

PREPARATION AND EVALUATION OF HERBAL HAIR OIL

Rahathunnisa begum^{1*} & Afzalunnisa begum²

¹Department of Pharmacology, G.Pulla Reddy College of Pharmacy affiliated to Osmania University, Mehdiapatnam, Hyderabad, Telangana, India-500028.

²Department of Pharmacognosy, G.Pulla Reddy College of Pharmacy affiliated to Osmania University, Mehdiapatnam, Hyderabad, Telangana, India-500028.

Received: September 17, 2018

Accepted: October 30, 2018



ABSTRACT: Herbal cosmetics have burgeoning demand and in the world market and are an inestimable gift of nature. There are wide spans of herbal cosmetic products to satisfy beauty regime. The presence of number of phytochemicals and botanicals in the herbal products have dual stuff, one that they are used as cosmetics for body care and another that phytochemicals amend the biological functions of human body naturally results in healthy skin and hairs. Herbal hair oil not only moisturizes scalp but also converse dry scalp and dry hair conditions. It bestows numerous essential nutrients required to maintain normal functions of the sebaceous gland and promote natural hair growth.







Key Words: herbal cosmetics, herbal hair oil, phytochemicals

I. Introduction

The conception of beauty and cosmetics is as ancient as mankind and civilization. So, they use different beauty products that have herbs to look ravishing and young. Indian herbs and its intendment are popular worldwide (Sanju et al., 2006). As the name suggests, the herbal extracts means the extracts of herbs. It is an ancient methodology because its origin was discovered from the holy Vedas and in Unani scriptures. As the cognizance said that the chemical medicines are not always work as magic bullets and they may have side effects. The in vogue trend moves toward the herbalism and use of natural products. Indian herbs are the prosperous source to be used in cosmetic industries. Hair oils those embraces herbal drugs are called as hair tonics. These are contrived by herbal extracts in an oil base. Hair oils are the hair care formulations applied for cure of hair disorders such as baldness, greying of hairs, hair falling, and dryness of hairs (Joshi et al., 2017). A plethora of herbs have been employed for hair treatments. A few of these herbs are Amla, Henna, Neem, Methi, Lemon, Tulsi, Brahmi, Shikakai, Reetha, Liquorice root, Musk root, Mahabhringraj, Jantamasi, Chitraka, Marigold, Hibiscus, Nutmeg, Parsley, Rosemary, Thyme (Bhatia, 2001). Herbal formulations always have tempted considerable attention because of their good bustle and comparatively lesser or nil side effects with synthetic drugs (Pooja et al., 2009).

Table 1: Representing different herbs with figures used in the preparation of hair oil.

S.No.	Herbs	Figures
1.	Aloe Vera pulp subsumes proteolytic enzymes which repairs dead skin cells on the scalp. It also feat as a great conditioner and leaves your hair all smooth and shiny. It bolster hair growth, prevents itching on the scalp, reduces dandruff and conditions your hair.	
2.	Tulsi is a cogent remedy for hair loss. It is prepensed as an essential ingredient in herbal hair loss treatment. The herb works by strengthening the hair roots, thereby curbing hair fall, prevent bacterial and fungal infections.	

3.	Hibiscus flowers are used to clout premature graying of hairs, prevent hair loss and spilt ends.	
4.	Shikakai fights in contrast to dandruff and anticipate lice.	
5.	Methi curb hair fall and strengthens your hair from root to tip.	
6.	Coconut oil nourishes the scalp and proffer shine to the hairs.	
7.	Almond oil rich in vitamin E used in the treatment of hair loss and strengthen the hairs.	
8.	Jasmine flowers serves as anti-microbial agent, conditioning agent and also gives good odour to the oil.	

II. Materials and Methods

2.1 Formulation of herbal hair oil

Different ingredients used in the formulation of herbal oil are presented in Table 1. Precisely all the dried and fresh herbs such as Tulsi, hibiscus, Shikakai, Aloe Vera pulp and Methi were weighed and grinded in the mixture and mixed in 60% of almond oil. The above content was boiled for 15 min. and was filtered through

muslin cloth. To the filtrate 25% coconut oil was added to make up the volume (100 mL). Finally small amount of flavoring agent was added to the oil and it was placed in amber colored bottle (Mithal et al., 2000)

Table 2: Ingredients used in formulation of herbal hair oil

Ingredients	Quantity (%)
Aloe Vera pulp	4%
Tulsi	2%
Hibiscus	1%
Shikakai	2%
Coconut oil	25%
Almond oil	60%
Methi	5%
Jasmine	1%

III. Evaluation of herbal hair oil

The formulated herbal hair oil was levied to physical and biological evaluation.

3.1 Sensitivity test:

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

3.2 Acid value:

3.2.1. 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.

3.2.2. Preparation of sample:

10 mL oil was measured and dissolved in 50 mL of 1:1 ethanol and ether mixture and shaken vigorously. 1 mL of phenolphthalein solution was then added and titrated with 0.1 molar KOH solution.

3.3. Saponification value:

To accurately weighed 1 mL of oil in a 250 mL of conical flask, 10 mL of ethanol: ether mixture (2: 1) was added. To this, 25 mL of 0.5 N alcoholic KOH was added and was kept undisturbed for 30 min. and the flask was cooled. This 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 using formula,

$$\text{Saponification Value} = 56.1(B-S) N/W$$

Where,

B= Volume in mL of standard Hydrochloric acid required for the blank.

S= Volume in mL of standard Hydrochloric acid required for the sample.

N= Normality of standard Hydrochloric acid.

W= Weight of the oil taken in gms for the test.

3.3.1. pH: The pH of herbal hair oil was determined using pH meter.

3.3.2. Viscosity: The viscosity was determined using Ostwald's viscometer.

3.3.3. Specific gravity: Specific gravity bottle was rinsed with distilled water, dried in hot air oven for 15 minutes, cooled, capped, weighed and was noted as (a). Now the same specific gravity bottle was filled with the sample, capped and again weighed (b). Weight of the sample per milliliter was determined by subtracting the weights (b-a) (Singh, 1996).

IV. Result and Conclusion

Herbal oil provides numerous essential nutrients required to maintain normal function of sebaceous glands and promotes natural hair growth. The utilization of herbal cosmetics enhanced many folds in personal hygiene and healthcare system. Hence, there is a tremendous clamor for the herbal cosmeceutical individual care or personal health care industry, which is presently focusing and paying extra diligence on the development of herbal-based cosmetics. As nowadays, it is a fast developing segment with a mammoth scope of manifold boost in coming years. Use of bioactive ingredients in cosmetic formulations have valuable effect on body features and provide nutrients, which are essential for maintaining healthy and beautiful hairs. At last it can be concluded that, this herbal hair oil formulation has significant quality.

Table 3: Role of herbs in herbal hair oil

Ingredients	Importance
Coconut oil	Moisturizes dry hair
Almond oil	Treat hair loss and strengthens the hairs
Tulsi	Anti bacterial
Hibiscus	Controls premature graying
Shikakai	Anti dandruff
Jasmine	Conditioning agent, provides good odour
Methi	Hair growth
Aloe Vera	Boosting scalp health

Table 4: Evaluation of herbal hair oil

Evaluation parameter	Inference
Sensitivity test	Non sensitive
Irritation test	Non irritant
pH	6.4
Grittiness	Smooth
Specific gravity	0.94
Saponification value	197.04
Acid value	4.7
Color	Yellowish brown
Odour	Aromatic

V. References

1. Sanju, N., Arun, N., Roop, K.K. 2006. *Cosmetic Technology*. 2nd Edition, 379-382.
2. Joshi, A.A., Dyawarkonda, P.M. 2017. Formulation and evaluation of polyherbal hair oil. *International Journal of Green Pharmacy*, 11 (1): S135.
3. Bhatia, S.C. 2001. *Perfumes, soaps, detergents and cosmetics*. 639: 641.
4. Banerjee, P.S., Sharma, M., Nema, R.K. 2009. Preparation, evaluation and hair growth stimulating activity of herbal hair oil. *Journal of Chemical and Pharmaceutical Research*, 1(1): 261-267.
5. Mithal, B.M., Shah, R.N. 2000. *A Hand Book of Cosmetics*. 1st Edition, 141-142.
6. Singh, R.M. 1996. *Indian Pharmacopoeia*. Government of India, Ministry of Health and Family Welfare, Published by, The Controller of Publication, Edition, Vol. II.