



FORMULATION AND EVALUATION OF HERBAL HAIR OIL

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ABSTRACT

Herbal formulations always have activity and comparatively lesser or no side Effects with synthetic. The growth activity in a concentration range for 1-10% separately. Excellent results of hair growth were seen in formulation prepared by boiling method of oil preparation technique. Natural remedies are acceptable in the belief that they are safer with fewer side effects than synthetic one. Herbal hair oil is one of the most well recognized for hair treatment. Herbal oil not only moisturizes scalp but also reserves dry scalp and dry hair condition. It provides various essential nutrients required to maintain function of sebaceous glands and promotes natural hair growth. Were subjected to test of sensitivity, pH, odour, colour etc. In Ayurveda medicine, herbs are used as an integral part of health care system. Besides healthcare, herbs are also used for beautification of the body and for preparation of various cosmetics and colors. The aim of present study involve preparation of poly herbal hair oil using fresh leaves of various plants. The prepared herbal oils were subjected to photochemical screening. The aim of present study involves preparation of poly herbal hair oil. Using the leaves in neem. The concept of beauty and cosmetics is as ancient as mankind and civilization. So, they use various beauty products that have herbs to look charming and young. Herbal cosmetics are now-a-days widely used by the common people because of concept of fewer side effect and with a better safety profile.

Key words: Dandruff, Cosmetic efficacy, Hair disorder, Herbal cosmetics Traditional medicine

INTRODUCTION

Hair is one of the vital parts of the body considered to be protective appendages on the body and

accessory structure of the integument along with sebaceous glands, sweat glands and nails. Hair loss is a dermatologic disorder, and the surge for discover in natural products with hair growth promoting potential is continuous. Each hair grows in three cyclic phases viz., anagen (growth), catagen (involution) and telogen (rest). The anagen phase can be as short as 2-6 years. In the catagen phase, the growth activity increases and hair moves to the next phase, catagen phase is between 2-3 weeks. The telogen phase is a state at which the hairs move into resting state. This phase lasts for 2-3 months. In general, 50 to 100 hairs are known to be shed everyday and an increase of more than 100 constitutes a state of hair loss or alopecia.

Hair is one of the vital parts of our body and it influences the overall appearance of the person. Hair care products are defined as those formulations which are used for modifying the texture of hair. Changing the color, giving life to the stressed hair, providing nourishment and giving the healthy appearance to the hair. Herbal cosmetics are in high demand due to the increasing interest of mankind towards them because they are more effective with nil or less side effect, easily available ingredients etc. Hair care cosmetics are now loaded with herbs and they are well recognized, composed with synthetic ones. In India, herbal medicines are the principal form of medicines. In India, around 6000 manufacturers for herbal medicines are available. According to WHO, around 80% of the people of the world use herbal medicines. It is common in women and men also. This is caused by stress, menopause, birth control, medication, changing hormones, and the plethora of hairstyling products.

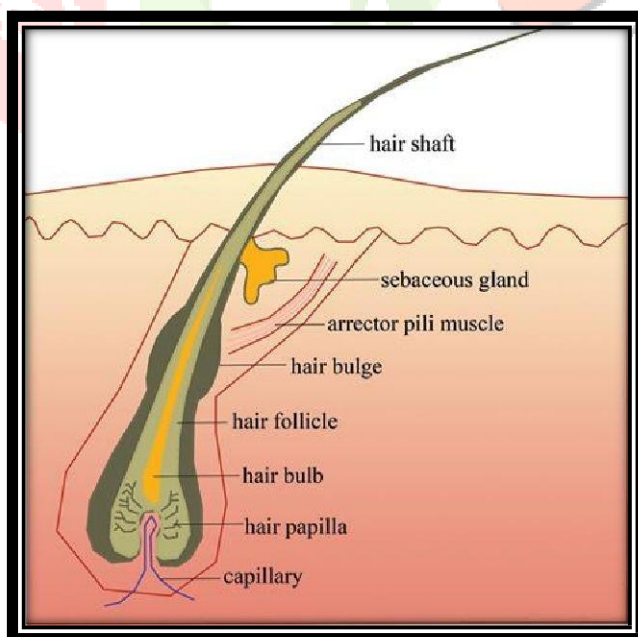


Fig-Structure of Skin

A hair follicle is a tube-like structure (pore) that surrounds the root and strand of a hair. Hair follicles exist in the top two layers of your skin. You're born with over 5 million hair follicles in your body and over one million

hair follicles on your head. As you age, hair grows out of your hair follicles.

The function of a hair follicle is to grow your hair. In addition to promoting hair growth, your hair follicles do the following jobs:

- Help repair your skin after a wound or an injury.
- Form new blood vessels (angiogenesis).
- Form new nervous system neuron cells (neurogenesis).

HERE IS THE TOP MOST BENEFITS OF USING HERBAL HAIR

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

OIL :

- Hair oil helps in preventing hair loss and tames frizzy hair. Hair ends need special care and herbal hair oil pampers them through their nutrients.
- Natural hair oil reinvigorates hair tissues. No matter, your shampoo and conditioner is made up of how many good ingredients but they can't deeply nourish your scalp the way a hair oil does.
- A thorough massage with such hair oil boosts blood circulation in the scalp and strengthens hair.
- Natural hair oils contain some rare fatty acids which makes them shiny and lustrous.
- Regular use of natural oils cures the problem of premature grey hair.

AIM:

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

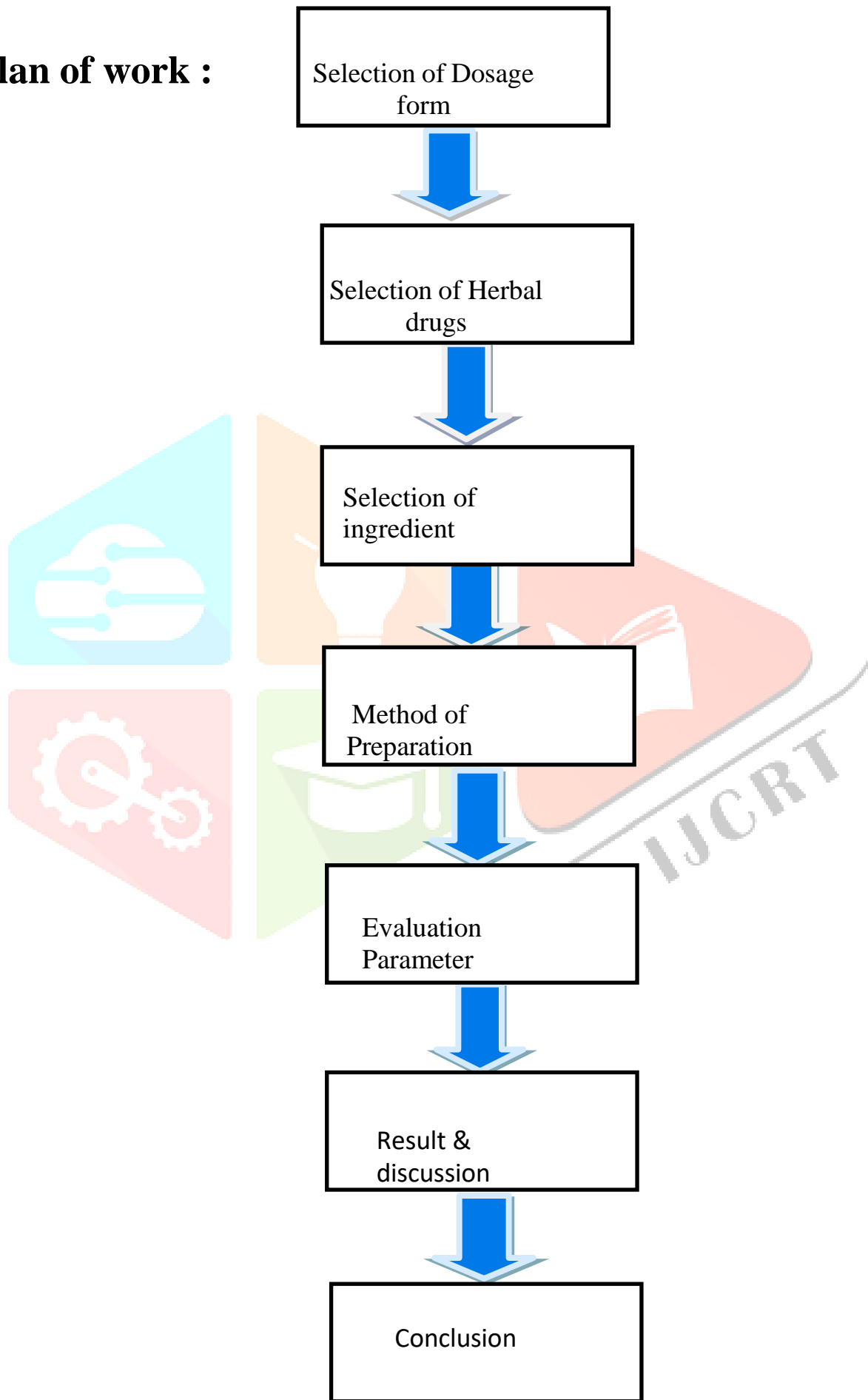
These oils are used not only for moisturizing purposes but also to promote hair growth, improve circulation of blood in the scalp, prevent dandruff and add volume to the hair shaft.



OBJECTIVES:

1. Using lemongrass essential oil daily can enhance hair growth .
- 2.strengthens hair follicles, controls hair loss, and leaves hair shiny and fresh. 3.It has antibacterial properties.
4. It has antifungal properties.
- 5.It has anti-inflammatory properties.6.It has antioxidant properties.
7. It may help prevent gastric ulcers or relieve nausea.
8. It may help ease diarrhea.

Plan of work :



DRUG AND EXCIPIENT PROFILE

For the preparation of herbal hair oil various plant materials were collected viz.,Neem, Amla, Brahmi, Shatavari ,and Pudina ,Kapor ,Brahmi ,till oil,etc.

Lemon Grass

Synonyms: Indian oil of Verbena Indian Melissa oil.

Biological source: Lemongrass oil is the oil distilled from *Cymbopogon*.

Family: Germaine

Uses: Lemongrass oil is one of the beneficial essential oil that helps regrow hair by addressing any scalp issue that are affecting healthy hair growth such as eczema, dandruff, and psoriasis.



LEMONGRASS

AMLA

Synonyms: Amla ,myrobalanemblica.

Biological Sources: dried as well as fresh fruit of *the Emblica officinalis*.

Family: Euphorbiaceae. Indiangooseberry

Chemical constituents: vitamin C galotann 5% carbohydrates 14%,lectures,minerals,phenol acid, garlic acid ,amino acid.

Uses: boost hair growth. Good for skin, hair & eyes .Promotes the immunefunction.



Fig No. 2 -AMLA FRUIT

PUDINA

Synonyms: Pudina

Biological Sources : consists of dried leaves & flooring to psosmen thespicataLinn.

Family: Labiates, Liliaceae

Botanical name: menthe piperita land menthespicata.

Chemical constitutes: Mentho land mentioned as well as several other minor constituents, including Menthufuran,1-8cineoleandlimonene.

Uses: mint is rich in natural Antimicrobial and antifungal properties, which treat many scalps issue, especially dandruff. It prevents growth of any unwanted bacteria or infections as well as on

the scal .



Fig No. 3 -PUDINA

NEEM

Synonyms: Melisa Azadirachta, Margosa Azadirachta indica.

Biological Sources: Neem consists of the fresh or dried leaves and seed oil of Azadirachta indica J. Juss (Melia Indica or M. azadirachta Linn.).

Family: Meliaceae

Botanical name : Azadirachta Indica.

Uses: It reduces hair loss by improving blood circulation in the scalp and hair. The sulphur in the juice helps in the production of essential collagen that promotes hair growth.



Fig No. 4- NEEM

SHATAVARI

Synonym: *Asparagusracemosus*

Biological Source: derived from dried tuberous roots of *Asparagus racemosus* Willd. derived from dried tuberous roots of *Asparagus racemosus* Willd.

Family Liliaceae

Kingdom: Plantae

Uses: Shatavari is anti-inflammatory and thus helps soothe the scalp. This way no inflammation due to skin irritation occurs and this helps promote hair growth.



Fig No. 4 SHATAVARI

KAPUR

Synonym : camphor

Biological Source: Its Solid Ketone, obtained from volatile oil of *Cinnamomum camphora* (L.)

Family: Lauraceae

Botanical name: *cinnamomum camphora*

Chemical constituents: Camphor oil contains camphor, cineole, pinene, camphene, phellandrene, limonene, and diterpenes. Camphor is entirely a monoterpenic ketone. Its basic carbon framework is related to bofneol

Uses: It has antifungal properties as well as anti-inflammatory properties which can disinfectant your hair. Camphor is used externally as a rubefacient, counterirritant and internally as a stimulant, carminative and antiseptic. It is a topical antipruritic and antiinfective, used as 1–3% in skin medicaments and in cosmetic



Fig No. 5-KAPUR

TILL OIL

Synonym: Teel Oil

Biological source : It is fixed oil obtained from theseeds of sesamoideum.

Family: pedaliscae

Botanical Name : sesamoideum

Chemical Constituent: linoleic acid, oleic acid, palmiti cacid, stearic acid

Uses :sesame oil has vitamin E, B complex and minerals such as calcium,magnesium, phosphorus and protein that strengthens hair from the rootand deeply nourishes Sesame oilfor hair promote good scalp health and encourages hair growth.



Fig No. 6- TILL OIL

EXPERIMENTALWORK

Extraction process: Wash out the collected plant material with distilled water

.An dried under the sunlight. Then grind the dried plant material in grinder andthe coarse powder

Table list ofmaterials

Methods**Formulation of Herbal Hair oil:**

The various ingredients used in the formulation of Herbal hair oil ,in table Accurately weight dried leaves and stalk of lemongrass and other herbs such as, neem, alma, pudina, shatavari ,kapur and Brahmi were grinded in the mixture and was mixed in **20 ml of till** oil. The above content was boiled for 15 min. And was filtered through muslin cloth. To the filtrate coconut oil was added to make up the volume. Finally small amount of color and flavoring agent was added to the oil and it was placed in umber colored bottle

Sr no.	Ingredients	Botanical Name	Role	Quantity
1	Lemongrass powder	Lemongrass	Boost hair growth	2 mg
2	Neem Powder	AzadiracthalIndica	Reduce hair loss	2 mg
3	Amla Powder	Indian goose berry	Boost hair growth	2 mg
4	Pudina Powder	Mentho piporeta	Reduce scalp issue	2 mg
5	Shatavari Powder	Shatavari	Anti - Inflammatory	1 mg
6	Kapur Powder	Cinnamommum camphora	Antifungl e Activity	1 mg
7	Coconut Oil	Cocus nucifera	Improve hair health	2 mg
8	Til Oil	Sesamum Indicum	Encourages hair growth	8 mg

Evaluation of Herbal Hair Oil



Colour: Greenish black

Odour: characteristics

PH: PH of prepared herbal hair oil was measured by pH meter (ph-6.5).

Sensitivity Test: The prepared lemon grass hair oil was applied on 1 cm skin of hand and exposed to sun light 4 to 5 min

Skin irritation Test: No irritation(30min.)

Grittiness: Smooth

Saponification value : accurate weight 1 ml of oil into a 250 ml of conical flask & 10ml ethanol:Ether 2:1 to this flask 25 ml of 0.5 N alcoholic KOH was kept the flask was cooled solution was titrated against 0.5 N HCL using Phenolphthalein indicator.

Viscosity: The viscosity was determined using Ostwald's viscometer.

Specific gravity: Take the specific gravity bottle, rinsed it with distilled water, dry it in oven for 15 minutes, cool, closed it with cap and weigh it (a). Now fill the same specific gravity bottle with the sample and closed it with cap and again weigh it (b). Determine the weight of sample per milliliter by subtracting the weight (b-a).

Stability Study : It is performed by keeping the prepared herbal hair oil in a closed container at cooled and dry place.

Acid value : 10 ml 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 $n = \text{Number of ml of 0.1M KOH}$ $w = \text{Wt. of oil}$

RESULT & DISCUSSION

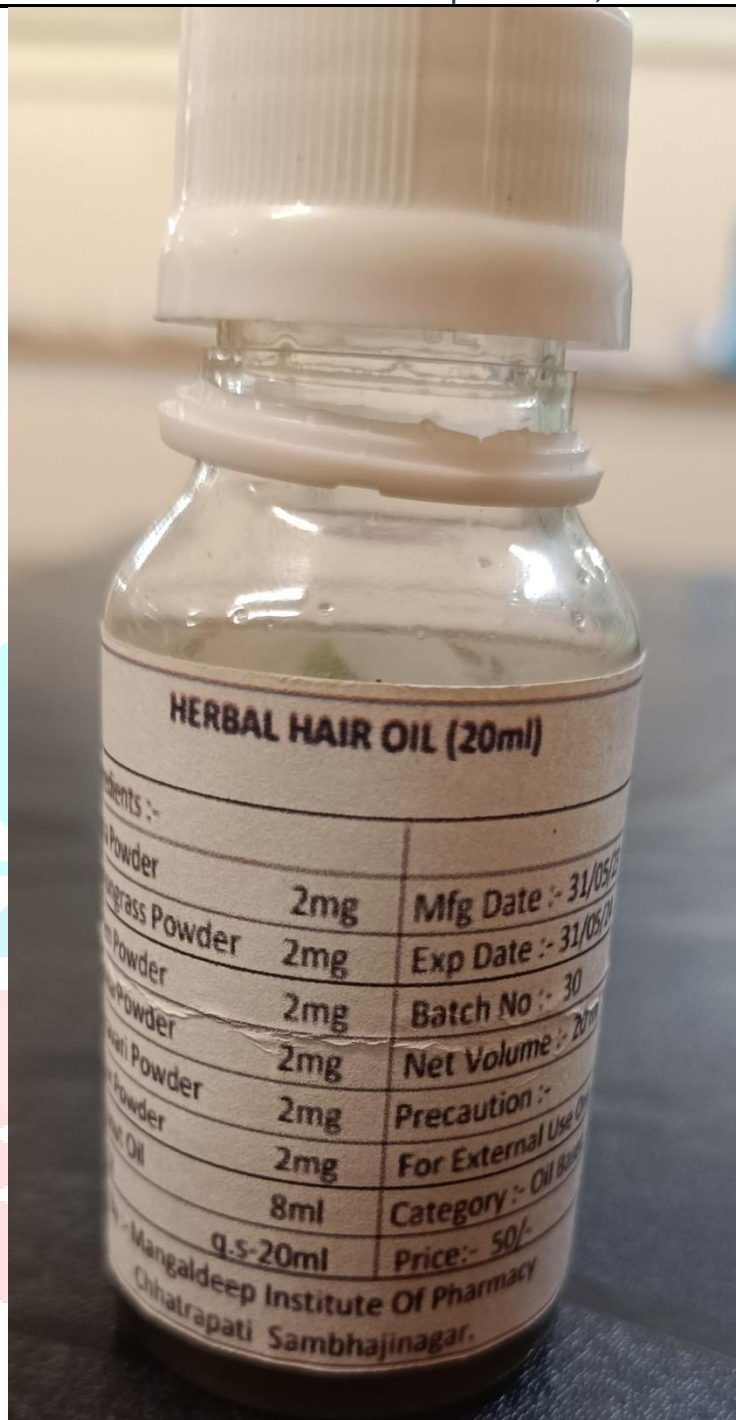
Herbal hair oil is one of the most well recognized hair treatments. Herbal hair oil not only moisturizes scalp but also reverses dry scalp and dry hair condition. It provides numerous essential nutrients required to maintain normal function of sebaceous glands & promotes neutral hair growth. The herbal hair oil was prepared from various parameters like sensitivity test, ph, irritation test, grittiness test of herbal hair oil was evaluated.

SUMMARY AND CONCLUSION

In general, the herbal formulation provides good blend of vitamins, terpenoids & essential oil. All the values in the evaluation of finished product showed that they are within the acceptable limits. Hence, it is concluded that the oil is beneficial in maintaining good growth of hairs, turning grey hairs to black, providing protection from dandruff & results in lustrous looking hairs.

FORMULATION





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