



INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

A REVIEW ARTICLE ON HERBAL SHAMPOO

Riya Suryakant Patil¹, Siddhi Sandeep Patil², Momin Abrarul Haque³ Dipesh Pramod Patil⁴ M.S. College of Pharmacy, Devghar, Wada, Palghar

ABSTRACT

Preparing and evaluating a herbal shampoo with an emphasis on the product's safety, effectiveness, and quality is the primary goal of the current study. Herbal shampoo is a natural hair care solution that is used to eliminate grime, dandruff, and grease as well as to encourage hair growth, strength, and blackness. Since shampoos are a common cosmetic item used in daily life, the shampoo industry has the most units sold of any hair care product. Consumers have occasionally experienced negative consequences as a result of synthetic detergents and preservatives. Incorporating natural extracts with similar functionality to their synthetic counterparts is a more extreme method of minimizing the use of synthetic compounds. Shampoo is one of the most important beauty items since it helps clean the hair. Herbal shampoo is a cosmetic product similar to ordinary shampoo in that it uses traditional ayurvedic herbs to clean the hair and scalp. They are used to clean up environmental pollutants, dandruff, grease, and grime.

KEYWORDS

Herbal Shampoo, Cosmetics, Traditional Ingredients, Aloe Vera, Amla, Hibiscus, Reetha.

INTRODUCTION

Herbal shampoo -

The most popular cosmetic item for washing hair and scalp in daily life is definitely herbal shampoo. Herbal shampoos are cosmetic preparations that clean the hair and scalp in the same way as ordinary shampoo by using traditional ayurvedic herbs. They are used to remove contaminants from the environment, such as oil, dandruff, and grime. Herbal shampoo is a category of cosmetic products that employs plant-based herbs as an alternative to commercially available synthetic shampoo. (1) People have used natural resources and extracts for health care and cosmetics since prehistoric times. As a result, people are increasingly demanding natural chemicals

and additives, particularly in cosmetic items, to substitute synthetic substances that might have adverse impacts on human health and the environment. (2) People are becoming more aware of and interested in herbal cosmetics, mostly due to the perception that these products are risk-free and without adverse effects. (3) Shampoos, which are a viscous mixture of detergents with the right additions, preservatives, and active chemicals, are probably used as beautifying products. Most likely, shampoos are utilized as cosmetics. It is a hair care product that is used on a regular basis to clean the scalp and hair. They are used to remove pollutants from the environment, dandruff, oils, and grime. It is often massaged into wet hair before being applied and cleaned out with water. Although there are many synthetic shampoos on the market today, both medicated and unmedicated, herbal shampoo has gained popularity since it is safer, has higher customer demand, and has no negative side effects. (4)

Definition: -

A shampoo is a mixture of a surfactant (also known as a surface-active substance) in an appropriate form, such as a liquid, solid, or powder, that when used as directed will remove surface grime, filth, and debris from the hair shaft and scalp without having an unfavorable effect on the user. (2)

Need of shampoo –

The oil in the skin is a sticky substance produced by the skin of our heads. It is designed to completely cover the head in order to shield the hair. When secreted in big amounts, this makes the hair seem filthy yet gives it a healthy sheen. (5)

History: -

Since ancient times, many plants and their extracts have been used as shampoos throughout the Indian subcontinent. Boiling sapindus, also known as soapberries or soapnuts, along with dried Indian gooseberry (amla), a variety of other herbs, and utilizing filtered extract resulted in an extremely potent early shampoo. Sapindus are a tropical tree that is commonly found in India by the name of ksuna. (6) Saponins, a natural disinfectant, are found in the fruit pulp of this plant and in ancient Indian scriptures. Indian texts referred to the lather produced by soapberry extract as phenaka. The hair feels smooth, shiny, and manageable after treatment. (3) Shikaki (*Acacia concinna*), hibiscus flower, ritha (*Sapandus mukorossi*), and arrapu (*Albizzia amaru*) are other hair-cleansing solutions. In the sixteenth century, the founder and first Guru of Sikhism, Guru Nanak, made references to soapberry trees and soap. (1) Early colonial traders in India enjoyed pampering themselves with a daily body and hair massage (champu). When they returned to Europe, they brought their newly acquired habits with them, including the shampoo they had been using. (7)

Ideal properties –

It should fully and efficiently clean the hair of any dust or filth, excessive sebum or other fatty material, and loose corneal cells.

It ought to be simple to remove with rinse water.

It shouldn't cause any negative effects like eye or skin discomfort.

It should provide a pleasant aroma to the hair.

To give the hair a lustrous, smooth finish.

Make a significant volume of foam.

The hand shouldn't get dry and chapped as a result.

It ought to successfully and totally eliminate dirt. [1,8,9]

Requirements of Shampoo: -

It should not harm the hair or scalp and should not be poisonous.

Sebum and environmental toxins have to be eliminated from scalp hair.

To meet the user's expectations, it should supply the ideal amount of foam.

It must to eliminate any leftovers from earlier applications of hair style creams and sprays.

If accidentally spilled, not to harm the eye's tissue.

After rinsing, to leave the hair in an acceptable state so that it may be combed easily in both the wet and dry states. (10,4)

Function of Herbal Shampoo: -

Dirt or soil should be entirely and successfully removed.

It needs to thoroughly clean the hair.

It ought to generate enough foam to please the user.

It ought to be simple to get rid of by giving it a good rinse.

It should provide a pleasant aroma to the hair.

It shouldn't cause skin or eye irritation or have other negative side effects (12,13).

Hair problems: -

Dandruff-

Dandruff is a non-inflammatory, unpleasant skin disease that can cause hair loss and affects the crown. It is scaled and clings to the hair's base.

Hair Loss-

Stress, medications, changes in hormone levels, and a variety of hair style products are the major causes of hair loss.

Dry Hair-

The lack of proteins in the diet leads to short hair. Dry hair can also be caused by menopause, anemia, hormonal imbalance, and birth control lozenges.

Spilt Ends-

Split ends occur when the hair ends get dry and for other causes, such as exposure to very heavy rain. Split ends can result from hair care practices including uncurling, entwining, and chemical hair products.

Oily Hair/Greasy Hair-

Unruly hair is a result of excessive sebum production by the crown, a natural oil painting product. Sebaceous glands create sebum when they occasionally "work overtime," which results in an excessive amount of oil painting. (4,14,15)

Types of shampoo: -

1. Powder shampoo
2. Shampoo and lotion
3. Shampoo with cream
4. Jelly shampoo
5. aerosol hair spray
6. particular shampoo
7. Shampoo for conditioning
8. Anti-itch shampoo
9. Baby conditioner (11,4)

Ingredients use in Herbal Shampoo: -

Amla:

Botanical name: *Embelica officinalis*

Common name: Amla

- Use Function: Boost the hair and scalp.
- Reduce hair aging caused by early pigment loss.
- Enhance the development of hair.
- Stop hair loss.
- Prevent or cure scalp and dandruff issues.
- Prevent or cure fungal and bacterial infections of the hair and scalp, Enhance the look of hair overall.



FIGURE 1: - AMLA

Shikakai:

Botanical name: *Acacia concinna*

Common name: shikakai

Use / Function:

- Sanitizes hair
- Make the hair shine more
- Avoid grays
- Provide the hair nutrients and encourage quick, healthy hair development.



FIGURE 2: - SHIKAKAI

Hibiscus:

Botanical name: *Hibiscus rosa sinensis*

Common name: Hibiscus

Use / Function:

Encourage the restoration of lost hair volume.

Hair condition Stop baldness.

Treat your itchy scalp and dandruff.



3: FIGURE – HIBISCUS

Reetha:

Botanical name: *Sapindus mucorossi*

Common name: Reetha

Use / Function:

- It's used in the production of shampoo.
- In shampoo, it serves as a foaming agent.
- Can be utilized as a hair cleaner.



FIGURE 4: - REETHA

Aloevera:

Botanical name: *Aloe barbedensis*

Common name: Aloe vera

Use / Function:

- Calm, irritated scalp, cleans greasy hair thoroughly, Strengthens, the proteolytic enzyme found in aloe vera repairs dead skin cells on the scalp. encourage hair growth natural, silky curls.



FIGURE 5: - ALOE VERA

Neem:

Botanical name: *Azadirachta indica*

Common name: Neem

Use / Function:

- Prevent hair from becoming dry.
- Hair's waving.



FIGURE 6: - NEEM

Heena:

Botanical name: *Lawsonia Inermis*

Common name: Heena

Use / Function:

- Growth of hairs.
- Conditioning of hairs.



FIGURE 7: - HEENA

Fenugreek Seeds:

Botanical name: *Trigonella foenum graceum*

Common name: Fenugreek seeds

Use / Function:

- Therapy for dandruff.
- Encourages hair development and repairs damaged hair. May lessen hair shedding and loss.
- Encourage a healthy scalp.
- Stop your hair from going gray too soon.



FIGURE 8: - FENUGREEK SEEDS

Lemon:

Botanical name: *Citrus lemon*

Common name: Lemon

Use / Function:

- Maintains the Ph and gives the food a fragrant flavor



FIGURE 10: - LEMON

Bhringraj:

Botanical name: *Eclipta prostrata*

Common name: Bhringraj

Use / Function:

- Hair serum



FIGURE 11: - BHRINGRAJ

Ashwagandha:

Botanical name: *Withania somnifera*

Common name: Ashwagandha

Use / Function:

- Controls hair loss, encourages hair growth, and enhances scalp circulation.



FIGURE 12: - ASHWAGANDHA

Green Tea:

Botanical name: Camellia Sinesis

Common name: Green Tea

Use / Function:

- Improvement and hair growth. (12,16,17)



FIGURE 13: - GREEN TEA

Benefits of Herbal Shampoo: -

1. More luster.
2. Less hair shedding.
3. Color that endures.
4. Hairs that are stronger and more robust.
5. Chemical-free and all-natural.
6. Maintain wholesome natural oils. (8)

Advantage of Herbal Shampoo: -

- 1) Simple to produce and inexpensive.
- 2) Widely accessible and present in both number and variety.
- 3) They have no adverse side effects and did not cause an allergic reaction.
- 4) Easily absorbed into skin and hair.
- 5) Enhance hair care.
- 6) Shampoo maintains smooth, silky hair.
- 7) Using herbal shampoo will help you achieve the ideal oil balance. (18)

Disadvantages of Herbal Shampoo: -

1. Sometimes difficult to disguise taste and odor.
2. Because herbal medicines work more slowly than allopathic ones, long-term treatment is necessary.

3. The manufacturing process is difficult and time-consuming. (11,12)

Limitations of herbal shampoo: -

- 1) Natural goods have an impact on product quality and consistency.
- 2) Less stable, requiring the use of preservatives.
- 3) Changes in plant elements with the seasons.
- 4) Some herbs help with hair growth. For instance, papaya, menthol, lemon, and so on. (4)

Shampoo evaluation and characterization include: -

Specific tests for shampoo formulations, such as those for surface tension, foam volume and stability, detergency, and preliminary stability study, were also carried out to assure the goods' quality.

Visual Appearance: -

The formulation's outward appearance and visual examination were noted. The created compositions were assessed for their viscosity, transparency, color, and capacity to produce foam.

Determination of pH: -

At room temperature, the pH of a 10% w/v shampoo solution in distilled water was measured. Using a pH meter (Mettler Toledo, USA), the pH was determined.

Percentage of Solid Contents: -

A clean, dry evaporating dish was filled with four grams of the prepared shampoo. The weight of the shampoo and dishes was calculated. By setting the shampoo on a hot plate, the liquid part of the shampoo was evaporated. After then, the weight of the shampoo's solid components was calculated.

Surface Tension Measurement: -

At 20 °C, a tensiometer was used to measure the surface tension of the diluted shampoos (10% w/v in distilled water), and the data were computed using the equation shown below. (A.

$$\text{Kumar, et al., 2010) } R = \frac{(W_s W_i) n}{W_2 W_1} \times R_i$$

Where W_s is weight of empty beaker.

W₂ is weight of beaker with shampoo solution N₁ is no of drops of distilled water N₂ is no drops of shampoo solution.

R₁ refers to distilled water at room temperature on the surface. The shampoo solution's R₂ surface tension.

Wetting Period:

The filter paper was cut into 1-inch-diameter discs that weighed, on average, 0.44g. The disc floated on the top of a 1% w/v shampoo solution. (2014) Khaloud A.B. et al.

Measurement of Viscosity: -

Using a programmed rheometer (Brookfield DV-III Ultra, Brookfield Engineering Laboratories Inc., USA) equipped with a spindle type S 62 and configured to various spindle speeds, the viscosity of the produced formulations was evaluated at room temperature (Kadhim R. B., et al. 2011).

Dirt Dispersion: -

10 ml of distilled water and two drops of shampoo were put to a big test tube. India ink was applied in one drop, and the test container was shaking ten times. Khaloud A. B. et. al. (2014), Kumar A., et al. (2010), Kadhim R. B., et al. (2011).

Foam, Volume and Stability: -

Take 50 ml of the 1% shampoo solution, pour it into a graduated cylinder measuring 250 ml, cover it with your hand, and shake it vigorously for 10 minutes. Instantaneously, one minute of shaking was captured (Kumar A., et al. 2010).

Detergency Evaluation: -

Although removing sebum was a herbal shampoo's main goal, it has been challenging to standardize experimental detergency test assessment since there isn't much consensus on what constitutes a standard sebum, a repeatable sebum process, or how much sebum a shampoo should ideally remove. Later, the method changed to employing hair clippings from salons as little as 3gm to evaluate detergency by using hair tresses that had been contaminated with synthetic sebum (Thompson et al. 2011). (20,21,19,22,23,24).

CONCLUSION: -

The popularity of natural goods is rising among today's ecologically and health-conscious consumers. The never-ending effort to preserve healthy hair has presented to be a problem and ongoing battle among many individuals nowadays, and this new age mania applies to hair care as well. They are beginning to understand that exposure to damaging chemicals on the hair over time may be to blame for this. People are switching to safer and healthier choices as a result of growing awareness of how natural goods may improve our lives. Therefore, it is crucial to ensure that herbal shampoo is safe and effective. Therefore, testing for quality control needs to be done on herbal cosmetics. It is believed to be secure over extended time frames. The demand for natural medicines is now significant and is increasing in western countries.

The herbs with the lowest phytochemical content are working hard to fulfill their roles in polyherbal formulations so that they can work together harmoniously. Based on the results of the current study, evaluated herbal shampoo formulations meet all assessment criteria for the optimal shampoo property.

ACKNOWLEDGEMENT

I would like to thank my friends who have made a significant contribution to our development during my undergraduate and graduate studies as well as at the institutions. As my careers have developed, I have also met a lot of exceptional professors from many sectors and other notable pharmacy people who have greatly influenced my work and offered advise. I am thankful that these individuals have shared their knowledge and experiences with us, as they have all taught me a great deal.

The entire teachers and staff of Mumbai University's M.S. College of Pharmacy are also worthy of appreciation. Let me thank the authors of each of our chapters for their hard work. The writers were chosen for their writings not only because of their backgrounds in pharmacy and pharmacy education, but also because of their dedication to these fields. I could not have completed writing the following article without their assistance.

Reference:

- 1] Jammao kaveri, Gaikwad vishal Shivaji. "A review on Herbal Shampoo"; ijcrt, vol-10, 23202882.
- 2] Mayank Singh, piyush Yadav Memish kumar Maurya jaiswal, Nitin Yadav (2021), "A review on Cosmetic Product shampoo", ijort vol. 9, (1) 2320- 2882
- 3] Abhay P. Kardile, Mahesh P. Kolhe, Maheshwari A. Chaudhari, Snehal D. Laid, Mahesh B. Kshirsagar (2023) "A review on Herbal shampoo" vol. 4, (5)2582-7421
- 4] Dr. Hingane 1. D., Miss Khade P. B. (2023) "Formulcition & Evaluation of Herbal Shampoo" IJPRA Vol. 8, (3) 2249-7781
- 5] Pawan Maurya, Shashikant Maury, Piyush Yadav, Manoj Kumar Yadav, Suraj, Maurya, suryam. Jay Sawal (2021), "A review article on Herbal shampoo" vol. 8, (5)2349-5162
- 6] Mr. Barde Gauravs, Prof. Mali Shubhangi R (2022) "Herbal Shampoo: A review"Vol. 3, (6)2582-7421
- 7] Badi KA, Khan SA. "Formulation, evaluation & Comparison of the herbal Shampoo with the Commercial Shampoo", Beni-suef univ I Basic Appl sci 2014; 3: 301-5.
- 8] Mrs. K. Sravanthi, N. Kavitha, K. Sowmya, S. Nazneen, U. vaishnavi, CH, Anil (2021), "A review on formulation & evaluation of onvidandruff Shampoo", ijpra vol.6 ,(3)2249-778
- 9] Balsam, S.M., Gershon S.D., Rieger, M. M. Sagarin, E & strianse, S. J, "Cosmetic science & Technology". 2nd edition, Vol. 2, John Wiley India, New Delhi, 2008.

- 10] Sandhyamani, Alli Ramesh, Balaji B (2014), "A review on shampoo" ActaBiomedica scientia 2348-2168
- 11] Mrs. K. Sravanthi A Kawitha, K. So winger, SNU Mr. Barde Gaurav, Prof. Mali Subhangi international journal of reaserch publication & Reviews, Vol. 3. issue 6 PP 74-81, june 2022
- 12] Miss, Waghmode Monika vasant, Dr Hingane 1. D. Adi (2022), "Formulation & Evaluation of Shampoo", TRASET vol. 10, (6)2321-9653
- 13] Kathari S, Patidar K, Solanki R. Polyherbal Anti- dandruff Shampoo: Basic Concept, Benefits, & challenges. Asian J. pharm. 2018, 12(3): 5849- 58.
- 14] Ms. Shital Ashok Kadam, Mrs. Manisha B. Parhad, Dr. Gajanan Sanap (2023) "A review on Herbal Shampoo & its Evaluation" vol.10, (3) 2349-5162
- 15] Haritha PN, Supraja P, Samreen S., Hrudayemjali, Qureshi M, Sundya P, Sweta T. "A Review polyherbal Shampoo powder". Int. J pharm Res. 2021 21(2): 346-63.
- 16] Meduri Teja Sri, Munnangi Lakshmi Divya, Potharaju Sreevami, Suravarapu Sri Tejaswi, swami vasavi Rama Deepthi, Uppala vandana, Yepuri, Vadlamudi Pallavi, Nadendla Rama Rao (2021) "formulation & evaluation of fermented rice water herbal shampoo JDDT 127130.
- 17] N Rajesh Kumar, T. Dineshkumar, K. Hariharan, A. V. Navaneetha Krishnan, C. Pavitharani, S. Subash, P. Manikandan, M. Surendra Kumar (2022) "Formulation and Evaluation of Herbal Baby Shampoo", JPRI, 2456-9119.
- 18] Suyog Sunil Bhagwat, Dr. N. J. Paulbudhe College of pharmacy, "formulation & evaluation of Herbal Shumpoo", 2020 IJCRT/ vol. 8, Issueg. Sep 2020.
- 19] Vijayalakshmi A, Sungeetha S. Ranjith N (2018) "Formulation & Evaluation of Herbel Shampoo", AJPCR vol.11 (4) 2455-8891
- 20] Shweta Patel, Dr. Ajay Gupta, Dar Meenakshi Gupte (2022), "formulation & evaluation of polyherbal Ant dandruff shampoo & its marketed comparison" Vol. 1 (1)2583-4053
- 21] Rimjhim Arora, Rathore kamal singh, Bharakati- ya Meenakshi (2019), "formulation & evaluation of Herbal Shampoo by Extract of some plant", tpcj 2349-7092
- 22] Darsh, GIS & NOOT Husna Nazirah Bint A. Razak, (2017), "Formulation & Evaluation of a herbal Shampoo" Indo American Journal of phoomaceutica Sciences, vol. 4 (9). 28602865.
- 23] Gaud RS, Gupta GD. Practical physical pharmacy 1st ed. New Delhi: C.B.S. Publisher & Distributer; 2001. P. 81-105
- 24] A. R. Manikar and C. I. Jolly, (2001) formulation of natural shampoo, Int J Cosm sci, vol.23,PP no: 59-62.