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FORMULATION AND EVALUATION OF HERBAL HAIR GROWTH OIL

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ABSTRACT

The present study on formulation and evaluation of herbal hair growth oil focuses on preparing a polyherbal oil formulation using natural ingredients to promote hair growth and improve scalp condition. Some of these herbs include Amla, Henna, Neem, Fenugreek, Lemon, Tulsi, Brahmi, Shikakai, Reetha, Mulethi root, Kasturi root, Mahabhringraj, Jantamasi, Chitrak, Marigold, Hibiscus, Nutmeg, Parsley, Henna and Thyme. The herbal hair oil formulation is expected to provide multiple benefits like nourishment to hair roots, prevention of dandruff, reduction in hair fall. Improves hair texture, and increases hair growth. Evaluation of the finished formulation is necessary to determine its quality, stability, safety and effectiveness.

INTRODUCTION

Hair care products are special formulations designed to cleanse the hair, change its texture, nourish it, and help keep the hair healthy and looking great. Hair oils are hair care products that are used to prevent and treat baldness or other hair problems, and they help make hair stronger and healthier. Many types of herbs have been used for hair care. Some of these herbs include amla, henna, neem, fenugreek, lemon, tulsi, brahmi, shikakai, reetha, licorice root, musk root, mahabhringraj, jantamasi, chitrak, marigold, hibiscus, nutmeg, parsley, henna and oregano.

This herbal hair oil helps in keeping the scalp moisturized and can also heal dry scalp and dry hair. It gives the scalp all the vital nutrients it needs to function properly and encourages

healthy hair growth naturally. Alopecia, or hair loss, is a common concern among patients, often causing severe mental and physical distress. One of the main contributors to alopecia is thought to be a combination of various factors, including androgens. It is advised to apply oil to hair daily. It is common to include appropriate herbs with other components. This tradition continues even today. Hair oil preparations include: Solutions to various hair fall problems including dandruff and split ends primarily used for styling purposes, both men and women can enjoy luxurious hair growth by cooling their scalp. Cleaning the Scalp with Different Oils A variety of oils like coconut, almond, castor and onion oil can be used to effectively clean the scalp.

Hair loss not only affects the physical appearance, but can also cause anxiety, depression, and loss of confidence in affected individuals. Therefore, the development of safe and effective hair care products has become important.

MATERIAL AND METHOD

Materials Required Herbs

Ingredient	Scientific Name	Function / Benefit
Amla	Emblica officinalis	Strengthens hair
Bhringraj	Eclipta alba	Promotes hair growth
Neem	Azadirachta indica	Combats dandruff
Henna	Lawsonia inermis	Conditions hair
Fenugreek seeds	Trigonella foenum-graecum	Reduces hair fall
Curry leaves	Murraya koenigii	Boosts melanin
Hibiscus flowers	Hibiscus rosa-sinensis	Prevents greying and hair loss
Coconut oil (Base)	Cocos nucifera	Carrier oil; penetrates deeply into hair

METHOD OF PREPARATION

The direct boiling method was chosen to make herbal hair oil using the mentioned herbs.

Gather fresh ingredients: If you choose to use fresh herbs, make sure they are well-dried. Leave the oil in a shady place for a day or two to prevent it from getting spoiled due to moisture. Using dried forms such as dried amla can help reduce this problem.

Lightly roast the fenugreek seeds: To deepen the color of the fenugreek seeds, dry them on low flame for 2-3 minutes until they become slightly darker. This process enhances the medicinal properties that will be added to the oil.

Heat coconut oil: Pour coconut oil in a heavy-bottomed pan or kadhai and keep aside. Heat it gently on low flame.

IMPORTANT: Be careful not to overheat the oil or allow it to smoke.

Add the herbs: When the oil is hot but not boiling, add the herbs. Include hibiscus, henna, amla, curry leaves and roasted fenugreek.

Keep stirring continuously for 10-15 minutes on low flame. The oil will gradually change color and give off a pleasant herbal aroma.

Cool and add: Turn off the flame and let the oil along with the herbs cool completely. Leaving it overnight will increase both its taste and potency.

Filter the oil: Use muslin cloth to filter oil.

Straining and Storage: Filter the oil into a clean, dry glass bottle using a gauze cloth placed in tinfoil or sand. Store the prepared oil in a cool, dark place.

EVALUATION PARAMETERS FOR HERBAL HAIR OIL

Organoleptic Property

Colour: Can be identified with the naked eye.

Sensitivity: Applied on skin and exposed to sun for 5 eyelids to check any irritation on skin dirt.

Grit: Noticed by rubbing on the skin. **Sedimentation:** Keep the entire medicine aside overnight and check for sedimentation.

PH: The pH meter was calibrated with buffer results of pH 4 and pH 7. The electrode was bathed in hair oil painting for several twinkles until the pH returned to normal.

Viscosity Measurement: Viscosity measurements were performed on a Brookfield viscometer (RVDV-II+Pro) with spindle number 6. In the beaker, 50 ml hair serum was placed, and the viscosity was measured at different rpm, i.e., 10, 20, 50, 100..

Physical Assessment: Specific gravity, pH, viscosity, acid value and saponification value are physical. The evaluation criteria that were established.

Acid value: 10 ml of oil was mixed with 25 ml of ethanol and 25 ml of ether. Phenolphthalein was added as indicator and titrated with 0.1 M potassium hydroxide solution. n = number of milliliters of 0.1M KOH w = Wt. of oil .

RESULT AND DISSUSSION

The results obtained indicated that the prepared herbal hair growth oil had acceptable quality parameters and good cosmetic properties. The formulation was easy to apply, non-sticky and cosmetically acceptable. The combination of several medicinal herbs produces synergistic activity that may help improve scalp health, reduce dandruff, reduce hair fall, and promote healthy hair growth naturally.

The study confirms that herbal formulations can serve as safe alternatives to synthetic hair care products because they contain natural phytoconstituents with fewer side effects. Therefore, the prepared herbal hair oil can be considered effective, economical and suitable for regular hair care..

Evaluation Results of Herbal Hair Oil

S.No.	Evaluation Parameter	Observation / Result
1	Color	Dark greenish brown
2	Odor	Pleasant herbal odor
3	Appearance	Smooth and homogeneous
4	Grittiness	Absent
5	Sedimentation	No sedimentation observed
6	Ph	6.5 – 7.0
7	Viscosity	Moderate and suitable
8	Specific Gravity	0.91 – 0.94
9	Acid Value	Within acceptable limit
10	Saponification Value	Satisfactory
11	Sensitivity Test	No irritation observed
12	Stability Study	Stable at room temperature

REFERENCES

1. Suman, K. G., Kumar, B., & Mukopadayay, S. (2022). Herbal hair oil: A review. International Journal of Health Sciences, (II), 13449-13465.
2. Banerjee, P. S., Sharma, M., & Nema, R. K. (2009). Preparation, evaluation and hair growth stimulating activity of herbal hair oil. J Chem Pharm Res, 1(1), 261-7.
3. Jain, P. K., Das, D., & Jain, P. (2016). Evaluating hair growth activity of herbal hair oil. Int J PharmTech Res, 9(3), 321-7.
4. Gautam, S., Dwivedi, S., Dubey, K., & Joshi, H. (2012). Formulation and evaluation of herbal hair oil. Int J Chem Sci, 10(1), 349-53.
5. Pavan, S., Prathibha, C., Dr Kavitha, P. N., & Dr Saraswathi, C. D. (2021). Formulation and Evaluation of herbal hair oil. International Journal of Pharmaceutical Research and Applications, 6(5), 1285-1299.
6. Tiwari, G., & Tiwari, R. (2021). Assessment of nutraceutical potential of herbs for promoting hair growth: Formulation considerations of herbal hair oil. The Open Dermatology Journal, 15(1).
7. Darade, D. V., Gote, V. P., Deshmukh, S. P., & Bansod, N. Y. (2023). A review on formulation and evaluation of herbal hair oil. GSC Biological and Pharmaceutical Sciences, 25(3), 001-004.

8. Saraf, S., Jharaniya, M., Gupta, A., Jain, V., & Saraf, S. (2014). Herbal hair cosmetics: advancements and recent findings. *World J Pharm Res*, 3(2), 3278-94.
9. Kale, A. D., Gayake, P. D., Farkade, M. G., Gavali, S. E., Gaware, S. G., & Vir, D. K. (2025). HERBAL HAIR OIL: A NOVEL FORMULATION FOR HAIR CARE AND MANAGEMENT.
10. Darade, D. V., Gote, V. P., Deshmukh, S. P., & Bansod, N. Y. (2023). A review on formulation and evaluation of herbal hair oil. *GSC Biological and Pharmaceutical Sciences*, 25(3), 001-004.
11. Pavan, S., Prathibha, C., Dr Kavitha, P. N., & Dr Saraswathi, C. D. (2021). Formulation and Evaluation of herbal hair oil. *International Journal of Pharmaceutical Research and Applications*, 6(5), 1285-1299.
12. Mithal BM. A Textbook of Cosmetics. New Delhi: Vallabh Prakashan; 2012. Prajapati ND, Purohit SS, Sharma AK, Kumar T. A Handbook of Medicinal Plants. Jodhpur: Agrobios; 2010.
13. Nadkarni KM. Indian Materia Medica. Mumbai: Popular Prakashan; 2009. Harborne JB. Phytochemical Methods. London: Chapman and Hall; 1998. Ebling FJG. Hair follicle and associated glands. In: Textbook of Dermatology. Oxford: Blackwell Scientific Publications; 1998
14. Tiwari, G., & Tiwari, R. (2021). Assessment of nutraceutical potential of herbs for promoting hair growth: Formulation considerations of herbal hair oil. *The Open Dermatology Journal*.
15. Meghamala, G., Bonthagarala, B., Yohan, G., Sri, G. D., Blessy, D., Angelina, C. B. S., & Saketh, D. (2024). Formulation development and evaluation natural hair oil. *World Journal of Pharmacy and Pharmaceutical Sciences*, 13(7), 1006-1016.
16. Pavan, S., Prathibha, C., Dr Kavitha, P. N., & Dr Saraswathi, C. D. (2021). Formulation and Evaluation of herbal hair oil. *International Journal of Pharmaceutical Research and Applications*, 6(5), 1285-1299.
17. Patel RP, Sharma RK. Evaluation of polyherbal hair oil formulations. *International Journal of Cosmetic Science*. 2012;34(2):145-150.
18. Sharma N, Gupta PC, Rao CV. Herbal oils and their role in hair care. *Asian Journal of Pharmaceutical Research*. 2011;1(3):45-50.
19. Kapoor VP. Herbal Cosmetics for Skin and Hair Care. *Natural Product Radiance*. 2005;4(4):306-314.