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Formulation and Evaluation of Polyherbal Hair Oil

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Abstract: ***Beauty and cosmetics concept is an ancient as mankind and civilization. Cosmetics play a vital role in human life. Herbal cosmetics is one of the most effective areas of cosmetic technology . herbal cosmetics are developed by the coalition of bioactive ingredients. Herbs are used for beautification purpose of body. Hairs Play a viral role in personality of human and we used a lots of products for the care of hair. The study aims reviewing the importance of herbal oil and their use in the common hair problem such as baldness, hair fall , hair dryness , dandruff etc. Various beauty and cosmetic products are used which contains herbs to give young and charming look. Various herbal ingredients are use in the herbal hair formulation they provide essential nutrients. Herbal hair oil has been widely used for nourishment of the hair and protection of the hair from hair fall and hair damage . Now day's side effects is major problem after using any beauty product due to which herbal products are preferred because of having less probability of any types of side effects.***

Herbs and herbal medications have been shown in studies to promote hair growth. Men and women alike are very concerned about hair loss issues, with fading, dandruff and hair falling being the main issues linked to hair loss. Comparing herbal hair oils to synthetic drugs, which can have adverse effects like burning, itching and localized irritation, has drawn attention to these alternatives. They could result in systemic adverse effects such headaches and dizziness as well as dermatological reactions. Therefore, the creation of herbal hair oil is necessary to stop hair loss and promote strong hair growth without causing any negative side effects. There are several synthetic medications available for hair loss, but they have serious adverse effects and don't provide permanent relief. The primary goal of this endeavor is to create a herbal hair oil formulation that can address issues with hair loss and other hair-related conditions.

Keywords: herbal hair oil , dandruff , herbal , cosmetic , hair.

I. INTRODUCTION

The present work was aimed to prepare and evaluate a Poly herbal hair oil containing herbs like Amala, almond Neem, curry leaves in coconut oil . all these herbs have known traditional potential in the treatment of the hair.

Cosmetic Are the substance use to enhance the appearance or order of the human body. cosmetic include skin care creams, lotionsgel.Deodorants, lipsticks, fingernail and toe nail Polish. and facial makeup, Permanent wavescolored contact lenses, hair colors, hair spray and, baby products,bathoils,Bubble bath, bath salts, butters and many types of products. subset of cosmetic is called make up. Which refers primarily to colored products intended to alter the user's appearance. Many manufacturers distinguish between decorative cosmetic and care cosmetics. In the last 3-4 decades the use of cosmetic has increased exponentially not only among females but the male population also includes in their use. Hair dyes, hairoils, creams are as popular with males as with females. most countries now have laws to control manufacturing, label, scale etcetera. of cosmetic in such a way that use of cosmetics harmful to health is prevented.

The concept of beauty and cosmetic 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 herbs is cosmetic is very save for our skin. horrible 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 conditions. it provides numerous essential nutrients required to maintain normal function of sebaceous gland and promote natural Your growth keeping.

II. AIM AND OBJECTIVE

A. AIM

Formulation of polyherbal hair oil

Herbal oil : herbal oils also known as oil extracts ,are obtained from herbs and plants source they possess therapeutic benefits .it is well known that synergistically a combination of nutrients,Bio active components, antioxidant and bio stimulant proved to be more effective.

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Types of herbal hair oil

1) Amla hair oil
2) Coconut hair oil
3) Bhringraj hair oil
4) Jasmine hair oil
5) Brahmi hair oil
6) Onion hair oil
7) Poly herbal hair oil

B. Objective

The primary goals of this study is to :prepare and evaluate herbal hair oil made from fresh components of various plants.

1) Promotes the growth of hair
2) Moisturizes scalp but also reverses dry scalp and dry hair conditions
3) Improve elegance of hair and prevent hair fall.

C. Ideal Properties

1) Hair concerns : What you want to achieve with the oil such as, promoting hair growth, treating dandruff or repairing damage hair
2) Scalp condition : whether you have an itchy, dry ,oily or greasy scalp
3) Ingredients : whether the oil contains nature and organic ingredients that address your hair concerns
4) Side effect : Weather the oil is safe for your skin and eyes

III. LITERATURE REVIEW

1) *Traditional And Ayurvedic perspective :*

- Charaka Samhita : This is ancient Ayurvedic text describe the use of Poly herbal formulation for promoting hair growth and improved scalp health
- bhavaprakasha :Another Ayurvedic text that mentioned the use of Poly herbal hair oil for various hair related issue

2) *Phytochemical and pharmacological studies :*

- Amla (Emblica officinalis):rich in antioxidants, vitamins,andminerals,amla promotes hair growth and improve scalp health
- Bhringraj (Eclipta alba) : enhance hair growth, improve scalp health, and reduce graying
- Bramhi (Bascopamonnieri): improve hair growth, enhance scalp health ,and reduce nn

3) *Clinical and experimental studies*

- Journal of cosmetic, dermatological science and applications (2018):A polyherbal hair oil containing hibiscus,neemleaves, amla ,bhringraj and bramhisignificantly reduced hair loss and improve scalp health
- Journal of Ayurveda and integrative medicine (2019) :
- A polyherbal hair oil containing rosemary,thymeand lavender significantly reduced hair loss and improve hair texture.
- Indian journal of dermatology (2017) : A polyherbal hair oil containing amla, bramhi, and coconut oil improve hair growth and reduce dandruff in patients with androgenetic alopecia.

4) *Safety and efficacy studies :*

Toxicity studies :Only herbal hair oil have been shown to be safe and non-toxic in various studies

- *Advantages*

➢ Promotes hair growth
➢ Reduce hair fall
➢ dandruff prevention
➢ straightness here
➢ Shiny hair

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- Prevents hair greaying
- moisturizing to avoid drying out
- reduce frizz and dryness
- prevent split ends

- *Benefits*
- It gives hairs its natural sweetness
- Vitamins and micronutrients found in the herbal oil serve as sustencefor hairs .
- Hair oil is a great way to tame frizzy here and prevent hair loss
- To provide nourishment to the hair
- Enhance hair growth and prevent dandruff.

IV. PLANT PROFILE

1) BHRINGRAJ

- Botanical name :Eclipta prostrata
- Kingdom. : plantae
- Family. : Asterales
- Genus : Asteraceae
- Species :E.prostrat



. Fig. no : 1- BHRINGRAJ

Eclipta Alba is an annual multi branched herbaceous plant. The height of plant is up to 30 to 5OCm.It is found in tropical and subtropical region of the world such as South America ,Asia and Africa at an altitude up to2000 m.In the region of India it is mainly found in state of Bihar, Assam ,Uttar Pradesh and Manipur

Role :

- Prevent hair fall
- Promotes hair growth
- Makes hair lustrous
- repair hair damage
- Treats blandness

2) AMLA

- Botanical name : phyllanthus ebica
- Kingdom : plantae
- Order : malpighiales

- Family : phyllanthaceae
- Genus : phyllanthus
- Species : p.emblicca



Fig.no : 2 - AMLA

Phyllanthus ebicais an important medicinal plant in Indian traditional system of medicine. the tree is of 1-8 meter in height. The leaves are simple and intently set alongside Branchlets The flowers are of greenish yellow colour. The root is nearly round in shape and having a hard appearance

Role :

- Condition your scalp
- Minimize greys
- Reduce dandruff
- promote healthy hair growth

3) TULSI

- Botanical name : ocimumtenuiflorium
- Kingdom : plantae
- Order :lamiales
- Family :lamiaceae
- Genus :ocimum
- Species :o.tenuiflorum



Fig no : 3 – TULSI

Tulsi is one of the most well recognized herb from the family lamiaceae that is indigenous to the Indian subcontinent and has been used inside Ayurvedic medication over 3000 years .holy basil is an erect ,mini branched sub shrub 30 to 60 centimeter tall havinghairly stem .leaves are of green or purple colour the plant of tulsi has many medicinal properties. Leaves of tulsi are a nerve tonic and also sharpen memory.

Role :

- Co agent remedy for hair loss
- hair loss treatment
- Strengthening the hair roots
- prevent bacterial and fungal infection

4) HIBISCUS

- Botanical name : Rosa -sinensis
- Kingdom :plantae
- Order :malvales
- Family :malavaceae
- Genus :hibiscus



Fig.no : 4 –HIBISCUS FLOWER

The leaves are alternate , ovate to lanceolate, frequently with tooth head or lobed margin .the flowers are large conspicuous .trumptet – shaped with five or more petals this plant is extensively cultivated as an ornamental plant in tropical and subtropical region.this plant is commonly found through out the tropics and is found as a house plant

Role :

- stop hair loss
- Stop hair loss prevent premature graying
- Thicken hair and add volume
- treat dandruff

5) COCONUT OIL

- Botanical name : coca nucifera
- Kingdom :plantae
- Order :Arecales
- Family : Arecacea
- Genus :cocos
- Species. :c.nucifera



Fig. no 5 : COCONUT OIL

Coconut oil is derived from milk of the coconut palm fruit. Coconut oil is used as a meals oil and is used in industrial applications for cosmetic and detergent production

Role :

- Masks hair
- Moisturizes hair
- Seal hair
- makes hair look Shiner

6) NEEM

- Botanical name :Azadirachta Indica
- Kingdom : planta
- Order. : sapindales
- Family :meliaceae
- Genus :Azadirachta



fig. no : 6 NEEM LEAVES

Neem tree are found commonly in India, Africa and America due to having medicinal properties, it has been used in Ayurvedic medicine from 4000 years .it is a fast growing tree and can reach height of 15 to 20 meters the Sanskrit name of name is arista U.S.

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National Academy of science recognized the importance of neem tree,published a report in 1992 entitled Neem or tree for solving global problems leaves ,bark and gum are the non woody product of neem tree and have various uses they have antifungal ,antibacterial ,Insecticidal and other biological activities.

Role :

- Cure scalp problem
- makes lustrous and healthy hair
- promotes thicker stronger hair growth
- Prevents premature greying

7) ONION

- Botanical name :Allium cepa
- Kingdom : plantae
- Order :Asparagales
- Family :Amaryllidaceae
- Genus :Allium
- Species : A. Cepa



Fig . no : 7 – ONION

The onion is also known as the bulb onion, or common onion is a vegetable that is the most widely cultivated species of genus allium.the onion plant has been grown and selectively bred in cultivation for at the least 7000 years,15 to 45 centimetre the leaves are yellowish and bluish green they are hollow ,cylindrical with one flattened side. onion has been valued as a food and a medicine plant since ancient times.

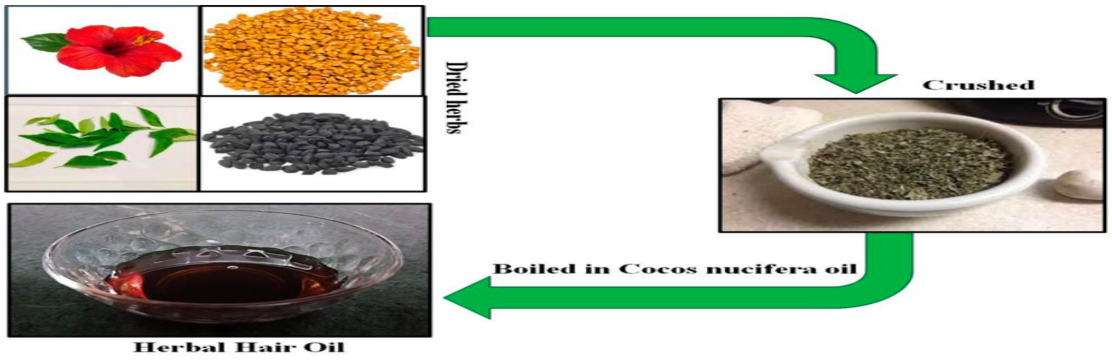
Role :

- Treats dandruff
- Inhibit hair thinning
- fights scalp infection
- Slow down premature greying

V. METHOD

The Poly herbal hair oil was prepared by collecting various plant materials like Amla fruits, Curry leaves, neem leaves from herbal garden and almond and coconut oil where procured from local market

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VI. EVALUATION TEST

The Formulated herbal oil was evaluated for parameters like PH,acid value ,saponification value, refractive index, viscosity and organoleptic parameters.

1) *Acid value :* 10 ml of oil was added with 25 ml of ethanol and 25 ml of ether phenolphthalein was added as indicator and treated with 0.1 M potassium hydroxide solution,

Acid value =5.61n/w where,
n= number of ml of 0.1M KOH
W = weight of oil

2) *2.Saponification value :* 2 g Off oil was accurately weighted and transferred into a 250ml of iodine flask 25 ml of 0.5 M alcoholic potassium hydroxide was added and boiled under reflux on a water bath for 30 minutesphenolphthaleinwas added as indicator and titrated against 0.5 M HCL (‘a’ml)similarly blank was performed(‘b’ml) without sample.

Saponification value: 28.05(b-a)/w where,
W = weight in grams of the solutions.

3) *3 . PH :* PH of the herbal oil was detected using PH meter
4) *4 . viscosity :* Viscosity was determined using Ostwald’s viscometer.
5) *5 .Specific gravity :* Specific gravity of the prepared oil was determined using pyknometer or specific gravity bottle
6) *6 . Refractive index :* It was determined using refractometer
7) *Organoleptic property :* colour, odour,skin irritation was determined manually .

VII. CONCLUSION

Over all, herbal oils that are formulat provide a lot of nutritious food.Hairvalues such as vitamins ,minerals and essential oils. finished products are within the limits. in conclusions, oil useful to prevent hair from damage and loss caused by pollution and dull hair. and provide alternative sources from hazardous chemical

This research provides guideline on the use of herbal ingredients on the preparation of Herbal Hair oil having minimal or no side effects. All the parameters showed that they are within the limits and since all the ingredients added have many advantages, this oil will help in maintaining good growth of hair, turning grey hair to black, protects from dandruff and results in lustrous looking hair.

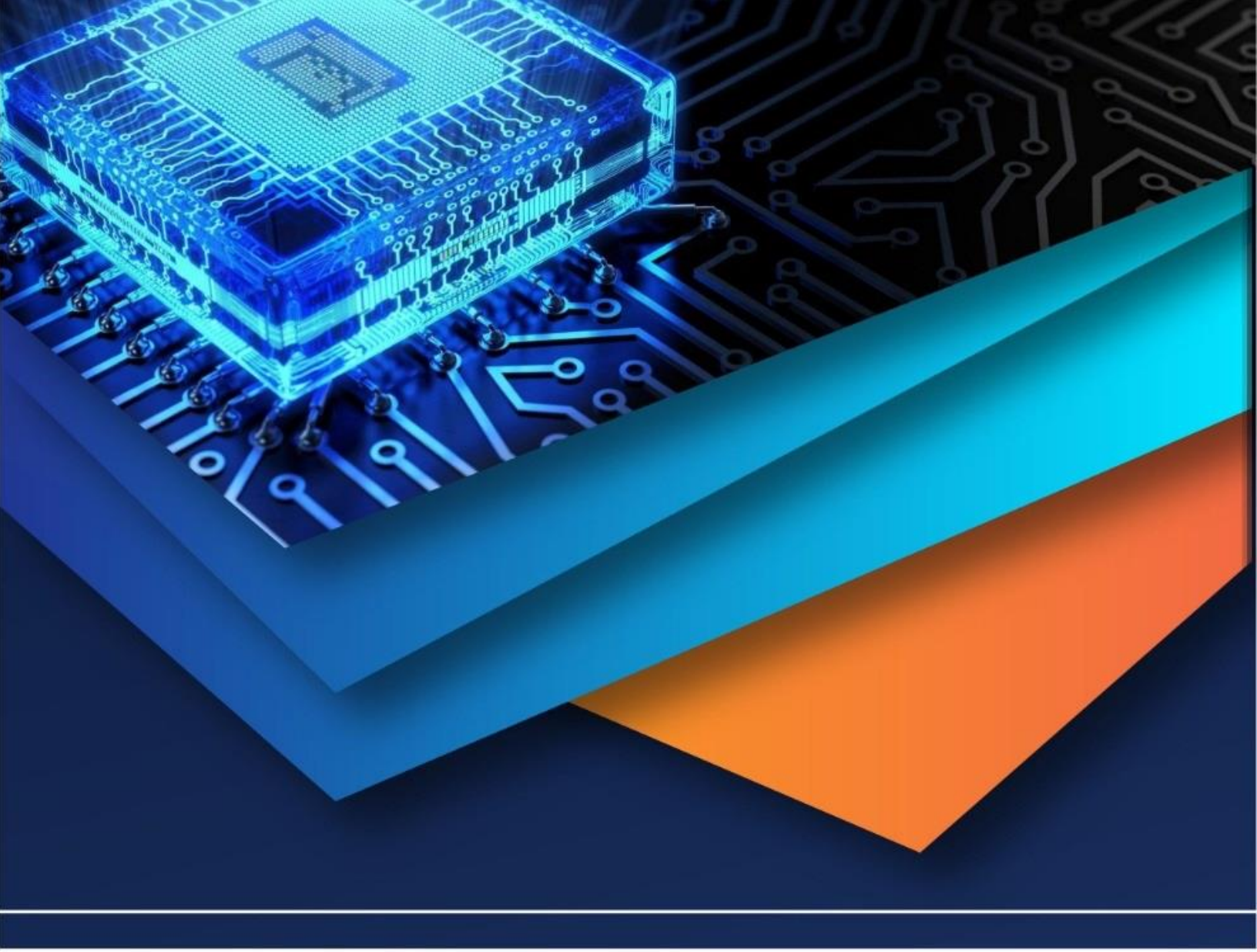
REFERENCES

[1] T..Usha Kiran Reddy,S Rajesh, G Sindhu ,B Aruna, herbs used in formulating poly herbal hair oil- review, into Journal of pharmaceutical scienceISSN :-2349-7750
[2] R.R Shah, S.A Mohite, preparation and evaluation of polyherbal hair oil -an effective cosmetics, Asian journal of pharmaceutical research, ISSN : 2231-59691
[3] X. Fatima Grace, s Rahul Raj, Shanmughaathan, D . Chamundeeshewari,
[4] preparation and evaluation of polyherbal hair oil, ISSAN: 2494-2789
[5] Mr . Shrikant M Madhekar,mrs Surekha S .Tayde ,msvaishali n tike, formulation and evaluation of polyherbal antidandrff hair oil. A hair care preparation, journal of emerging technologies and innovative research, ISSN: 2349- 5162
[6] Swarnakata Saraf, Manjusha, jharaniya , herbal hair cosmetics: Advancements and recent Findings, World journal of pharmaceutical research, ISSN :2277-7105
[7] Ayyanar M, Ignacimuthu S. Medicinal plants used by the tribals of tirunelveli hills, Tamilnadu to treat poisonous bites and skin diseases. Indian J TraditKnowl 2005; 4(3): 229-36.Evaluation of herbal hair oil
[8] Yadav UC, Baquer NZ. Pharmacological effects of Trigonella foenum-graecum L. in health and disease. Pharm Biol 2014; 52(2): 243-54.

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[9] Saini SC, Reddy GBS. A review on curry leaves (Murrayakoenigii): Versatile multi-potential medicinal plant. Am J Phytomed Clin Therap 2015; 4: 363.
[10] Amol Joshi A, Pravin Dyawarkonda M. Formulation and evaluation of polyherbal hair oil. Int J green Pharm 2017; 11(1): 135-9.
[11] Kuber BR, Lavanya C, Haritha C, Preethi S, Rosa G. Preparation and evaluation of poly herbal hair oil. JDDT 2021; 9(1): 68-3.
[12] Gousia Begum S, Sekar M, Ravikumar K. Sekar Keerthana. Design and evaluation of herbal hair oil formulations by using ethanolic exract of Ziziphus jujuba leaves. Int J Pharma Bio Sci 2017
[13] Bhatia SC., Perfumes, soaps, detergents and cosmetics, 2nd ed., New Delhi, CBS Publishers and distributors; 2001; 639, 641.
[14] Kirtikar K.P., Basu B.D., Indian Medicinal Plants, Vol. I, International Book Distributors, Dehradun, 1995, 768-769
[15] Shaikh C S, Qudry J S, A Text book of Pharmacognosy,11th Ed., B.S. Shah Prakashan, Ahmadabad, 1996; 119.
[16] Evans W C, Trease, Evans, Pharmacognosy, 15th Ed., W.B. Saunders Harcourt Publishers Ltd., 2002; 292.
[17] The Ayurvedic Formulary of India, Government of India, Ministry of Health and family planning, Department of health, Delhi, 1st ed.1978; part 1, 99.
[18] N. Sanju, N. Arun, K. K. Roop, Cosmetic Technology, 1st Edition, Birla Publications Pvt. Ltd, Delhi, 2006, 379-382.
[19] Adhirajan, N., Dixit, V. K., Chandrakasan, G., Development and Evaluation of Herbal Formulations for Hair growth, Indian Drugs, Nov-2001, 38 (11), 559-563.
[20] Roy, R. K., Thakur, M., Dixit, V. K., Development and Evaluation of polyherbal formulation for hair growth- promoting activity, Journal of Cosmetic Dermatology, Nov-2006, 6, 108-112.
[21] Roy, R. K., Thakur, M., Dixit, V. K., Development and Evaluation of polyherbal formulation for hair growth- promoting activity, Journal of Cosmetic Dermatology, Nov-2006, 6, 108-112.

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