IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, November 2022
Impact Factor: 6.252

Review on Formulation and Evaluation of Herbal Hair Serum

Pawar Shankar B[1], Shinde Pallavi M [2], Datkhile Sachin V[3]
Student, Samarth Institute of Pharmacy, Belhe, Maharashtra, India[1]
Department of Pharmaceutics, Samarth Institute of Pharmacy, Belhe, Maharashtra, India[2,3]
shankarbpawar2942001@gmail.com

Abstract: *Hair plays an important role within the personality of human and for his or her care we use plenty of cosmetic products. Herbal formulations always have activity and relatively lesser or no side effects with synthetic. This study aimed toward reviewing the importance of polyherbal toilet article for the treatment of common hair problems like baldness, alopecia, hair fall, gray hair, dryness, and most typical dandruff. Cosmetics are being employed on an oversized scale for its various utilities in day–to-day life. Mankind uses various products to reinforce beauty and elegance to seem young and charming. To ameliorate hair growth and to assist hair loss, hair root activation is required. Herbal dress are still generally employed by average citizens thanks to smaller side goods and lesser protection and safety profile. This study was intended to use different sauces to formulate herbal hair serum for general purposes (hair operation) The formulated oil was evaluated for its organoleptic properties, acid value, saponification value, viscosity, pH etc. All the parameters were found to be good and within the standards.*

Keywords: Polyherbal ,Alopecia, Cosmetics, Formulation, Viscosity, Dandruff

I. INTRODUCTION

Herbal toilet article is more preferred and is employed within the repairmen of the many ailments of hair .(1)They promote hair growth, improve elegance of hair and forestall hair fall(2) . Toiletries not only promotes hair growth but they also provide necessary moisture to the scalp rendering in beautiful hair(3) . Hair tonics maintain the lipid levels.(4) .Many cosmetics are available nowadays to unravel these problems and hair grease is one of them.(5) persons are born with approximately 100,000 terminal hair follicles on the scalp that are predetermined to grow long and thick hair. (6) Ninety percent of the hair on the healthy scalp is growing, some are undergoing involution (less than 1%), and remaining are resting (5% to 10%).(7,8,9) Post Finasteride depression has also been reported.(10) Minoxidil, on the opposite hand, is related to facial hypertrichosis and phone dermatitis.(11).

1.1 Advantages

- Controlling frizz and dryness.
- Enhancing the hair's natural look
- Protecting against damage

1.2 Disadvantages

- After several days of continued use, this build-up weights down your hair, making it appear flat and dull.
- Accumulation on your scalp can cause dryness, flaking, and skin irritation.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, November 2022
Impact Factor: 6.252

II. MATERIAL AND METHOD

2.1 Heena Powder

- Henna improves and keep up your scalp's health with its cooling and antimicrobial properties.
- Henna is known as a natural conditioner and conditions your hair.
- It fixes the damage and strengthens your hair.
- It maintains the pH balance of the scalp and oil production.

2.2 Neem Powder

Neem powder has anti-bacterial properties that help to stop scalp damage and maintain its pH level. It hydrates our scalp and keeps it refreshed. A monthly hair pack of neem oil to stay the scalp healthy may be a very essential a part of the hair care routine.

2.3 Acalypha Indica

A good herbal remedy for Skin problems like Acne, Eczema, Cuts, Scraps. It's effective in curing Burns and Wounds. It's effective in getting eliminate Hair troubles like Dandruff, Hair fall, Baldness. It adds shine and promotes growth of the Hair.

A. Collection of Plant

The Hair serum was prepared 3-8 by collecting various plant materials like Acalypha Indica, neem leaves from herbal garden and Argan oil were procured from local market . Plant profile of some herbal material used in preparation of Herbal Hair serum as given below,

B. Formulation Table

Sr No.	Ingredients	Quantity Required	Role
1.	Acalyphaindica powder	5ml	Growth of hair
2.	Heena powder	5ml	Colouring agent
3.	Neem Powder	2.5ml	Anti-dandruff
4.	Argan oil	2ml	Moisturizer
5.	Vitamin E	0.5ml	Anti oxidant

C. Formulation

- All fresh herbs, such as *Acalyphaindica powder, Heena powder, Neem powder* were specifically weighed and dispensed in 500 ml of water. The contents referred to above were boiled for 15 min.

IJARSCT
ISSN (Online) 2581-9429
International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)
Volume 2, Issue 1, November 2022
Impact Factor: 6.252

- They were permitted to cool after 15 minutes of boiling and then filtered. Argan oil and vitamin E were added to the filtrate. Afterward, the Prepared serum was kept in a spray bottle.

III. EVALUATION OF HERBAL HAIR SERUM

1. **Physical Appearance**: The physical appearance, color, and feel of the set herbal hair serum are visually tested.
2. **Homogeneity Test:** A clean and dry object glass was smeared with the hair serum, and a cover glass was sealed. The appearance under the light of some coarse particle/homogeneity was investigated. Herbal hair serum was tested by visual examination for homogeneity and tested for some lumps, flocculates, or aggregates.
3. **pH Test:** The pH cadence was calibrated using pH 4 and pH 7 buffer results. also, the electrode was soaked in the hair serum and left until the pH regularized after a many twinkles
4. **Skin Irritation Test:** It is carried out by applying the serum on skin and tested for any redness or itching after 2 hours.
5. **Sensitivity Test:** It is carried out by applying the serum on the skin and is exposed to sunlight and tested for any rashes or itching after 10 minutes.
6. **Stability:** The herbal hair serum was kept for three months at two separate temperatures of 4 ± 2 °C and 30 ± 2 °C, with 65 RH. Compared with the original pH and density, the pH and density of the herbal hair serum were determined after three months
7. **Viscosity:** The viscosity measurement was performed with spindle number 6 on a Brookfield viscometer (RVDV-II+PRO). In the beaker, 50 ml of hair serum was placed, and the viscosity was measured at various rpm, i.e., 10, 20, 50, 100
8. **Spredability:** Spreadability was measured by a parallel plate process typically used to assess and measure the spreadability of semi-solid preparations. One gram hair serum was pressed between two horizontal plates of dimension 20× 20 cm, the upper of which weighed 125 g. The spread diameter was measured after 1 min. Spreadability was calculated using the following formula:

   $$S = M \times L / T$$

   Where, S= Spreadability, M= Weight in the pan (tied to the upper slide), L= Length moved by the glass slide, and T = Time (in sec) taken to separate the slides completely .
9. **Test the Sensitivity of the Eye (Draize Eye Test):** Eye sensitivity was tested on three rabbits for getting the average result of sensitivity. One drop of hair serum was injected into the left eyes of the rabbits in physiological NaCl (as the control is the right eye) and then observed for 30 minutes, 60 minutes, 120 minutes, 240 minutes, 1 day, 2 days, 3 days, and 4 days. The scores of the cornea, iris, and conjunctiva were determined

IV. RESULT AND DISCUSSION

- **Physical Appearance:** It was observed that the colour of all the herbal hair serum was pale brown with a translucent look, which on the operation was founded to be smooth.
- **Homogeneity:** By visual examination of the looks and presence of any lumps, flocculates, or summations, the produced herbal hair serum was checked for unity. The unity of set serum has been shown to be fine
- **pH Determination:** The pH of the entire herbal hair serum was 7.3, which was sufficient for the hair, suggesting that the herbal hair serum was suitable for the hair.
- **Stability Studies:** The herbal hair serum was stable during the exploration time, as these serums showed no physical insecurity, and there was no conspicuous difference within the pH ahead and after the study
- **Skin Iritation Test:** after we apply on skin no any variety of redness occur .
- **Sensitivity Test:** Apply on skin and observed after 10 min no any rashes or itching occur

.

V. CONCLUSION

This research provides guideline on the employment of herbal ingredients on the preparation of Herbal toilet article having minimal or no side effects. All the parameters showed that they're within the boundaries 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 leads to lustrous looking hair.

ACKNOWLEDGEMENT

We thanks and gratitude to Trustee of Samarth Rural Educational Institute's and team of Samarth Institute of Pharmacy, Belhe, Pune with their valuable guidance and support.

REFERENCES

[1]. Patni P., Varghese D., Balekar N. and Jain D.K. Formulation and evaluation of herbal hair oilFor alopecia management. Planta Indica. 2(3): 27-30, 2006

[2]. Adirajan N., Ravikumar T., SShanmugasunda Ram N. and Babu M. In vivo and in vitro evaluation of hair growth potential of Hibiscus rosa-Sinensis Linn. J Ethanpharm. 88: 235-239, 2003

[3]. Purwal, L., Gupta, S. B. N. and Pande, M.S. Development and Evaluation of Herbal Formulations for hair growth, E- Journal of Chemistry, Vol-5, NO-1, 34-38,2008.

[4]. Gloor M, Fitchtler C.The basic of protein chemistry, J. Cosmetology, 3, p.193-194,1973.

[5]. Rathi V., Rathi J.C., Tamizharasi S. and Pathak A.K. Plants used for hair growth promotion: A Review. Phcog Rev. 2(3): 165-167,2008

[6]. Price VH. Treatment of hair loss. N Eng. J Med. 1999;341(13):964–973. Doi:10.1056/NEJM199909233411307

[7]. Sinclair R. Male pattern androgenetic alopecia. BMJ. 1998;317 (7162):865–869. Doi:10.1136/bmj.317.7162.865

[8]. Orasan MS, Roman II, Coneac A, Muresan A, Orasan RI. Hair loss And regeneration performed on animal models. Clujul Med. 2016;89 (3):327.

[9]. Abell E. Embryology and anatomy of the hair follicle. Dis Hair Growth. 1993;1–19.

[10]. Mella JM, Perret MC, Manzotti M, Catalano HN, Guyatt G. Efficacy And safety of finasteride therapy for androgenetic alopecia: A systematic review. Arch Dermatol. 2010;146(10):1141–1150. Doi:10.1001/archdermatol.2010.256

[11]. Rogers NE, Avram MR. Medical treatments for male and female Pattern hair loss. J Am Acad Dermatol. 2008;59(4):547–566.

[12]. Mella JM, Perret MC, Manzotti M, Catalano HN, Guyatt G. Efficacy And safety of finasteride therapy for androgenetic alopecia: A systematic review. Arch Dermatol. 2010;146(10):1141–1150. Doi:10.1001/archdermatol.2010.256

[13]. Rogers NE, Avram MR. Medical treatments for male and female Pattern hair loss. J Am Acad Dermatol. 2008;59(4):547–566.

[14]. Complementary A. Or Integrative Health: What's in a Name? NCCIH. National Center for Complementary and Integrative Health NCCIH; 2016.

[15]. Hosking A-M, Juhasz M, Mesinkovska NA. Complementary and Alternative treatments for alopecia: a comprehensive review. Skin Appendage Disorders. 2019;5(2):72–89. Doi:10.1159/000492035

[16]. Soleymani T, Shapiro J. The Infatuation With Biotin Supplementation: is There Truth Behind Its Rising Popularity? A Comparative Analysis of Clinical Efficacy versus Social

[17]. Popularity. J Drugs Dermatol. 2017;16(5):496–500.

[18]. Food U, Administration D The FDA warns that biotin may interfere With lab tests: FDA safety communication.2018.

[19]. Dawber R, Rundegren J. Hypertrichosis in females applying minoxidil Topical solution and in normal controls. J Eur Acad Dermatol Venereol. 2003;17(3):271–275. Doi:10.1046/j.1468-3083.2003.00621.x

[20]. Friedman ES, Friedman PM, Cohen DE, Washenik K. Allergic contact Dermatitis to topical minoxidil solution: etiology and treatment. J Am Acad Dermatol. 2002;46(2):309–312. Doi:10.1067/mjd.2002.119104