



# A UPDATED REVIEW ON: HERBAL ANTI DANDRUFF SHAMPOO

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## ABSTRACT

Herbal shampoos are shampoos infused with extracts of natural ingredients used to wash the hair and helps to control and reduce dandruff. The skin on our head produces a greasy liquid called sebum. It is made to spread over the entire head and protect the hair. This gives the hair a healthy glow, but when secreted in large quantities it makes the hair look dirty. Herbal shampoos are made from pure organic ingredients, contain no synthetic additives or surfactants, and have no side effects. Herbal shampoos for hair growth are formulated to strengthen the hair follicles by delivering essential oils and nutrients through the roots and hair follicles. It then stimulates the formation of new and healthy hair roots and promotes healthy hair growth.

## KEYWORDS

Natural, Herbal, Ingredients, Shampoo, Formulation, Antidandruff shampoo, Evaluation.

## CAUSES & SYMPTOMS



Shiny white flakes that often peel off collars and shoulders can be caused by a skin condition called dandruff. Although it looks harmless, dandruff causes itching and embarrassment. It is a very common condition that causes constant exfoliation of the scalp. Poor hygiene and inadequate shampoo as skin cells accumulate and cause dandruff and itching.

**Dandruff signs and symptoms may include:** Scalp, hair, eyebrows, beard or mustache flaky skin, and itchy scalp on the shoulders Flaky unfriendly scalp of a baby with cradle cap. When stressed, the signs and symptoms can be more severe and tend to burn in the cold and dry season.

## **INTRODUCTION**

Shampoos are probably the most widely used cosmetic products for cleansing hairs and scalp in our daily life. Under cosmetic preparations, Herbal shampoos are mainly used for cleansing the hair and scalp with the use of traditional Ayurvedic herbs. They are mainly used for removal of oils, environmental pollutions, dandruff, dirt, etc., and nourishes your hair smoothly. Herbal shampoo uses herbs from plants as an alternative to the synthetic shampoo found in the market. The herbal shampoo is becoming important, as people these days prefer herbal products than chemical as chemicals have side effects and also Herbal shampoo is proved to enhance hair health having no side effects, awareness and need for cosmetics with herbs are on the rise, because it is believed that these products are safe and free from side effects. Herbal formulations are preferred as alternative to synthetic shampoo but formulating cosmetics using completely natural raw material is a difficult task.

## **Classification of Shampoo**

### **1. Based on Appearance**

- Powder shampoo
- Liquid shampoo or lotion shampoo
- Gel shampoo or Solid shampoo
- (Cream shampoo
- Oil shampoo
- Miscellaneous anti dandruff shampoo or medicated shampoo

## 2. Based on Use or Function

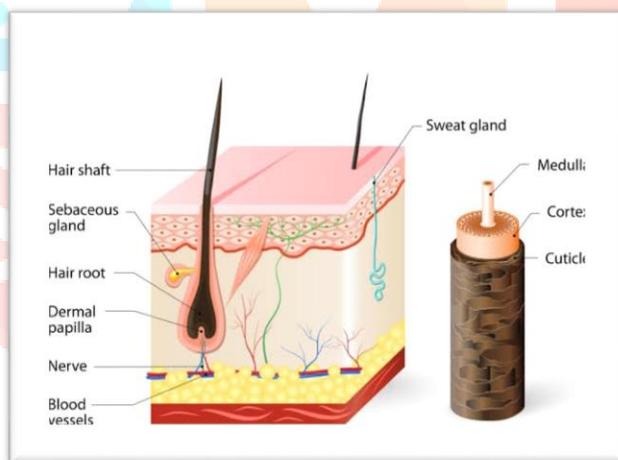
- Conditioning shampoo
- Antidandruff shampoo
- Therapeutic shampoo
- Baby shampoo
- Balancing shampoo
- Clarifying shampoo

## 3. Based on origin:

- Herbal shampoo
- Egg shampoo

Evaluation of shampoos comprises the quality control tests including visual assessment and physiochemical controls such as pH, density and viscosity.

## HAIR ANATOMY



Hair grows from the hair follicles in the fat layer of the scalp. Contrary to the general belief that hair grows as individual strands, hair follicles actually grow in groups of 1-4 hairs called "follicular units". At the base of each hair follicle is a hair bulb where the growth mechanism for producing hair occurs. Hair follicles get their nourishment from the blood vessels within the dermis. The cells divide and develop to produce the hair shaft. It keeps its soft shape while the hair is still developing under the epidermis. As it passes through the epidermis, its outer layer hardens to keratin.

## **Parts of the Hair**

**Dermal papillae:** The dermal papilla is responsible for regulating the hair cycle and hair growth, and is also comprised of androgen receptors that are sensitive to the presence of DHT.

**Matrix:** The matrix surrounds the dermal papillae needed for hair and contains all the active cells for growth and for the development of the different parts of the hair, particularly the outer root sheath, the inner root sheath and the hair shaft. Combined, the matrix and the dermal papillae make up the hair bulb.

**Outer root sheath:** The outer root sheath, or tricholemma, is the outermost part of the hair and is keratinized. It covers the entire hair follicle inside the dermis and then transitions through to the epidermis, providing the hair follicle with an opening from which to surface from.

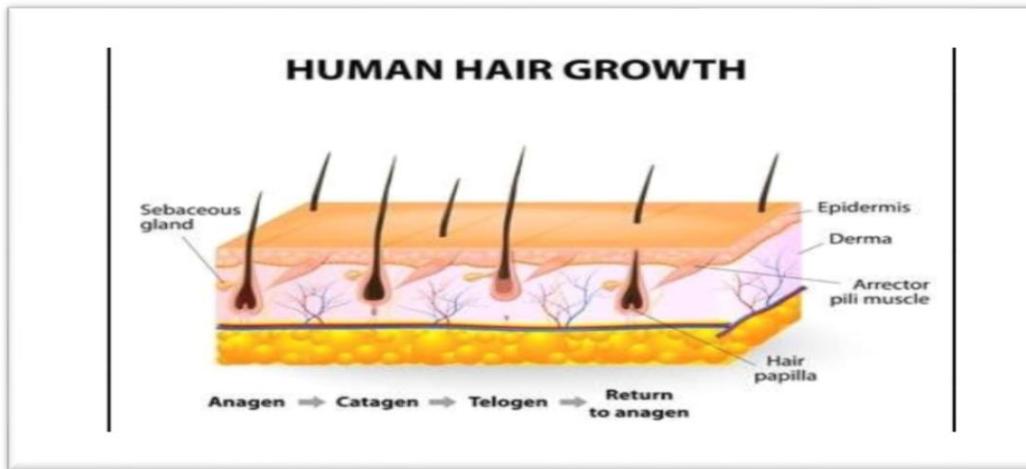
**Inner root sheath:** inner root sheath is comprised of three parts: the Henley layer, Huxley layer, and cuticle. The Henley's and Huxley's layers are capsular layers that anchor onto each other with the purpose of stabilizing the hair. The cuticle, which is the innermost part that is closest to the hair shaft, is made from dead hardened cells and give the hair shaft added protection. This, together with the capsular layers that make up the Henley's and Huxley's layers, secures the hair and allows it to grow in length.

**Hair shaft:** The hair shaft is the solitary part of the hair follicle that fully exits the surface of the skin. The hair shaft is made up of three layers: the medulla, cortex, and the cuticle.

The medulla is described as an unsystematic and unstructured area located in the innermost region of the hair shaft and is not always present.

The cuticle is the hair's outer protective layer and is connected to the internal root sheath. It is a complex structure with a single molecular layer of lipids that helps hair repel water.

## HAIR PHYSIOLOGY



### Anagen (growth phase):

Most hair is growing at any given time. Each hair spends several years in this phase.

### Catagen (transitional phase):

Over a few weeks, hair growth slows and the hair follicle shrinks.

### Telagen (resting phase):

Over months, purpose of stabilizing the hair. The cuticle, which is the innermost part that is closest to the hair shaft, is made from dead hardened cells and gives the hair shaft added protection. This, together with the capsular layers that make up the Henley's and Huxley's layers, secures the hair and allows it to grow. Growth stops and the old hair detaches from the hair follicle. A new hair begins the growth phase, pushing the old hair out.

## NEED OF SHAMPOO

The skin on our head produces a greasy fluid called sebum. It is produced to protect the hair by coating itself all over the head. This gives the hair a healthy shine but when secreted in large amounts it makes the hair look dirty.

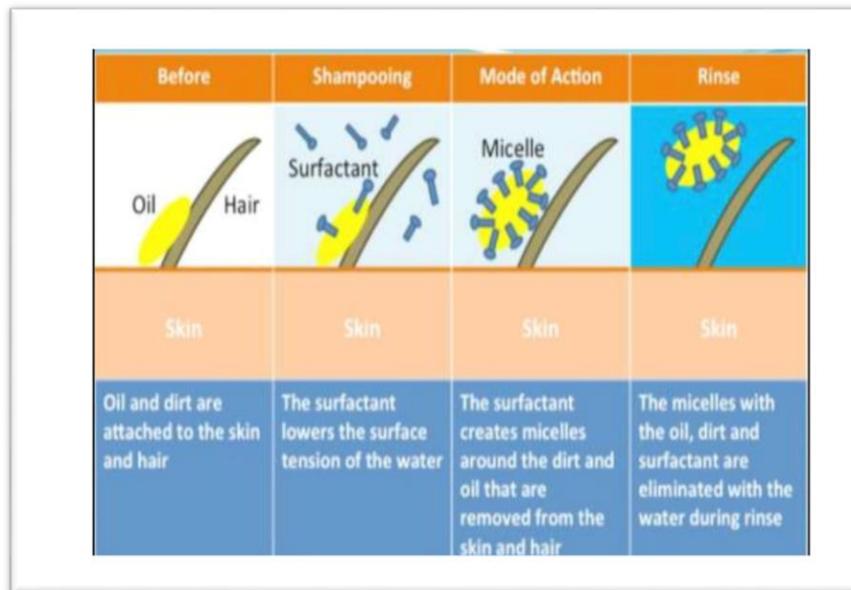
## **IDEAL PROPERTIES OF HERBAL SHAMPOO**

1. Dust and dirt, excess sebum and other greasy substances, hair octopus cells need to be effectively and completely removed.
2. It is necessary to generate a sufficient amount of foam to meet the psychological needs of the user.
3. It can be easily removed by rinsing with water.
4. Keep your hair dry, soft and shiny, easy to handle and minimize splattering.
5. It should give your hair a pleasant scent.
6. Do not cause side effects or irritation to the skin or eyes. Do not roughen or crack your hands.

## **ADVANTAGES OF HERBAL SHAMPOO:**

Herbal shampoo are formulated by pure and organic ingredients with no synthetic additives or surfactants are free of any side effects.

- ▶ Herbal shampoos are biodegradable and earth friendly.
- ▶ It doesn't cause irritation to the eyes.
- ▶ It is cost friendly, not much expensive.
- ▶ Regular usage of herbal shampoo can do wonders for your hair.
- ▶ A perfect oil balance is achieved by using herbal shampoo.
- ▶ They consist of natural essential disinfectant properties that protect hair and scalp from the harsh UV rays of the sun and prevent skin infections.

**Action of Shampoo on hair:****MATERIAL AND METHOD**

Sno.	Common name	Pictures	Biological name	Category
01	Amla		Emblicoefficialis	Anti-dandruff agent
02	Cassia		Cassia auriculata	Anti-dandruff agent
03	Shikakai		Acacia concinna	Anti-dandruff and foam base
04	Neem		Azadirachta indica	Anti-dandruff, Anti-bacterial, Anti-fungal
05	Brahmi		Bacopamonieri	Anti-dandruff, Hair growth
06	Reetha		Sapindusmukorossi	Anti-dandruff, Hair growth, detergent

**Fig: 02 Description of ingredients.**

## Part 1 – Preparation of herbal extract

Take herbs. Soak Amla, Reetha, Bringraj, Brahmi, Aloe Vera, Neem, etc. in distilled water. Take 7 ml and 10 ml of the extract for 5 minutes with 800 W microwave radiation, or when it starts to boil, squeeze with lemon to keep it transparent and mix until colorless.

- Collected parts of herbs and dried in the sun.
- Dried herbs were crushed and accurately weighed.
- All ingredients shown in the previous table were mixed with a pestle in a mortar.

## EVALUATION

Formulations were evaluated and manufactured using several quality control tests, including visual evaluation, physicochemical control, and conditioning performance tests.

**Appearance:** The transparency, color, odor, and foaming ability of the prepared product were evaluated.

**Foaming and Foaming Stability:** The total amount of foam after shaking for 1 minute was recorded. The volume of the foam is only calculated. Immediately after shaking, the amount of foam shake was recorded at 1-minute intervals for 4 minutes.

**PH determination:** Take a piece of PH paper and place it on a white tile. Pour a drop of sample onto PH paper with a clean pipette. Pay attention to the color of the PH paper. now Compare the color obtained on the PH paper with another shade of the standard color PH card and make a note of the PH value.

**Percentage of solids:** 4 grams of shampoo was placed in a clean, dry evaporating dish and weighed. They were weighed again to confirm the exact weight of the shampoos. An evaporating dish on a hot plate was used to evaporate the liquid portion of the shampoo. Then the weight percent was determined.

**Skin irritation:** Shampoo skin irritation can be confirmed by applying a small amount of product to the skin. After a few minutes, check for local irritation or inflammatory reactions.

## CONCLUSION

This study states that it is necessary to develop a stable and effective herbal shampoo without the use of synthetic chemicals. The main purpose of this study was to develop a stable, functionally effective shampoo. The purpose of this study was to make an herbal shampoo that gives hair a smooth and smooth effect and is safer than chemical conditioning agents.

## **REFERNCES**

1. Sharma RM, Shah K, Jankipatel. Evaluation of prepared herbal shampoo formulations and to compare formulated shampoo with marketed shampoos. International journal of pharmacy and pharmaceutical sciences. 2011; 3(4):402-405.
2. Chandran S, Vipin KV, AugusthyAR, Lindumol KV, Shirwaikar A. Development and evaluation of antidandruff shampoo based on natural sources. J Pharm Phototherapeutics. 2013; 1(4):10-4.
3. Shinde PR, Tatiya AU, Surana SJ. Formulation Development and Evaluation of Herbal Antidandruff Shampoo. International Jnl of research in Cosmetic Science. 2013; 3(2):25-33.
4. Snehal W, Nitin K, Vaibhav B. Original research paper on Preparation and Evaluation of Antidandruff polyherbal powder Shampoo. Pharmacophore an international research Jnl. 2014; 5(1):77-84.
5. Potluri A, Harish GB, Pragathikumar, Durraivel. A review article on Formulation and evaluation of Herbal Anti-Dandruff Shampoo. Indian jnl of Research in Pharmacy and Biotechnology. 2013; 1(6):835-839.
6. Santhanam J, Nadiah F, Ghani A, Basri DF. A research article on Antifungal activity of Jasminumsambac against Malassezia sp. And Non-Malassezia sp. Isolated from Human skin samples. Journal of Mycology, 2014.
7. Prachi S, sonal D. A research article on preparation of Herbello- an herbal antidandruff shampoo. Biological sciences IJPBS. 2015; 5(2):220-228.
8. Prabhamanju M, Shankar SG, Babu K, Ranjith MS. An overview Herbal vs. chemical substances as antidandruff ingredients which are more effective in the management of dandruff. Egyptian Dermatology Online Journal. 2009; 5(2):1-8.
9. Suriyaprakash TNK, Kalaivani R, Lakshmana Prabu S, Sumathi. A Formulation and evaluation of poly herbal shampoos for its antimicrobial and anti-lice activity.
10. Vimaladevi T. Text book of Herbal cosmetics, 2015, 94- 102.
11. Wolf R, Wolf D. Soaps, Shampoos and Detergents. Clin Derma. 2001; 19: 393-397.

12. Gaud R and Gupta G. Practical Physical Pharmacy. First edition. C.B.S. Publisher and Distributer, New Delhi, 2001; 81105.
13. Mithal B, Saha R. A hand book of cosmetics. First edition, 2000.
14. Potluri A, Harish G, Kumar B, Durraivel. Formulation and Evaluation of Herbal Antidandruff Shampoo. Ind J Res Pharm Biotech. 2013; 1(6): 835-839.
15. <https://www.jetir.org/papers/JETIR2105847.pdf>
16. [http://ijprajournal.com/issue\\_dcp/A%20Review%20on%20Formulation%20and%20Evaluation%20of%20Herbal%20AntiDandruff%20Shampoo.pdf](http://ijprajournal.com/issue_dcp/A%20Review%20on%20Formulation%20and%20Evaluation%20of%20Herbal%20AntiDandruff%20Shampoo.pdf)
17. M.Ishii MK. Objective and instrumental methods for evaluation of hair care product efficacy and substantiation of claims. In: Hair and hair care. New York: Marcel Dekker, Inc; 1997. p. 261-302
18. Arora, P., Nanda, A., Karan, M. 2011. Shampoos based on synthetic ingredients vis-à-vis shampoos based on herbal ingredients: A review. Int. J. Pharma Sci. Rev. Res. 7, pp.41.
19. Sanskrit Lexicon, Monier-Williams Dictionary (1872).
20. Spoken Sanskrit, University of Koeln, Germany.
21. Rahman, History of Indian Science, Technology and Culture at Google Books, Oxford University Press, ISBN 978-0195646528, page 145
22. Revansiddappa M, Sharadha R, Abbulu K. Formulation and evaluation of herbal anti-dandruff shampoo. J PharmacognPhytochem. 2018; 7(4):764-767
23. ManikerAR, Jolly CI. Formulation of natural shampoo. Int J Cosm Sci. 2001; 23(1):59-62.
24. Aghel N, Moghimipour B, Dana RA. Formulation of a herbal shampoo using total saponins of Acanthophyllumsquarrosum. Iran J Pharm Res. 2007; 6:167-72.

25. Potluri A, Asma SS, Rallapally N, Durrivel S, Harish GA. Review on herbs used in anti-dandruff shampoo and its evaluation parameters. *Indo Am J Pharm Res.* 2013; 3:3266-3278.
26. Chandrani D, Lubaina SZ, Soosamma M. A review of antifungal effect of plant extract vs. Chemical substances against *Malassezia* spp. *Int J Pharm Bio Sci* 2012;3(3):773-80.
- Naveen S, Karthika S, Sentila R, Mahenthiran R, Michael A. In-vitro evaluation of herbal and chemical agents in the management of Dandruff. *J Microbial Biotech Res* 2012;2:916-21.

