage, colour damage, grey hair, and other problems are frequent. To aid with these problems, a variety of products are on the market, including hair oils, shampoos, conditioners, serums, gels, masks, and colours.^[3]

Hair oils are hair care products used to treat and prevent hair loss, balding, and other hair-related conditions. Additionally, they encourage the luxurious growth of hair. As a hair tonic, hair oil containing herbal medications is utilised. Hair tonics and hair grooming aids are the two main categories for hair care products.^[4]

1.1 Aim :

- To Formulate and Evaluate Herbal Hair Oil.

1.2 Objective :

- To Promote hair growth and Smoothness of Hair.
- To Provide Vital Nutrients such as vitamins and minerals essential for hair growth.
- To Prevent dandruff, spit end, and dull hair.
- To provide and alternative source from hazardous.

MATERIAL AND METHOD USED FOR PREPARATION

Collection of Plant Material:

The herbal hair oil was prepared by collecting various plant materials like, Amala, Ashwagandha, Neem, Shatavari, Kapur, Pudina, Sunflower Oil, , Reetha and Til oil are procured from local market

1.Amala : (Table No. 1)

Biological source:	Dried Fruits of <i>Phyllanthus embilica</i> L.
Family :	Phyllanthaceae
Use :	hair conditioner, treats scalp ailments, promotes hair growth.



Fig. 1. Amala.

2] Ashwagandha: (Table No. 2)

Biological source:	root of the <i>Withania somnifera</i> plant
Family:	Solanaceae
Use:	helps in the visible reduction of hair loss, by strengthening the hair follicles.



Fig. 2. Ashwagandha

3] Neem: (Table. No. 3)



Fig. 3. Neem

Biological source: Dried leaves of A. Indica	
Family:	Meliaceae
Use:	Antimicrobial, antiseptic, antidandruff.

4] Shatavari: (Table No. 4)

Biological Source : Dried roots and leaves of the plant <i>Asparagus racemosus</i> Willd.	
Family :	Liliaceae
Use :	Hair Growth, It helps to produce breast milk in new mother's



Fig. 4. Shatavari

5] Pudina : (Table No. 5)

Biological Source : dried leaves and flowering tops of <i>Mentha piperita</i> L.	
Family :	Lamiacea
Use :	Flavouring agent etc.



Fig. 5. Pudina.

6] Sunflower Oil: (Table No. 6)

Biological Source : seeds of the sunflower	
Family :	Asteracea
Use:	Provides your scalp and strands with the nutrients needed for shiny, strong hair.



Fig.6. Sunflower seeds

7] Kapur : (Table No. 7)

Biological Source : distillation of the wood of the camphor tree	
Family :	Lauraceae
Use :	boosts hair growth and ensures better nutrition supply to the hair roots.



Fig. 7. Kapur

Biological Source : it consist of dried fruit of Sapindus Trifoliatus (S.1). Sapindus Mukorassi (N.L.)	
Family :	Sapindaceae
Use :	can be used as a cleanser for hair and a hair tonic as it forms a natural lather



Fig.8. Reetha

9] Til Oil : (Table No. 9)

Biological Source :	Seeds of Sesame
Family:	Pedaliaceae
Use:	may help reduce dandruff.



Fig. 9. Seeds of Sesame.

Formulation of Herbal Hair oil ^[1]

The various ingredients used in these formulation are described below in following table

(Table.1) collect all the ingredients in dried powered form such as, Amala, Ashwagandha, Neem, Shatavari, Kapur, Pudina, Sunflower Oil, , Reetha and Til oil. Was mixed in 63% of Til oil These mixture of all the content boiled for 15 minuts. And was filtered through muslin cloth . Sunflower oil added to make up the volume (100 ml). Finally small amount of color and flavouring agent was added to the amber color bottle.

Table. 10.

Ingredients Used for formulation of herbal hair oil.

Sr. No.	Ingredients	Quality %
1	Amala	85
2	Ashwagandha	7
3	Neem	2.5
4	Shatavari	2.5
5	Kapur	1
6	Pudina	1
7	Reetha	3
8	Til oil	63
9	Sunflower oil	Q. S.

Schematic Representation of Process Of Preparation of Herbal Hair Oil :

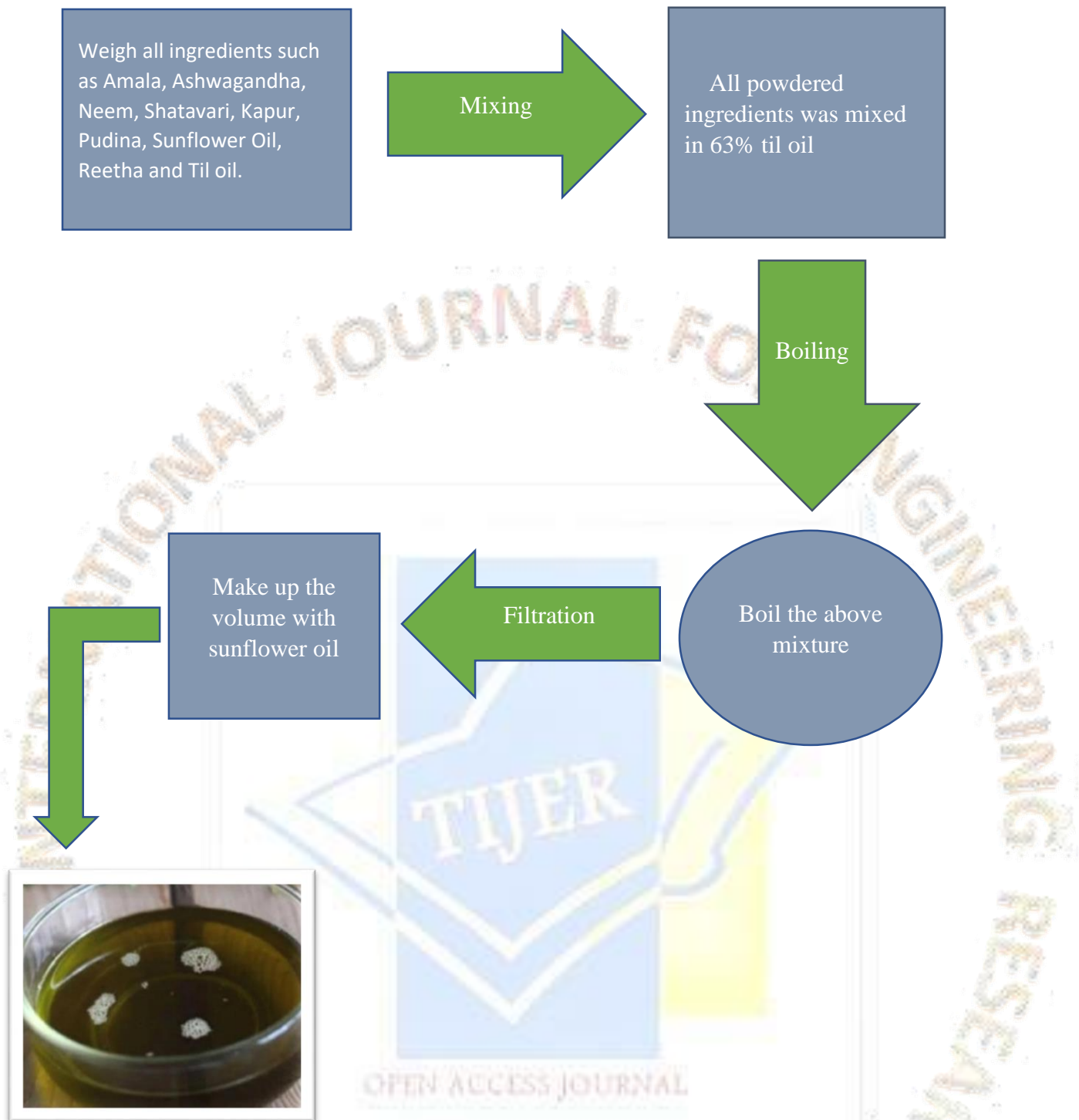


Fig. Final Product

(Herbal Hair Oil)

Evaluation of Herbal hair oil ^[6]

- **Acid Value :** Preparation of a 0.1 molar solution: weigh 0.56 g of potassium hydroxide pellets and dissolve in 100 ml of distilled water, stirring constantly. The prepared 0.1 molar KOH solution was poured into the burette. Sample preparation: measure 10 ml oil and dissolve in 25 ml ethanol and 25 ml

ether mixture and stir. 1 ml of phenolphthalein solution was added and titrated with 0.1 molar KOH solution.

- **Saponification value** : Accurately take weighed 1 to 2 g of oil sample to a 250 mL conical flask. Add 25.0 mL of 0.5 N alcoholic KOH, heat the flask on a steam bath under a suitable condenser and reflux for 30 minutes, inverting the contents frequently. Then add 1 mL of phenolphthalein and titrate excess KOH with 0.5 N HCL. Similarly, perform a blank titration (without taking an oil sample). Calculate the amount of KOH in mg.
- **Viscosity** : The viscosity of the prepared oil was determined using Ostwald Viscometer. Take a specific gravity bottle, rinse with distilled water, dry in the oven for 15 minutes, cool, close it with stopper and weigh (a). Now fill the sample with the same specific gravity, close it with the stopper and weigh it again (b). Determine the weight of the sample per millilitre by subtracting the weight (b-a).
- **PH:** PH of oil sample was determined by using digital PH meter. The most accurate common means of measuring of PH through a lab device called a probe and meter, a PH meter. The probe consists of a glass electrode through Which small voltage is passed. The meter, a voltmeter, measures the electronic impedance in the glass electrode display of Units instead of volts. A PH meter should be calibrated before taking measurement. with two standard sample solutions of known ph. Measurement is made by dipping ph electrode in the oil sample until a Reading is registered by the meter.
- **.Sensitivity Test** : Prepared herbal hair oil was poured and rubbed on skin of our hand and exposed to sunlight for some time. (4 to 5 minutes.).

Results and Conclusion : The formulated herbal hair oil provide nutrient to scalp needed for Shiny and strong hair Prevent hair loss help to keep Dandruff free Hair and Promote Hair Growth. These hair oil is prepared by using various herbs and their role given in following table.

Table No. 11.

Role of herbs used in preparation of hair oil are Given Below.

Sr. No.	Herbal Ingredients	Role
1	Amala	Hair Growth
2	Ashwagandha	Hair growth
3	Neem	Antimicrobial
4	Shatavari	Hair Growth
5	Pudina	Flavouring agent
6	Kapur	Stimulating agent
7	Reetha	Antidandruff
8	Til oil	Vehicle
9	Sunflower oil	Vehicle

Table no. 12. Evaluation of herbal Hair oil.

Sr. No.	Parameters	Results
1	Acid Value	4.48
2	Saponification Value	212.8
3	PH	6.4
4	Viscosity	0.976
5	Sensitivity Test	No Irritation

6	Specific Gravity	0.893
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