



Formulation And Evaluation Of Herbal Hair Oil

Rhushikesh Jitendra Shelke, Rutuja sudhakar Shimp, Diksha rajendra Surwade

Abstract

Cosmetics are substances used to enhance the appearance or odour of the human body. Cosmetics include skin-care creams, lotions, powders, perfumes, lipsticks, fingernail and toe nail polish, 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 types of products. A subset of cosmetics is called "make-up," which refers primarily to coloured products intended to alter the user's appearance. Many manufacturers distinguish between decorative cosmetics and care cosmetics. In the last three-four decades the use of cosmetics has increased exponentially not only among females but the male population also indulges in their use. Hair dyes, hair oil, creams are as popular with males as with females. Most countries now have laws to control, manufacturing, label, sale etc. of cosmetics in such a way that use of cosmetics harmful to health is prevented.

Key words-Herbal hair oil, Herbal Extract.

INTRODUCTION :-

Cosmetics are substances used to enhance the appearance or odour of the human body. Cosmetics include skin-care creams, lotions, powders, perfumes, lipsticks, fingernail and toe nail polish, 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 types of products. A subset of cosmetics is called "make-up," which refers primarily to coloured products intended to alter the user's appearance. Many manufacturers distinguish between decorative cosmetics and care cosmetics. In the last three-four decades the use of cosmetics has increased exponentially not only among females but the male population also indulges in their use. Hair dyes, hair oil, creams are as popular with males as with females. Most countries now have laws to control, manufacturing, label, sale etc. of cosmetics in such a way that use of cosmetics harmful to health is prevented.

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. Indian herbs and its significance are popular worldwide. Herbal cosmetics have growing demand in the world market and are an invaluable gift of

nature. There are a wide range of herbal cosmetic products to satisfy beauty regime. Adding herbs in cosmetics is very safe for our skin. Herbal hair oils are 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 functions of sebaceous gland and promote natural hair growth. Keeping this point in consideration the present work was undertaken. (1)

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 The basic part of hair is bulb (a swelling at the base which originates from the dermis), root (which is the hair lying beneath the skin surface), shaft (which is the hair above the skin surface). Hair loss is a dermatologic disorder, and the surge for discovering natural products with hair growth promoting potential is continuous. Each hair grows in three cyclic phases viz., anagen (growth), catagen (involution) and telogen (rest). 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 effects, easily available ingredients etc. Hair care cosmetics are now added with herbs, and they are well recognized compared with synthetic ones. Herbal hair oil is preferred and is used in many ailments of hair. They promote hair growth, improve elegance of hair and prevent hair fall. (2)

Hair oils are the hair care preparations used for the prevention and treatment of baldness or other ailments, aggression of hair. They also promote the luxurious growth of hairs. Hair oil containing herbal drugs are used as hair tonic. Hair care products are categorized into two main category, hair tonics and hair grooming aids (3) 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. There are two categories of hair care products. They are hair tonics and hair grooming aids. Hair oil those contains herbal drugs are called as hair tonics. These are formulated by herbal extracts in an oil base. Hair oils are the hair care formulations applied for treatment of hair disorders such as baldness, greying of hairs, hair falling, and dryness of hairs(4)

Hair oil not only promotes hair growth they also provide necessary moisture to the scalp rendering in beautiful hair The present work was aimed to prepare and evaluate a polyherbal hair oil containing herbs like Bhringraj, Jatamansi, Bramhi, Shankpushpi, Kalongi, Shatavari, Kapoor, vitamin E, Coconut Oil, Fenugreek etc. All these herbs have well known traditional potential in the treatment of hair care.(1)

Hair care has been an integral part of human culture for centuries, with ancient civilizations using plant-based remedies to enhance the health and appearance of hair. Herbal hair oils, made from natural plant extracts, essential oils, and other organic ingredients, have gained significant popularity due to their perceived benefits for hair health and their minimal side effects compared to chemical-based products. This growing interest in natural alternatives for hair care has led to the development of herbal hair oils that are believed to nourish, strengthen, and rejuvenate hair from the root to the tip.

The formulation and evaluation of herbal hair oils involve the selection of suitable herbal ingredients, the combination of these ingredients to form a stable oil mixture, and the scientific assessment of its efficacy and safety for regular use. A well-formulated herbal hair oil is expected to improve hair texture, reduce hair fall, promote growth, condition the scalp, and maintain overall scalp hygiene.

INGREDIENTS :-

- 1) Bhringraj
- 2) Jatamansi
- 3) Bramhi
- 4) Shankpushpi
- 5) Kalongi
- 6) Shatavari
- 7) Kapoor
- 8) vitamin E
- 9) Coconut Oil
- 10) Yashtimadhu

Study of Drugs:-

1) Jatamansi:-

A) Introduction :- It is used as a good stimulant, antispasmodic, tonic, laxative and antiepileptic . Jatamansi has been traditionally used in treatment of wide range of disorders, which include digestive system, circulatory system, nervous system, respiratory system, urinary system, reproductive system and skin diseases.

B) History:- Flowers are slightly blue or pink in dense cymes. The root of this taxon consist of short, thick, dark grey rhizomes crowned with reddish brown tufted fibrous remains of the petioles of the radical leaves. Its rhizomes are used in traditional medicines in different medicinal system.

C) Biological Source:- Jatamansi (*Nardostachys jatamansi*) is a perennial herb that grows in the Himalayan ranges of Bhutan, China, India, Nepal, and Myanmar. It is a member of Valerianaceae Family(5)



2)Bhringraj :-

- A) Introduction :- Bhringraj is one of the main constituents for herbal preparations used in the management of hair loss due to its antibacterial, anti-inflammatory and antiallergic properties. It also helps fight hair fall and greying of hair.
- B) History Bhringraj oil is an herbal oil that has its roots in Ayurvedic medicine, which is a traditional system of medicine that has been practiced in India for thousands of years.
- C) Synonym :- Kesharanjana, keshraja, markava, bhungrah, bhunga, ravipriya, suryavarta, pittapriya.
- D) Biological Sources, family :- Also known as *Eclipta prostrata* Roxb.) belongs to the Asteraceae family and is commonly known as false daisy in English and bhringoraj or bhringraj in Bangladesh and India.(1)



3)Bramhi :-

A) Introduction :-*Bacopa monnieri* (L.) Wettst. (commonly known as Brahmi) is a perennial herb belonging to the family Plantaginaceae. It has been used in Ayurvedic medicine as a brain tonic and memory enhancer for hundreds of years.

B)History :- The herb was allegedly used by ancient Vedic scholars to memorize lengthy sacred hymns and scriptures. BM is colloquially called Brahmi, after the Hindu creator-god Brahma, especially when combined with other alleged intellect-sharpening herbs like *Centella asiatica* (Gotu Kola)

C)Synonym:- Brahmi, kapotvadka, somvalli and saraswatiare various synonyms of brahmi.

Madukparni, manduki, twashtri, divya and mahaashdhi are various names of mandukparni(1)

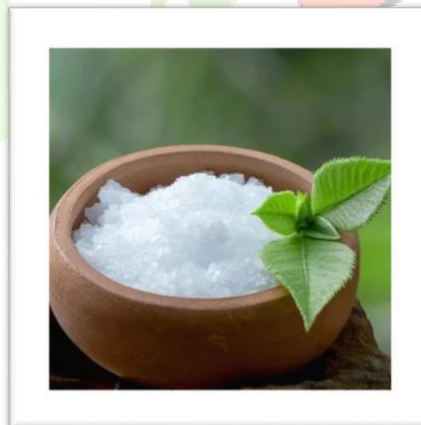


4)Kapoor

A) Introduction Camphor is a waxy, colorless solid with a strong aroma.

B) History The word camphor derived in the 14th century from, romanized: kafur, perhaps through Sanskrit: कर्क. In Old Malay, camphor was called kapur barus, meaning "the chalk of Barus". C. Keywords camfora, कर्क

C)Biological Sources It is found in the wood of the camphor laurel (*Cinnamomum camphora*), a large evergreen tree found in East Asia; and in the kapur tree (*Dryobalanops* sp.), a tall timber tree from South East Asia., family: Lauraceae.(1)



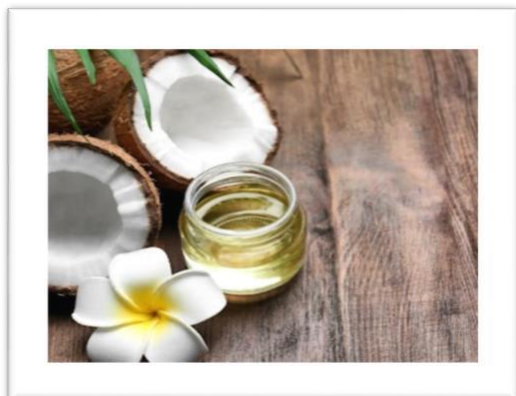
5) Coconut oil :-

A) Introduction:- Coconut oil (or coconut fat) is an edible oil derived from the kernels, meat, and milk of the coconut palm fruit. Coconut oil is a white solid fat below around 25 °C (77 °F), and a clear thin liquid oil in warmer climates. Unrefined varieties have a distinct coconut aroma. Coconut oil is used as a food oil, and in industrial applications for cosmetics and detergent production.

B) History It has been traced back in paintings and carvings to at least 5000 years ago in New Guinea, but it is most likely that people have used coconut since prehistoric times.

C)Synonym Cocos nucifera, coco, coco palm, cocoa palm, coconut palm, coconut tree oil.

D)Biological Source Oil expressed from the dried solid part of endosperm of coconut, Cocos nucifera L., belonging to family Palme(1)

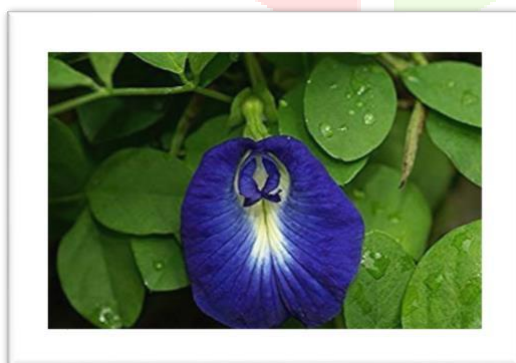


6)Shankpushpi:-

A) Introduction :-The plant has been found to be effective in reducing different types of stress including psychological, chemical and traumatic.

B) History:- There is a pertinent reference in Ayurvedic literature about the use of the drug as brain tonic in hypotensive syndromes. The pharmacological studies of the herb have shown varying degree of its hypotensive and tranquilizing effects.

C)Biological Source:- Shankpushpi is a name used for multiple plants, including Convolvulus pluricaulis, Evolvulusalsinoides, and Clitoriaternatea. All of these plants belong to the Convolvulaceae family, also known as the morning glory family. (6)



7) Kalongi:-

A) Introduction:- It nourishes the hair follicles so that they can grip the hair better which result in less hair fall.

B) History:- Native to Eastern Europe and Western Asia, but naturalized over a much wider area, including parts of Europe, Northern Africa and East Myanmar.

C) Biological Source:- The biological source of kalonji is the annual flowering plant *Nigella sativa*, which is also known as black cumin, blackseed, and black caraway. It belongs to the Ranunculaceae family.

(7)



8) Shatavari:-

A) Introduction:- *Asparagus racemosus* is most frequently used in indigenous medicine. The name Shatavari means curer of a hundred diseases

B) History:- *Asparagus racemosus* is the one most commonly used herb in traditional medicine due to the presence of steroidal saponins and sapogenins in various parts of a plant. Traditionally it is used as a health tonic

C) Biological Source:- Shatavari, also known as *Asparagus racemosus*, is a shrub with tuberous roots that is a member of the Liliaceae family(5)



9) Yashtimadhu:-

A) Introduction:- Apart from being a potent mental tonic as described in Charaka Samhita, it has been used as a Samidha Dravya (drugs used in holy fire in Hindu culture) also. Its many therapeutic actions include Varnya (skin repairing), Kushthaghna (Skin disorders), Keshya (hair growth property), Kanthya (speech promoting and useful in throat disorders like cough etc.), Shonitasthapanam (bleeding disorders)

and Rasayana (promoting overall body health). It has a significant role not only in the physical illness but also in a variety of mental disorders.

Yashtimadhu has been used as a single herb as well as in combinations in various formulations.

B) Biological Source:- The biological source of mulethi, also known as licorice, is the roots, stems, and stolons of the *Glycyrrhiza glabra* plant. (8)



10) vitamin E:-

Vitamin E in hair oil can help with a variety of hair concerns, including hair growth, dandruff, and split ends.



Formulation of Herbal Hair Oil:-

The various ingredients used in the formulation of herbal oil are presented in . Accurately weigh all the dried and fresh herbs such as Bringaraj, Jatamansi, Shankpusphi, Brahmi, Shatavari, Shankhpushpi, Kalongi And Kapoor and were grinded in the mixture and was mixed in coconut 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 (100 mL). Finally small amount of colour and flavouring agent was added to the oil and it was placed in amber coloured bottle.(1)

Ingredients Used in Formulation of Herbal Hair Oil :-

Ingredients	Quantity For 100ml	Importance
Jatamansi	5gm	Hair Thickening
Bhringraj	5gm	Promote Hair Growth
Bramhi	5gm	Nervine tonic
Kapoor	5gm	Perfuming Agent
Yashtimadhu	5gm	Antioxidant
Coconut oil	q.s.	Prevent Hair Fall
Vitamin E	2capsule	Preservative
Shatavari	5gm	Hair Growth
Kalongi	5gm	Hair Growth
Shankpushpi	5gm	Nervine tonic

Evaluation of Herbal Hair Oil :-**1)Organoleptic Evaluations :-**

A)Colour:- Brownish Yellow B)Odour:-

Characteristic

c)Texture :- Smooth

2)Safety Test :- Assess potential skin irritation it results into no irritation.

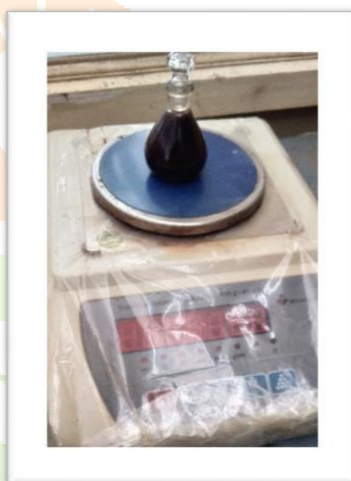
3)Sensitivity Test :- The prepared herbal hair oil was applied on 1 cm skin of hand and exposed to sunlight for 4-5 min and it results into no irritation.

4) PH Test :- Two-three drops of the solution were taken and then they were poured on the litmus paper. Hence the results were observed.(1)



5)Viscosity Test :- The viscosity was determined using Ostwald's viscometer.(1)

6)Specific Gravity Test :- 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).(1)



7)Acid Value Test :- 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. Preparation of sample: Measured 10 mL oil and dissolved in 25 mL of ethanol and 25 mL of ether mixture and shaken. Added 1 mL of phenolphthalein solution and titrated with 0.1 molar KOH solution.(1)



8)Saponification Test :- Accurately weighed 1 mL of oil into a 250 mL of conical flask and 10 mL of ethanol : ether mixture (2 : 1) was added. To this flask 25 mL of 0.5 N alcoholic KOH was. Kept the flask for 30 min. and the flask was cooled. The cooled 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.(1)



Result :-

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 and promotes natural hair growth. The herbal hair oil was prepared from various herbs and their importance in the formulation is presented in. The various parameters like sensitivity test, viscosity, pH, irritation test, grittiness test, saponification value and acid value of herbal hair oil was evaluated. Hence, from the present investigation it was found that the formulated herbal hair oil has optimum standards and further standardization and biological screening establishes the efficacy of formulated herbal hair oil

Sr.no	Evaluation Test	Prepared Hair Oil	Marketed Hair Oil
1	Colour	Brownish Yellow	Dark Yellow
2	Odour	Characteristic	Characteristic
3	Safety Test	No Irritation	No Irritation
3	Sensitivity Test	No Irritation	No Irritation
4	PH	5-6	6-7
5	Viscosity	0.92	0.93
6	Texture	Smooth	Smooth
7	Specific Gravity	0.9592	1.096
8	Acid Value	4.2	4.5
9	Saponification Value	112.02	115.05

Conclusion :-

From the obtained result we were conclude that each and every prepared hair oil and marketed hair oil are similar to each other. Evaluation gives different results.

Herbal hair oils provide a natural and holistic approach to hair care, with their combination of nourishing, strengthening, and therapeutic ingredients. The formulation and evaluation process ensures that these oils not only deliver the desired benefits but also maintain safety, efficacy, and quality for the end consumer. With a growing trend toward natural and organic beauty products, herbal hair oils are gaining popularity as a safe and effective solution for maintaining healthy, vibrant hair.

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