

FORMULATION AND EVALUATION OF HERBAL SHAMPOO**Shubhada S. Pawar, Sanjay K. Bais and Tejas Nanasaheb Mane***

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Pharmacy, Sangola,
Maharashtra, India.**ABSTRACT**

Shampoos are a type of cosmetic product used to clean hair by removing grease and grime from the scalp and hair shaft. Shampoo is used to clean the hair of filth that has accumulated without using a lot of sebum. Even though herbal shampoo performs better and is safer than synthetic shampoo, it seems unlikely that customers will embrace it in the current climate. Dry hair and keratin loss are two negative effects of synthetic shampoo on the hair and scalp. These factors led to the development of herbal shampoos as a safe and conventionally used alternative. Shampoos are a category of cosmetic item that are used to clean hair by getting rid of dirt and grime from the scalp and hair shaft. Shampoo is used to remove built-up dirt from the hair without using a lot of sebum. Although herbal shampoo is safer and more effective than synthetic shampoo, it doesn't appear realistic that consumers will

adopt it given the existing environment. Two detrimental effects of synthetic shampoo on the hair and scalp are dry hair and keratin loss. These factors encouraged the creation of herbal shampoos as a secure and widely accepted replacement for synthetic shampoo.

KEYWORDS: Herbal shampoo, cosmetics, Evaluation of shampoo, Natural & Healthy.**1. INTRODUCTION**

Human beauty is fundamentally based on the hair. The main purpose of hair care products is to clean the hair. Additionally, it alters the texture of the hair, feeds the hair, and gives the hair a healthy appearance. Human hair serves many purposes, including defence against outside influences, sebum production, apocrine sweat production, and thermoregulation. The most popular hair care product is shampoo. It can be used to clean the hair and scalp of grime, leftover hair style product residue, and environmental contaminants. It comes in viscous liquid or powder form. Shampoos were once simply intended to clean hair and today's

shampoos go well beyond simply cleansing the scalp. In addition to cleaning, it makes the hair manageable, simple to comb, and convenient to use. When used, hair products clean both your scalp and hair when applied to the scalp. Shampoos made from herbs are incredibly good for hair. same to ordinary shampoo, herbal shampoos are made from natural ingredients and intended to clean the hair and scalp. Since there are no surfactants used, these shampoos are stable, have less negative side effects, and are safer than synthetic shampoo. Surfactants can be found in artificial shampoo. These surfactants have major side effects that can include eye irritation, scalp inflammation, hair loss, and drying of the hair. Due to these factors, the public is becoming more interested in herbal cosmetics due to its little negative effects and affordable price. Shampoos are probably used as beautifying products because they are a viscous mixture of detergents with the appropriate additions, preservatives, and active chemicals. Shampoos are probably used as cosmetics. It is a daily hair care product that is used to cleanse the hair and scalp. Among other things, they are used to eliminate dandruff, oils, grime, and pollutants from the environment. Before applying, it is frequently massaged into damp hair and then washed out with water. Herbal shampoo has grown in popularity despite the abundance of synthetic shampoos available today, both medicated and non-medicated, because it is safer, more in demand, and has no unfavourable side effects. The main purpose of synthetic surfactants in synthetic shampoos is to wash and foam the hair.^[1]

1.2 REQUIREMENTS OF SHAMPOO

- It should not harm the hair or scalp and shouldn't be poisonous.
- Sebum and environmental toxins ought to be eliminated from scalp hair.
- It ought should be simple to remove after rinsing with water.
- To meet the user's expectations, it ought to deliver the ideal amount of foam.
- It ought to get rid of any leftovers from earlier hair styling lotion and spray applications.^[2]

1.3 ANATOMY OF HAIR

95% of the protein in hair is keratin. A hair root and hair shaft are present in every hair. A protein filament known as hair grows from dermal follicles. A medulla is present in some forms of hair along with the cortex and cuticle cells that make up the hair shaft.

➤ **There are three distinct components to the structure of hair**

- ❖ **Medulla:-** The medulla, the deepest part of the hair shaft, is made of a greasy and soft amorphous materials.

- ❖ **Cuticle:-** A thin rich in nutrients layer of protection which promotes the growth of hair. It is very keratinized and has scales that resemble cells and are piled one on top of the other; they are around 60 micrometres long and 6 micrometres wide.
- ❖ **Cortex:-** A thin protective layer that is rich in nutrients that promote hair development. It is very keratinized and has scales that resemble cells and are piled one on top of the other; they are around 60 micrometres long and 6 micrometres wide.^[3]

1.4 HAIR PROBLEMS

- a) **Dandruff:** A minor, non-inflammatory skin condition that affects the scalp and may give rise to hair loss is dandruff. It sticks to the hair's base and is scaly.
- b) **Hair loss:** Stress, prescription side effects, hormone fluctuations, and a variety of hair style products are the major causes of hair loss.
- c) **Oily hair/Greasy hair:** Excessive sebum (natural oil) production on the scalp is the cause of oily hair. Sebaceous glands generate sebum, and occasionally they "work overtime," producing an excessive amount of oil.
- d) **Dry hair:** Hormonal imbalances, Birth control medications, menopause, anemia and eating diets low in proteins may lead to dry hair.
- e) **Split Ends:** A range of factors, among them exposure to severe weather and dry hair ends, can cause split ends. Split ends can result from hair care practices including curling and straightening as well as chemical hair treatments.^[4]

1.5 TYPES OF SHAMPOOS

❖ Following types of Shampoos

1. Clear liquid Shampoo.
2. Solid gel Shampoo.
3. Power Shampoo.
4. Liquid herbal Shampoo.
5. Medicated Shampoo.

1.6 BENIFITS OF HERBAL SHAMPOO

1. Natural only; no chemicals.
2. durability of colour.
3. not irritating to the skin or scalp.
4. Maintain wholesome natural oils.
5. More luster.

6. Reduced hair loss.

1.8 ROLES OF HERBAL SHAMPOO

1. Conditioning.
2. Lubrication.
3. Medication.
4. Colour maintenance.
5. Hair Growth.

1.9 NEED OF HERBAL SHAMPOOS

The fatty substance called sebum is released by our scalps. Its goal is to give a layer that provides safety for the hair that covers the entire head. This gives the hair a healthy sheen, but when too much is secreted, the hair appears unclean. Herbal hair growth shampoos are designed to provide vital nutrients to the hair follicles, strengthening them.^[5]

1.10 ADVANTAGES OF HERBAL SHAMPOO

1. All-natural and organic components.
2. Devoid of adverse reactions.
3. No SLS or other surfactants.
4. No artificial preservatives.
5. No use of animals in research.
6. Safe for the environment and skin.
7. Encourage hair development.
8. Remove of dandruff.

1.11 LIMITATIONS OF HERBAL SHAMPOO

1. Natural goods have an impact on product quality and consistency.
2. Because of this, preservatives need to be applied.
3. Seasonal differences in the components of plants.
4. There are herbs for the scalp. For example, papaya, lemon, menthol, and peppermint.^[6]

1.12 LIST OF MARKETED HERBAL SHAMPOOS

1. Patanjali Kesh kanti Hair Wash

With its herbal formula, Patanjali Kesh Kant hair cleanser gently removes dust and debris from hair while leaving your tresses feeling silky. The natural medicinal substances relieve

dryness and dandruff in the hair and scalp. Your hair will be strengthened and shined after using Patanjali Kesh Kant Hair Wash, which is made entirely of natural herbs. It works well to prevent dryness and hardness in your hair in addition to decreasing hair loss and dandruff. It gives your hair the nutrition it needs to be strong and healthy.

❖ Features and Review

- helpful in restoring the roughness and dryness of hair.
- Reduce hair loss and enhance the texture of your hair.
- Take care of your parched hair.
- Reduces the amount of flakes and dandruff.
- makes hair lustrous, smooth, and soft.

2. Indulekha bringha anti hair fall shampoo

The main purpose of Indulekha Bringha Anti-Hair Fall Shampoo is to reduce hair fall. It makes advantage of the potency of several components, including amla, neem, bhringraj herb, and Shikakai. It has the strength of nine Bhringa plants in addition to not having any artificial color. Apart from that, it works well with all hair types and lessens breakage-related hair loss. It has extra fragrance or paraben, both of which are bad for your hair. For hair loss, it's the best natural shampoo available in India. It can be applied in addition to the Indulekha bringha hair oil.

❖ Features and Review

- Suitable for daily use.
- Has extracts from the Bhringraj plant.
- provides your hair with deep conditioning and anti-breakage advantages.
- Nurtures and gently cleanses hair
- Makes your hair healthier and stronger from the inside out.

3. Himalaya anti hair fall herbal shampoo

Among the various shampoos available in India, Himalaya anti-hair fall shampoo is not just a herbal shampoo; it also has anti-hair fall properties. Therefore, this may be employed if you're seeking for an excellent herbal shampoo for men's and women's hair fall issues. It has clarifying properties in addition to controlling hair fall. This herbal shampoo fights hair fall by strengthening hair roots with eclipta alba and combating the fall of hair with butea

fondosa. You can use this even if you don't have an issue with hair loss. Since that this is a clearing shampoo, there isn't much lather.

Features and Review

- Reduced lather as it gets clearer.
- Reduces hair fall.
- The shampoo smells lovely and light, with a gentle flowery scent.
- Its hue is a brilliant white, and its consistency is a smooth medium that is neither too thick nor too runny.^[7]

2. LITERATURE REVIEW

2.1 Srikanth J., Padmini K., Preethi P. Jaya, Lohita M., Swetha K., Rao P. Vengal (2013)

Shampooing is the most commonly employed hair care method. Shampoos are products primarily used to cleanse the hair and scalp. A more extreme strategy to boost the demand for herbal shampoo would be to try to change consumer perceptions by emphasizing safety and efficacy more. The research concentrates on the types, composition, methods of assessment, and a brief synopsis of herbal shampoo compositions.

2.2 Shashikant maurya, Piyush Yadav, Pawan Maurya, Manoj kumar Yadav, Suraj Maurya, Satyam jaysawal. (2021)

Herbal shampoo is a kind of natural hair care product that darkens, strengthens and promotes hair growth in addition to getting rid of oil, dirt, and dandruff. It also promotes softness, gloss, and smoothness of hair.

2.3 Utane R, Deo S and Itankar P. (2017)

Our hair is being treated with manufactured products, which means it is losing its beauty, quality, strength, volume, and luster. Each and every commercial product, such as cleanser, has a harmful ingredient that causes hair damage.






2.4 Vinayak M. Chavan, Kundan J. Tiwari Kiran A. Suryavanshi, Aditya S. Bhor. (2019)

A variety of characteristics, including pH, foam formation, viscosity, conditioning, and wet ability, were assessed during the formulation process at the laboratory scale in order to guarantee the product's safety and effectiveness.^[8]

3. EXPERIMENTAL METHODOLOGIEES

3.1 LIQUID HERBAL SHAMPOO

HERBS INCLUDED IN THE HERBAL SHAMPOO.

botanical name	common name	uses	picture
Azadirachta Indica	Neem	Antimicrobial agent that keeps hair from becoming dry and flaking	
Lawsonia Inermis	Heena	Promotes growth of hair, conditioner	
Emblica officinalis	Amla/Indian gooseberry	Reduces dandruff, stops greying of the hair, and encourages hair growth.	
Ocimum sanctum	Tulsi	Both antibacterial and anti-lice qualities	
Aloe barbadensis	Aloe vera	Conditioning and moisturizing effect	

3.2 PREPARATION METHOD

- Gathering of resources The ingredients needed for the preparation are gathered, carefully cleaned, and dried.
- Each weighing ingredient is measured out and then let to soak for a whole night.
- In the same water used to sac it, the components needed for the decoction formulation are boiled over medium heat, allowed to cool down, and then squeezed.
- Use muslin cloth to filter it, then gather the filtrate.
- Next, apply a preservative (such methyl paraben) to stop microorganisms from growing.^[9]

3.3 EVALUATION OF HERBAL LIQUID SHAMPOO

- Organoleptic evaluation/ visual assessment.

- PH determination.
- Percentage of solid content determination.
- Foaming ability and Foaming stability.
- Dirt dispersion test.
- Cleaning Action.^[10]

4. COMPOSITION OF FORMULATED HERBAL SHAMPOO

Sr. no	excipients	Quantity taken
1	Amla powder	1gm
2	Reetha powder	2gm
3	Fenugreek seeds	0.5gm
4	Ashwagandha powder	1gm
5	Brahmi powder	1gm
6	Onion powder	1gm
7	Methyl paraben	1gm
8	Shikakai powder	1gm
9	Neem leaves	Q.S.
10	Tulsi leaves	Q.S.
11	China rose	Q.S.
12	Lemon	Q.S.

5. RESULT AND DISCUSSION

Evaluation Parameter Table.

Sr. no	Evaluation	Herbal shampoo
1	Organoleptic evaluation a. Colour b. Clarity c. Odor	a. Brown b. Clear c. Good
2	Percentage of solid content determination	25%
3	pH determination	6.4
4	Foam type	Dense, small
5	Foaming volume	168ml
6	Cleaning action	31.16%
7	Wetting time test	120 second
8	Dirt dispersion test	Light
9	Conditioning performance evaluation	Good

6. CONCLUSION

The applications and significance of herbal shampoo are the main topics of this review. It also covers the knowledge and necessity of cosmetics containing herbal elements because it is widely held that these products are risk-free and have no negative side effects. It focuses on the many kinds, production techniques, and assessment standards for polyherbal

shampoos The goal of the current study is to produce a herbal shampoo that promotes hair growth and reduces hair loss during combing. Comparing it to chemical conditioning treatments, it is also safer. Herbal shampoo was made from the aqueous extracts of medicinal plants, which have long been used to wash hair. The use of synthetic conditioning agents reduces thinning hair or loss of protein. To achieve the required conditioning outcomes amla, shikakai and various other plant extracts are employed in this study instead of synthetic cationic conditioners. This investigation's primary goal was to create a stable and functionally successful shampoo without the use of any kind of synthetic ingredients, which are often included to such formulations. Numerous tests were conducted to assess the manufactured shampoo's superior product performance. The produced shampoo's assessment study yielded equivalent findings for the quality control test, but more research is necessary to confirm the product's overall quality.^[11]

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