



## **"Polyherbal Natural Ingredients in Hair Care: The Role of Polyherbal Shampoos in Promoting Healthy Hair"**

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### **ABSTRACT:**

Customers increasing preference for natural, plant-based hair care products is demonstrated by the incorporation of plants into herbal shampoo.

These derivatives not only enhance the cleansing properties but also provide essential nutrients that promote hair health. By harnessing the natural benefits of these ingredients, herbal shampoos can effectively address various hair concerns while minimizing the risk of irritation or damage. This makes them a suitable choice for individuals with sensitive scalps or those seeking a more holistic approach to hair care. the use of synthetic chemicals.

The aim of this present study is to prepare and formulate an herbal shampoo and to assess its physiochemical function that emphasizes safety, efficacy, eliminating harmful synthetic ingredients, and substituting them with safe natural ingredients.

**Keywords:** Herbal shampoo, Anti-dandruff agent, Cleansing agent, Conditioning agent.

### **INTRODUCTION:**

Most likely, shampoos are utilized as cosmetics. It is a hair care product that we use on a daily basis to clean our hair and scalp. Shampoos are a viscous mixture of detergents with appropriate additions, preservatives, and active chemicals that are most frequently used as beautifying agents. Usually applied to damp hair, it is massaged into the hair before being rinsed off with water. Shampoo is meant to remove accumulated dirt from hair without removing a significant amount of sebum. There are a lot of synthetic shampoos on the market right now, both medicated and non-medicated, but herbal shampoo has gained popularity because it is natural, safer, and has no negative side effects <sup>[1-3]</sup>

Synthetic surfactants are included in synthetic shampoos primarily for their washing and foaming properties; however, long-term use of these surfactants can have detrimental effects like drying of the hair, eye discomfort, and scalp irritation. <sup>[4]</sup>

### **DEFINITION OF HERBAL SHAMPOO:**

Herbal shampoo is a natural hair care product that strengthens and darkens hair while also removing oil, debris, and dandruff and encouraging hair growth. Additionally, it gives the hair gloss, softness, and smoothness. <sup>[5]</sup>

Natural elements are used to make herbal shampoos. Since no surfactants are used, these shampoos have no negative side effects, are less damaging than synthetic shampoos, and have superior durability. <sup>[6]</sup>

### **PROPERTIES OF HERBAL SHAMPOO:**

1. It should effectively and completely remove dust or soil, excessive sebum or other fatty substances, and loose corneal cells from the hair.
2. It should produce a good amount of foam to satisfy the psychological requirements of the user. It should be easily removed on rinsing with water.
3. It should leave the hair silky, shiny, non-dry, manageable, and with little flyaway
4. It should give the hair a pleasing scent.
5. It shouldn't irritate the skin or eyes or create any negative effects. The hand shouldn't get rough or chapped. <sup>[7-8]</sup>

### **TYPES OF SHAMPOO <sup>(9,10,11,12,13,14,15)</sup>**

1. Normal hair shampoo
2. Dry damaged/ hair shampoo
3. Oil hair shampoo

4. 4. Everyday shampoo
5. Deep cleansing shampoo
6. 6. Baby shampoo
7. 7. Medicated shampoo
8. 8. Two in one shampoo
9. 9. Professional shampoo

#### 1. NORMAL HAIR SHAMPOO:

Normal hair shampoo is intended for those with chemically unaltered hair and a scalp that produces a moderate amount of sebum. preferred by guys. Lauryl sulfate, the main detergent in typical hair washes, offers good cleansing with little conditioning.

#### 2. DRY DAMAGED/HAIR SHAMPOO:

Those who have had harsh styling techniques or chemical treatments should use dry hair wash. These shampoos offer superb conditioning and gentle washing.

#### 3. OIL HAIR SHAMPOO:

Those who produce a lot of sebum should use oily hair shampoo. They don't have conditioners and instead use sulfosuccinates or lauryl sulfates as detergents.

#### 4. EVERYDAY SHAMPOO:

For those who prefer to wash their hair and take a bath every day to avoid feeling unclean, everyday shampoo is ideal. They usually don't have conditioners and just contain mild detergents. However, it is advised to use an instant, standalone conditioner that may be washed out of the hair entirely before drying and applied right after shampooing in the shower.

#### 5. DEEP CLEANSING SHAMPOO:

Those who often use styling products like mousse, gel, and spray should use deep cleansing shampoo. After prolonged use, these polymers accumulate on the hair shaft, giving the hair a harsh, lifeless appearance. They employ a powerful detergent, such as lauryl sulphates, as their main detergent to get rid of these polymers. Usually, these shampoos are used once a week. Those who often use styling products like mousse, gel, and spray should use deep cleansing shampoo. After prolonged use, these polymers accumulate on the hair shaft, giving the hair a harsh, lifeless appearance. They employ a powerful detergent, such as lauryl sulfates, as their main detergent to get rid of these polymers. Usually, these shampoos are used once a week.

#### 6. BABY SHAMPOO:

Since newborns don't create a lot of sebum, baby shampoo is suited to them. It uses a light detergent that doesn't irritate their eyes and provides mild cleansing. They contain detergents from the amphoteric group, such as betaines, which really numb the tissues in the eyes to stop stinging and irritation. Therefore, if it is mistakenly injected, it could still harm the eye, so caution should be used when giving the infant a bath.

#### 7. MEDICATED SHAMPOO:

People with bacterial or fungal infections, psoriasis, or seborrheic dermatitis use medicated shampoo. They contain active ingredients such as zinc parathion, polyvinylpyrrolidone-iodine complex, sulphur, selenium sulfidic, salicylic acid, corticosteroids, tar derivatives, and chlorinated phenols in addition to standard cleansers. Information about medicated shampoos is outside the scope of this post.

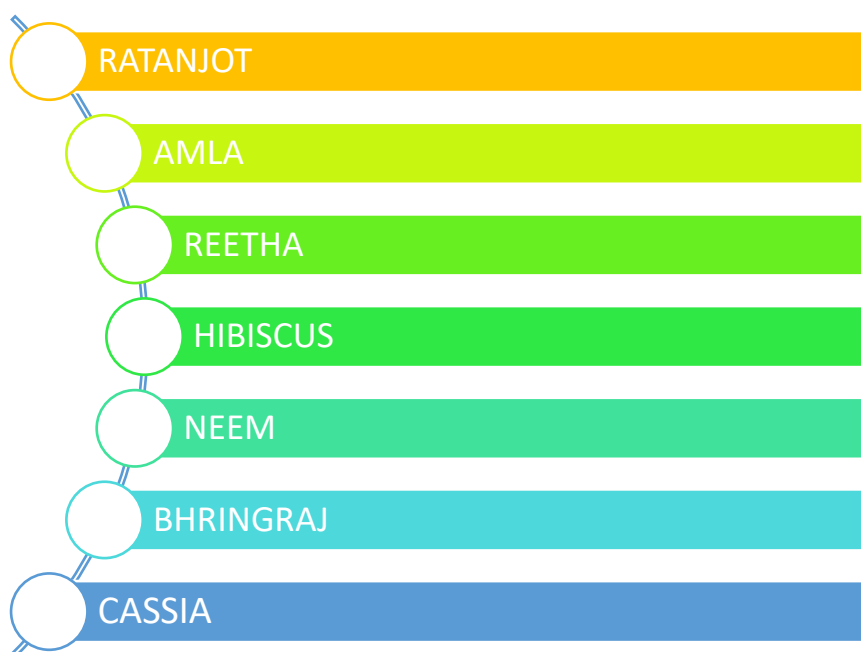
#### 8. TWO IN ONE:

Often referred to as "2-in-1" shampoos, these products combine mild detergents such as cationic or lauryl sulfates that create a respectably high foam with silicone in the form of dimethicone as conditioner. In order to make the hair silky, lustrous, and static-free, silicone is used to replace the sebum after shampooing.

#### 9. PROFESSIONAL:

Professional shampoos are used by cosmetologists and hairstylists and the general public. They are either used both before and after a chemical technique, likejacking and dyeing or colouring, or before a cutting or styling procedure. In a nutshell, these shampoos contain highly concentrated substances or unique cationic or anionic detergents that neutralize the damaging effects of chemicals on the hair shaft or eliminate chemical residues used to produce a specific color or style. They should not be used for regular hair maintenance.




#### NAME OF INGREDIENT:



## herbs used in formulation

S.NO	COMMON NAME	FIGURE	BOTANICAL NAME	PARTS OF USE
1.	Ratanjot	 A photograph showing several pieces of thick, reddish-brown, fibrous roots of Ratanjot (Alkanet) lying on a dark surface.	<i>Alkane tinctoria</i>	Root
2.	Amla	 A photograph of several bright green, round Amla fruits (Emblica officinalis) resting on a white surface, with a small green leaf attached to one of them.	<i>Emblica officinalis</i>	fruit
3.	Reetha	 A photograph of a pile of dark brown, round, textured Reetha fruits (Areetha) with some showing a lighter, orange-brown interior.	<i>Areetha</i>	Fruit
4	Hibiscus	 A photograph of several bright pink Hibiscus flowers (Hibiscus rosa-sinensis) in full bloom, surrounded by green leaves.	<i>Hibiscus rosa-sinensis</i>	Flower

5	Neem		<i>Azadirachta indica</i>	Leaves
6	Aloe vera		<i>Aloe barbadensis miller</i>	Leaves
7	Lemon		<i>Citrus limon</i>	Fruit
8	Liquorice		<i>Glycyrrhiza glabra</i>	Root

9	Cassia		<i>Cassia auriculata</i>	Leaves
10	Bhringraj		<i>Eclipta prostrata</i>	Leaves, flowers
11	Shikakai		<i>Acacia concinna</i>	Bark, leaves, and fruit pods

**1. Alkanna tinctoria:**<sup>[27]</sup>**Family:** Boraginaceae**Uses:** wound healing, hair growth, dyeing agent.**Biological source:** Herbaceous flowering plant

**2.AMLA** <sup>(16,17)</sup>

**Biological source:** Dried ripe fruits of *Emblica officinalis*

**Uses:** Darkening of hairs and hair growth promoter and Anti-dandruff agent.

**Category:** Darkening of hairs and hair growth promoter and anti-dandruff agent

1. Vitamin C, tannins, and minerals including calcium, iron, and phosphorus are abundant in amla, which both nourishes and darkens hair.
2. Amla can make hair shinier, smoother, and easier to manage by improving its overall texture.
3. Amla may lessen hair loss and shield hair from environmental factors like pollution and UV rays.

**3.REETHA** <sup>(18,19)</sup>

**Biological source:** Dried fruits of *Sapindusmukorossi*.

**Family:** Sapindaceae.

**Uses:** Detergent, cleansing agent and antidandruff.

**Category:** Detergent, cleansing agent and Anti- dandruff agent.

1. It acts as a cleansing agent, maintains the scalp pliable, and gets rid of any infection-causing bacteria.
2. It keeps hair nourished, healthy, and silky. It restores the texture of nature and shines hair. It helps with dandruff as well.
3. Reetha's antifungal and antibacterial qualities can aid in the reduction of scalp infections and dandruff, leading to healthier hair.
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**4.HIBISCUS** <sup>(16,19)</sup>

**Biological source:** Hibiscus is obtained from *Hibiscus sabdariffa*

**Family:** Malvaceae

**Uses:** Conditioning agent, Anti-dandruff agent, prevent hair loss and hair growth promoter.

**Category:** Prevents hair loss and hair growth promoter and conditioning agent and anti-dandruff agent

1. The most favourable substance for hair is hibiscus. It serves to treat hair loss and lack of hair growth and restore hair.
2. Along with other nutrients that are very good for the hair and scalp, hibiscus contains alpha hydroxyl acids, vitamin A, vitamin C, and amino acids.
3. Hibiscus has anti-inflammatory and antibacterial qualities. It can be used in shampoo to help keep the scalp healthy by lessening dandruff, inflammation, and itching.

**5.NEEM** (17,20,21)

**Biological source:** Fresh or dried leaves and seed of *Azadirachta indica*.

**Family:** Meliaceae

**Uses:** Prevents the dryness of hairs, Remove dandruff and hair

**Category:** Remove dandruff and prevent the dryness of hairs

**Description:**

1. Because of its conditioning and moisturizing qualities, neem oil is frequently found in shampoos. Neem oil is a common ingredient in commercial shampoos for lice prevention, and it helps prevent dryness and can enhance the overall texture of the hair.
2. Neem has the ability to cleanse the scalp and hair naturally by eliminating excess oil, debris, and pollutants. It is thought that neem helps to thicken hair and lessen breakage. This may result in better

**6.ALOE VERA** (16,22,23)

**Biological source:** Aloe is the dried juice collected by incision, from the bases of the leaves of *Aloe barbadensis miller*.

**Family:** Liliaceae

**Uses:** Conditioning and moisturizing effect, smoothening agent.

**Category:** Smoothening agent and conditioning agent.

**Description:**

1. Aloe vera is a fantastic conditioner that leaves hair feeling silky and lustrous. It conditions your hair, lessens dandruff, stops scalp irritation, and encourages hair development.
2. Antioxidants included in aloe vera may shield hair from environmental harm. Aloe vera also includes water, which helps to hydrate the scalp and lessen dryness and itching.

**7.LEMON** (5,24)

**Family:** Rutaceae

**Uses:** Maintains the pH & imparts fragrance to preparation.

**Description:**

1. Citric acid, which is found in lemons, has a natural cleansing effect. It aids in cleaning and revitalizing the scalp and hair by removing extra oil, debris, and residue.
2. Because lemon juice is acidic, it can help the scalp's pH level.

**8.Liquorice** <sup>(25,26)</sup>**Family:** Fabaceae**Uses:** Mainly used as a flavouring agent**Category:** A spice, an herb traditional medicine

Commonly used in products aimed at alleviating an irritated scalp, the liquorice root extract (*Glycyrrhiza glabra*) is appreciated due to its soothing, anti-inflammatory properties, which may relieve dandruff and create a healthy environment for the scalp.

**9.CASSIA****Biological source:** The dried bark of the evergreen tree *Cinnamomum cassia***Family:** Lauraceae**Uses:** As a spice, flavouring, and medicine.

**Description:** A naturally derived polymer, typically derived from the cassia plant, used as a conditioning agent to improve hair manageability, lustre, and slip by providing added moisture and detangling benefits.

**CONCLUSION:**

In conclusion, the increasing preference for natural, plant-based hair care products, especially herbal shampoos, highlights the growing demand for safer, more holistic alternatives to synthetic options. Herbal shampoos, formulated with natural ingredients such as Amla, Reetha, Hibiscus, Neem, Aloe Vera, Lemon, Liquorice, Cassia, and Bhringraj, offer numerous benefits, including effective cleansing, conditioning, and promoting overall hair health. These ingredients not only help in addressing common hair concerns like dandruff, dryness, and hair loss but also provide nourishment and protection from environmental damage without the risk of irritation or side effects.

The study emphasizes the importance of replacing harmful synthetic chemicals with safe, natural alternatives that are both effective and gentle on the hair and scalp. By prioritizing the use of natural ingredients, herbal shampoos present a promising solution for individuals seeking a more natural and holistic approach to hair care. Their ability to maintain hair health while minimizing damage makes them an ideal choice for people with sensitive scalps or those looking for a safer alternative to conventional shampoos.

Thus, herbal shampoos represent a sustainable, beneficial, and effective alternative in the growing trend towards natural and plant-based cosmetic products.



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