



INDO AMERICAN JOURNAL OF PHARMACEUTICAL RESEARCH



FORMULATION AND EVALUATION OF AYURVEDIC HERBAL OIL

K. D. Mali*, R. M. Shroff, S. D. Chaudhari, S. S. Bacchav

R.C.P.Institute of Pharmaceutical Education and Research, Shirpur, Dist- Dhule, Maharashtra-425405.

ARTICLE INFO

Article history

Received 30/03/2017

Available online
12/04/2017

Keywords

Ayurvedic Herbal Oil,
Cosmetics,
Herbs,
Evaluation.

ABSTRACT

In India, the use of herbals for the purpose of beautification was found in the traditional literature medicine such as Ayurveda. Herbal cosmetics is one of the most potent and effective area of cosmetic technology. Cosmetology is defined as the science of alteration in the appearance. It is used for beautifying and enhancing the overall human personality. Herbal products gains popularity over worldwide because of lack of side effects as compared with synthetic products. The purpose of using cosmetic preparations is to attain worship and sensual enjoyment. The present research work was aimed to formulate Ayurvedic herbal oil for application in hairs using various plant materials were collected viz., Neem, Amla, Shankpushpi, Brahmi, Bhringaraj, Jatamansi, Nirgundi, Shatavari, Gammbari and Pudina etc. and its evaluation for various properties its properties like specific gravity, viscosity, acid value, saponification value, pH, sensitivity test, Irritation test etc. All the parameters were found to be good and within the standard limits.

Corresponding author

Kamlesh Dilip Mali

Designation- Assist. professor

R.C.P.Institute of Pharmaceutical Education and Research,

Shirpur, Dist- Dhule, Maharashtra-425405.

kamleshmalipharma@gmail.com

Please cite this article in press as **Kamlesh Dilip Mali** et al. Formulation and Evaluation of Ayurvedic Herbal Oil. Indo American Journal of Pharmaceutical Research.2017:7(03).

Copy right © 2017 This is an Open Access article distributed under the terms of the Indo American journal of Pharmaceutical Research, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

INTRODUCTION

The word cosmetics is defined as that article which is rubbed, poured, sprinkled or applicable to any part of human body for the purpose of cleansing, beautifying or enhancing the appearance is called as cosmetics¹. Herbal formulation is an ancient methodology because its origin of was found in the holy Vedas and in Unani scriptures. Chemical medicines are not always work because of they may have side effects. Now a day in this world move towards use of herbal product in cosmetic industries and also in beauty parlours². Herbal Cosmetics are prepared by the combination of active bioactive ingredients or pharmaceuticals. the herbal products have dual importance, due to The presence of variety of phytochemicals and botanicals, one of its used as cosmetics to care body and another is the phytochemical improves the biological functions of human body naturally results in healthy skin and healthy hair³. In the formulation of herbal cosmetics plants are used in three ways either it is a total extracts or a single molecule obtained from the purification of extracts (e.g. aloe vera gel, teas, plant extracts) selective extract like wheat germ, ginkgo or single natural molecule like vitamins, coenzyme Q10⁴. Hair is the one of the vital part of our body and it influences the overall appearance of the person. Hair care products are defined as those formulations which are used for cleansing, modifying the texture of hair, changing of the color, giving life to the stressed hair, providing nourishment to the hair and giving the healthy appearance to the hair⁵. 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 skin⁶. Herbal hair oils are one of the most well recognized product for hair treatments. It not only moisturizes scalp but also reverses dry scalp and dry hair condition result in healthy hair. It maintains normal functions of sebaceous gland and promote natural hair growth by providing numerous essential nutrients required to it⁷. By considering this facts the present work was undertaken.

EXPERIMENTAL

Material and methods

Plant part collection

For the preparation of herbal hair oil various plant materials were collected viz., Neem, Amla, Shankpushpi, Brahmi, Bhringaraj, Jatamansi, Nirgundi, Shatavari, Gammbhari and Pudina from the Medicinal Plant Garden of R.C.P. Institute of Pharmaceutical Education and reasearch, shirpur, Maharashtra, India and was properly authenticated in the Department of Pharmacognosy.

Formulation of herbal hair oil³

The various ingredients used in the formulation of herbal oil are presented in Table 1. Accurately weigh all the dried and fresh herbs such as Jatamansi, Neem, Amla, Shankpusphi, Brahmi, Kapur and Pudina and were grinded in the mixture. Grinded mixture was mixed in 60% of til oil. The above content was boiled for 20 min. Boiled mixture was subject for filtration through muslin cloth. After filtration coconut oil was added to the filtrate to make up the volume (100 mL). Finally flavoring agent was added to the oil and it was placed in amber colour bottle.(see fig 1)

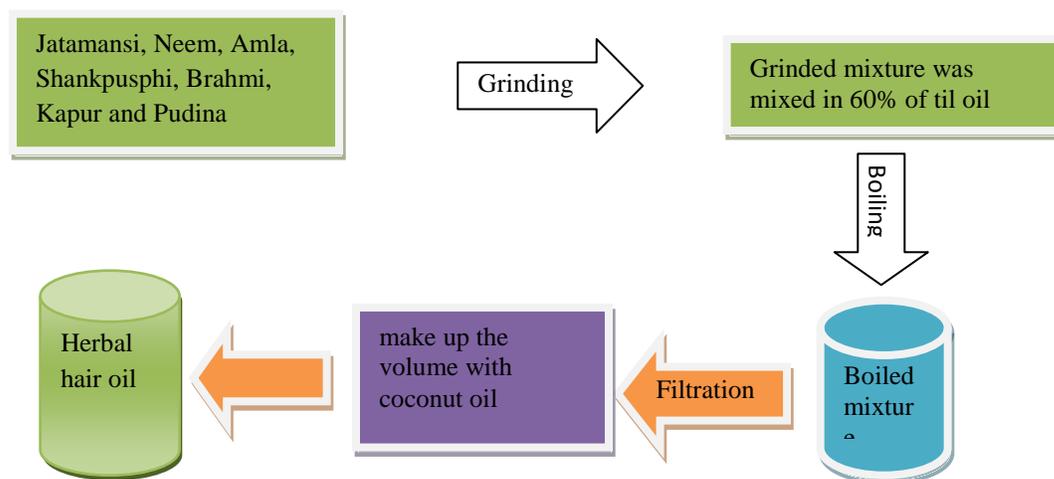


Fig: 1 formulation process of Ayurvedic herbal oil

TABLE 1: INGREDIENTS USED IN FORMULATION OF AYURVEDIC HERBAL OIL

S. No.	Ingredients	Importance	Quantity (%)
1.	Jatamansi	Flavouring agent	3
2.	Neem	Antimicrobial	2.5
3.	Amla	Hair growth	8.5
4.	Shatavari	Hair growth	2.5
5.	Shankpuspi	Nervine tonic	3.5
6.	Brahmi	Nervine tonic	7
7.	Kapur	Stimulating agent	1
9.	Jasmine oil	Flavouring agent	1
9.	Til oil	Vehicle	60
10	Coconut oil	Vehicle	q.s

EVALUATION OF AYURVEDIC HERBAL OIL ^{8,9}

The formulated Ayurvedic herbal oil was subjected to physical and biological evaluation.

Acid value

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.

Saponification value

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 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.

pH

The pH of Ayurvedic herbal oil was determined using pH meter. The most accurate common means of measuring pH is through a lab device called a probe and meter, or simply, a pH meter. The probe consists of a glass electrode through which a small voltage is passed. The meter, a voltmeter, measures the electronic impedance in the glass electrode and displays pH units instead of volts. A pH meter typically has to be calibrated before each use with two standard liquid solutions of known pH. Measurement is made by submerging the probe in the liquid until a reading is registered by the meter

Viscosity

The viscosity of Ayurvedic herbal oil 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).

Sensitivity test

The prepared Ayurvedic herbal oil was applied on 1 cm skin of hand and exposed to sunlight for 4-5 min.

Skin irritation test ¹¹

The back side skin of rats was denuded with the help of electric shaver followed by hair remover cream. The denuded area was kept under visual observation for any irritation or erythema for next 24 hours, and same observation was performed after applying test samples on denuded area, except time which was extended up to 48 hours ¹⁰(Table 3).

RESULTS AND CONCLUSION

Ayurvedic herbal oil, is one of the most well recognized hair treatments. Ayurvedic herbal oil, not only moisturizes scalp but also reverses dry scalp and dry hair condition. It provides various essential nutrients required to maintain normal function of sebaceous glands and promotes natural hair growth.

Formulation was done and evaluated by means of various parameters like pH, colour, odour, acid value, viscosity, specific gravity, and saponification value, sensitivity test, and skin irritation test. The pH of formulation was found to be 6.80 ± 0.02 . The colour of formulation was found to be Dark brown. The acid value of formulation was found to be 3.3 ± 0.1 . The saponification value of formulation was found to be 241.99 ± 0.6 . see table no. 2. Sensitivity test was performed and no sensitivity was found. Primary skin irritation test was performed for 48 hours for formulation and there was no sign of erythema or edema found on skin. See table no.3

Hence, from the present research it was found that the formulated Ayurvedic herbal oil, has optimum standards and biological screening establishes the efficacy and safety of formulated Ayurvedic herbal oil,

Table 2: Evaluation of oils.

S. No.	Parameter	Inference
1	pH	6.80 ± 0.02
2	Color	Dark brown
3	Odour	characteristics
4	Acid value	3.3 ± 0.4
5	Viscosity	0.966± 0.5
6	Specific gravity	1.093± 0.3
7	Saponification value	241.99 ± 0.6

Table 3: Primary Skin Irritation Test and sensitivity test.

S. No.	Test	Result
1	Skin Irritation test	No irritation
2	sensitivity test	No irritation

REFERENCES

1. B. M. Mithal and R. N. Shah, A Hand Book of Cosmetics, 1st Edition, Vallabh Prakashan, Delhi 2000 pp. 141-142.
2. Paithankar VV. Formulation and evaluation of herbal cosmetic preparation using safed musli. Int.J. PharmTech 2012. 11-16
3. Kapoor VP. Herbal cosmetics for skin and hair care. Indian Journal of Natural Products and Resources (IJNPR) 2005; 4(4): 306-314.
4. Goswami S, Sharma P, Soni P, Singh P, Shivhare Y. Phytopharmaceuticals as Cosmetic Agents: A Review. Research Journal of Topical and Cosmetic Science, 2011; 2(1): 11-13.
5. Pande SD, Joshi SB, Bobade NN, Wankhade VP, Tapar KT. Formulation and Development of a Liposome Based Hair Revitalizer. Research Journal of Topical and Cosmetic Science, 2011; 2(1): 14-17.
6. R. Shoba Rani Hiremath Textbook of Industrial Pharmacy, 1st Edition, Orient Longman Pvt. Ltd., Hyderabad 2007; 99-102.
7. S. C. Bhatia, Perfumes, Soaps, Detergents and Cosmetics, 2nd Edition, CBS Publishers and Distributions, Delhi, 2001; 639- 641.
8. Thorat RM, Jadhav VM, Kadam VJ. Development and evaluation of polyherbal formulations for hair growth-promoting activity. International Journal of PharmTech Research 2009; 1(4): 1251-1254.
9. Roy RK, et al; Development and evaluation of polyherbal formulation for hair growth activity. Journal of cosmetic dermatology 2007; 6(1): 108-112.
10. Semalty M, Semalty A, Joshi GP, Rawat MSM. *In Vivo* Hair Growth Activity of Herbal Formulations. International Journal of Pharmacology. 2010; 6(1):53- 57.



54878478451170354



Submit your next manuscript to **IAJPR** and take advantage of:

- Convenient online manuscript submission
- Access Online first
- Double blind peer review policy
- International recognition
- No space constraints or color figure charges
- Immediate publication on acceptance
- Inclusion in **Scopus** and other full-text repositories
- Redistributing your research freely

Submit your manuscript at: editorinchief@iajpr.com







