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Review

A Comprehensive Review On Herbal Shampoo For Dandruff Scalp



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	Abstract
Published on: 14 May 2025	<p>Herbal shampoos incorporate a variety of botanicals known for their hair-enhancing properties. Key ingredients such as aloe vera, shikakai, reetha (soapnut), amla (Indian gooseberry), hibiscus, neem, and bhringraj provide natural cleansing, conditioning, and strengthening effects. Aloe vera soothes the scalp and promotes hydration, while shikakai and reetha act as natural surfactants, removing dirt without excessive dryness. Amla and hibiscus are rich in vitamins and antioxidants, preventing hair fall and stimulating growth. Neem offers antimicrobial benefits, making it effective against dandruff and scalp infections. Additionally, essential oils like lavender, rosemary, and tea tree oil are often included for their fragrance and scalp-stimulating properties.</p> <p>One of the major advantages of herbal shampoos is their compatibility with different hair types, including sensitive and chemically treated hair. They help maintain the scalp's pH balance, reduce frizz, and enhance hair texture over time. Moreover, being biodegradable and free from synthetic additives, they pose minimal environmental risk compared to commercial shampoos.</p> <p>Despite their benefits, challenges such as shorter shelf life, variability in ingredient potency, and slower lathering compared to synthetic shampoos exist. However, advancements in natural preservation techniques and emulsification processes are improving their efficacy and consumer appeal.</p> <p>The growing awareness of clean beauty and sustainable living has positioned herbal shampoos as a key segment in the haircare market. Further research on standardized formulations and clinical validation of their benefits can enhance their adoption. In conclusion, herbal shampoos represent a harmonious blend of traditional wisdom and modern science, offering a holistic approach to hair care that aligns with health-conscious and environmentally responsible consumer trends.</p> <p>Keywords: Herbal shampoo, natural haircare, plant-based cleansers, sustainable beauty, scalp health, organic cosmetics.</p>
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INTRODUCTION

Herbal Shampoo are probably the most widely used cosmetic products for cleansing Hairs and scalp in our daily life Herbal shampoos are the cosmetic preparations [1] That with the use of traditional ayurvedic herbs are meant for cleansing the hair And scalp just like the regular shampoo. They are used for removal of oils, dandruff, environmental pollutions etc. shampoo is a type of cosmetic mixture that uses herbs from plants as an alternative to the synthetic Shampoo available in the market.[2] The herbal shampoo is important, as people today prefer herbal products than chemical ones for they proved to enhance.[3][4] Shampoos are most probably used as cosmetics. Shampoos are most likely utilized as beautifying agents and are a viscous solution of detergents containing suitable additives preservatives and active ingredients(3). It is a harmless, chronic condition that occurs when scalp becomes dry or greasy and produces white flakes of dead skin that appear in hair or on shoulders. People most often think of it as anything that produces a flaky scalp. [5][6] A good shampoo should almost 'immediately' form abundant foam irrespective of the type of water used Or the nature of soil or fat to be removed from hair. Concept foam formation is not related to the Cleansing effect, but people psychologically always prefer a high foam product. Some good shampoos Are found to have side effects like drying effect on the hair. This leaves the hair too dry to handle or Comb. hence proper conditioning of the hair is also an important consideration, some shampoos cause Irritation to the eye and a lasting corneal cloud. [7][8]Shampoos are most probably used as beautifying It is a hair care product that is used for cleanse scalp and hair in our daily life. Shampoos are most likely utilized as beautifying agents and are sticky solution of detergents containing suitable additives preservatives and active Ingredients. It is usually applied on wet hair, Massaging into the hair, and cleansed by rinsing with water. [9] The purpose of using herbal shampoo is used to remove dirt that is make up on the hair without stripping out much of the sebum. Many artificial shampoos are present in the current market both medicated and non medicated, however, shampoo popularized due to natural origin which is safe, increases consumers demand and free from side effects [10][11]. HS is defined as a preparation of a surfactant (surface active material) in suitable form liquid solid or power which when used under the conditions specified will remove surface grease, dirt and skin debris from the hair shaft and scalp without affecting adversely the hair, scalp or health of the user. HS has so many types are powder, liquid, lotion, cream,[12] jelly, aerosol, specialized HS (Conditioning, Anti-dandruff, Baby, Two Layers). But the future of HS is going to be herbal Shampoo [13] It contains all the natural ingredients with herb extract. It helps hairs to improve their standard of moisture, shine, growth, thickening, strength of hair roots. [14] Shampoos are may be the most widely used the cosmetic product for cleansing hairs and scalp in your daily life. A shampoo is Shampoos are may be the most widely used the cosmetic product for cleansing hairs and scalp in your daily life. A shampoo is basically a solution of a detergent containing suitable additives for other benefits such as hair conditioning, lubrication, medication etc. Nowadays many synthetic, herbal, medicated and non-medicated shampoos are available in the market[15]. Herbal shampoos have so many types are powder, liquid, lotion, cream, jelly, aerosol and specialized herbal shampoos (conditioning, antidandruff).[16] Herbal shampoos contain all the natural ingredients with herb extract. It helps hair to improve their quality of moisture, growth, thickening, strength of hair roots. The most important thing is that herbal shampoos have no any side effect. [17] The herbal shampoos are better in performance & safer than the synthetic shampoos herbal shampoos are totally natural no any other artificial chemical are added. herbal shampoos won't irritate the skin or scalp.[18][19] By using herbal shampoos we can stop the hair loss. Hairs are the basic part of human beauty. people are using herbs for cleansing, beautifying & managing hair since ancient era. The large amount of people used herbal product which are less expensive and have less side effects. as for as ancient time people used natural extract and resources for health care and cosmetic purposes Anatomy of Hair: [20][21] Understanding the anatomy of hair is fundamental in comprehending the effects and benefits of herbal shampoos on hair health.

1. Hair Structure: Hair is primarily composed of a protein called keratin, arranged in three layers: the cuticle, cortex, and medulla. The outermost layer, the cuticle, consists of overlapping scales that protect the inner layers and determine the hair's strength and shine. Herbal shampoos often target this layer, aiming to nourish and smoothen the cuticle for enhanced hair texture and appearance.[22]

2. Scalp: The scalp is the foundation of healthy hair growth. It contains hair follicles responsible for hair growth and sebaceous glands that produce natural oils (sebum) to moisturise and protect the hair. Herbal shampoos often focus on maintaining a balanced and healthy scalp environment, reducing excess oiliness or dryness while promoting optimal conditions for hair growth. [20][21]

3. Hair Growth Cycle: Hair undergoes a growth cycle consisting of three phases: anagen (growth), catagen (transition), and telogen (resting). Herbal shampoos may impact this cycle by nourishing the scalp, potentially prolonging the growth phase and reducing hair fall during the resting phase.

Anagen (growth phase): It is the growing phase. This phase lasts for several years.

Catagen (transitional phase): During this phase the hair follicle shrinks and hair growth slows.

Telogen (resting phase): It is the resting phase where hair growth stops and new hair begins the growth phase, pushing the old hair out. Exogen phase: Last phase of hair growth cycle where hair strand completely detaches

from the scalp and sheds off.[22][23]

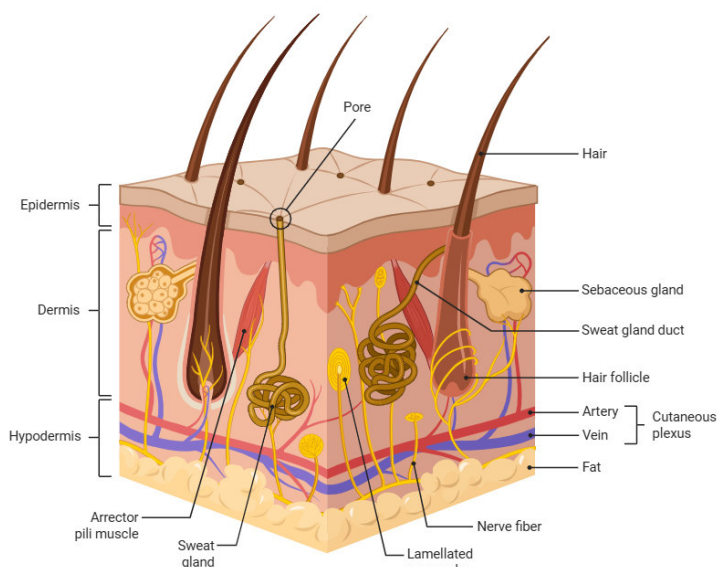


Fig 1: Hair structure

Hair Problem

Hair problems encompass a wide range of conditions that affect the scalp and hair strands, often necessitating specialised care and treatment: Fig.2. Hair growth cycle.

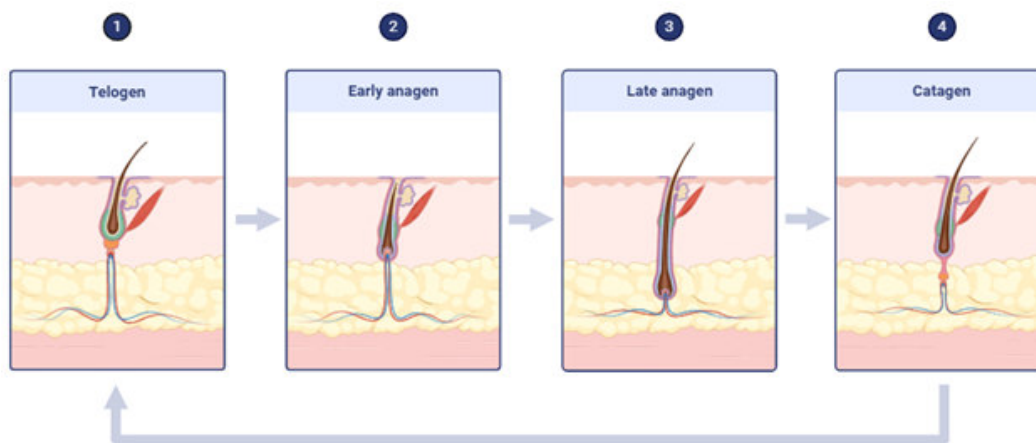


Fig 2: Hair growth cycle

Dandruff: A common issue characterised by flaking of the scalp, caused by various factors such as dry skin, yeast overgrowth, or sensitivity to hair care products. Herbal shampoos with antifungal or soothing ingredients like tea tree oil or aloe vera can help alleviate dandruff.

Hair Loss: Hair loss or alopecia can result from genetics, hormonal changes, stress, or medical conditions. Herbal shampoos targeting hair loss often contain ingredients like saw palmetto or biotin, aiming to strengthen hair follicles and minimise hair fall.[27]

Dryness and Frizz: Dry, frizzy hair occurs due to a lack of moisture and damage to the hair cuticle. Herbal shampoos with hydrating components like coconut oil or shea butter can restore moisture and smoothen the hair shaft.[28]

Oily Scalp: Excessive oil production on the scalp leads to greasy, flat-looking hair. Herbal shampoos formulated with clarifying ingredients like citrus extracts or witch hazel can regulate oil production without stripping the scalp of its natural oils.[29]

Scalp Irritation: Conditions like scalp psoriasis, eczema, or sensitivity to certain ingredients in hair

products can cause itching, redness, or inflammation. Herbal shampoos with gentle, calming ingredients like chamomile or calendula aim to soothe and alleviate scalp irritation. Choosing the right herbal shampoo tailored to address specific hair concerns is crucial in effectively managing and resolving these hair problems, promoting healthier and more resilient hair and scalp conditions.[30]

HAIR CARE

“Hair texture and shine are usually related to hair's surface properties, on the other hand, the integrity of hair is due to the hair cortex. For this purpose, hair products that improve the structural integrity of hair fibers and increase tensile strength are available, along with products that increase hair volume, reduce frizz, improve hair manageability, and stimulate new hair growth. Interestingly, modern cosmetic products are formulated to clean hair from detritus, and to restore and improve hair physiology. For example, intensive conditioning agents can temporarily replace the f-layer, improving the moisture retention in the cortex and rebuilding some of the reduced physical properties of hair. Therefore, the boost in hair shine is a key benefit of modern products.[31][32]

HOW SHAMPOO WORKS

Shampoo cleans by stripping sebum from the hair. Sebum is an oil secreted by hair follicles that is readily absorbed by the strands of hair, and forms a protective layer. Sebum protects the protein structure of hair from damage, but this protection comes at a cost. [33][34] It tends to collect dirt, styling products and scalp flakes. Surfactants strip the sebum from the hair shafts and thereby remove the dirt attached to it. While both soaps and shampoos contain surfactants, soap bonds to oils with such affinity that it removes[35].

IDEAL PROPERTIES OF HERBAL SHAMPOO:

It should effectively and completely remove dust or soil, excessive sebum or other fatty Substances and loose corneal cells from the hair. [36][37] It should produce a good amount of foam to satisfy the psychological requirement.

It should be easily removed on rinsing with water.

It should not cause any reaction/ irritation to skin or eye. It should not make the hand rough and chapped.(4,5) Conventional shampoos often contain harsh detergents like sodium lauryl sulfate (SLS) and sodium laureth sulfate (SLES), which strip the scalp of its natural oils, leading to dryness, frizz, and breakage. Additionally, synthetic preservatives like parabens and artificial fragrances can cause allergic reactions and long-term scalp damage. Herbal shampoos, on the other hand, use natural cleansers such as reetha (soapnut), shikakai, and amla, which gently remove dirt and excess oil while maintaining the hair's moisture balance. Since they are free from toxic chemicals, they are suitable for all hair types, including sensitive scalps and chemically treated hair.

HERBS USE AS SHAMPOO

Reetha (Soapnut)

Reetha, also known as soapnut, is a natural cleansing agent widely used in Ayurveda and herbal hair care. The fruit of the *Sapindus mukorossi* tree contains saponins, which produce a mild lather and effectively cleanse hair without harsh chemicals. Reetha shampoo is an excellent alternative to commercial shampoos, especially for those seeking a chemical-free, eco-friendly, and gentle hair wash solution.[38][39]

1. Benefits of Reetha Shampoo

- Natural Cleanser – Reetha's saponins act as a mild surfactant, removing dirt, excess oil, and product buildup without stripping natural oils.[40]
- Anti-Dandruff Properties – Its antifungal and antibacterial properties help combat dandruff and scalp infections.[41]
- Strengthens Hair – Rich in vitamins and antioxidants, reetha reduces hair fall and promotes stronger, thicker hair.[42]
- Soothes Scalp Irritation – It calms inflammation, reduces itchiness, and prevents dryness.
- Adds Shine & Softness – Unlike sulfate-based shampoos, reetha leaves hair naturally smooth and shiny.
- Safe for Colored & Treated Hair – Since it lacks sulfates, it doesn't fade hair color or damage chemically treated hair.
- Eco-Friendly & Biodegradable – Reetha is sustainable, non-toxic, and safe for the environment.[43]

2. Shikakai (Acacia Concinna)

Shikakai, scientifically known as *Acacia concinna*, is a revered herb in Ayurveda that has been used for centuries as a natural hair cleanser and conditioner, earning it the name "fruit for hair" due to its remarkable hair

care benefits.[44] Unlike commercial shampoos that contain harsh sulfates and synthetic chemicals, shikakai shampoo offers a mild yet effective cleansing solution that maintains the hair's natural oils while promoting overall scalp health. The pods and leaves of the shikakai plant contain natural saponins that produce a gentle lather, effectively removing dirt, excess oil, and product buildup without stripping the hair of its essential moisture. One of the standout benefits of shikakai shampoo is its ability to prevent hair fall by strengthening hair roots and reducing breakage, thanks to its rich content of vitamins A, C, and K, along with antioxidants that nourish the scalp and hair follicles.[45][46]

Regular use of shikakai shampoo helps maintain the scalp's natural pH balance, preventing dryness and irritation while reducing dandruff and scalp infections due to its antifungal and antibacterial properties.[47][48] The herb also acts as a natural conditioner, leaving hair soft, smooth, and manageable without the need for synthetic silicones or artificial fragrances, making it ideal for those with dry, frizzy, or chemically treated hair. Shikakai is particularly beneficial for people with sensitive scalps as it soothes inflammation and reduces itchiness, providing relief from conditions like psoriasis and eczema. Additionally, it enhances hair texture and adds a natural shine, making hair look healthier and more vibrant over time. Another advantage of shikakai shampoo is its ability to promote hair growth by improving blood circulation to the scalp and unclogging hair follicles, which encourages thicker and stronger hair growth.[47][50]

Shikakai shampoo is also environmentally friendly, as it is biodegradable and free from toxic chemicals that can harm aquatic life, making it a sustainable choice for eco-conscious consumers. To use shikakai shampoo, you can either prepare a liquid solution by boiling shikakai pods in water and straining the mixture or mix shikakai powder with water to form a paste before applying it to wet hair[50,51]. For enhanced benefits, shikakai can be combined with other Ayurvedic herbs like reetha, amla, or hibiscus to create a potent herbal hair wash that addresses multiple hair concerns simultaneously. While shikakai shampoo may not produce the same amount of lather as chemical-based shampoos, its cleansing efficacy is undeniable, and users often notice improved hair health after a few washes. However, those with extremely dry hair should follow up with a natural conditioner, such as aloe vera or coconut milk, to maintain moisture levels.[52]

3. Amla (Indian Gooseberry)

Amla, scientifically known as *Phyllanthus emblica* or Indian gooseberry, has been a cornerstone of Ayurvedic hair care for centuries, revered for its unparalleled ability to nourish, strengthen, and revitalize hair. [53][54] This potent fruit, packed with vitamin C, antioxidants, and essential minerals, forms the basis of amla shampoo—a natural alternative to chemical-laden hair products that addresses multiple hair concerns while promoting overall scalp health. Unlike commercial shampoos that strip hair of its natural oils, amla shampoo gently cleanses while delivering deep nourishment, making it suitable for all hair types, including dry, damaged, and color-treated hair.[55][56]

One of the most celebrated benefits of amla shampoo is its ability to prevent hair fall and promote hair growth by strengthening hair follicles from the roots. The high vitamin C content in amla stimulates collagen production, which is essential for maintaining hair elasticity and preventing breakage, while its antioxidant properties protect hair from environmental damage and premature aging. Regular use of amla shampoo reduces split ends and frizz, leaving hair smoother and more manageable, thanks to its natural conditioning effects. Additionally, amla is known to delay premature graying by preserving melanin, the pigment responsible for hair color, and its iron content improves blood circulation to the scalp, ensuring healthier and thicker hair growth over time.[57][58]

Amla shampoo is particularly beneficial for those struggling with dandruff and scalp infections, as its antibacterial and antifungal properties help maintain a clean and balanced scalp environment. The mild acidity of amla helps regulate the scalp's pH level,[59] reducing excess oiliness and preventing clogged hair follicles, which can lead to hair thinning. For individuals with dry or itchy scalps, amla shampoo provides soothing relief by moisturizing the scalp and reducing inflammation, making it an excellent choice for those with sensitive skin or conditions like psoriasis and eczema. Unlike synthetic shampoos that rely on harsh sulfates for lather, amla shampoo cleanses effectively without causing dryness or irritation, making it ideal for frequent use.[60]

Another advantage of amla shampoo is its ability to add natural shine and volume to hair, eliminating the need for silicone-based serums or artificial shine enhancers. The fruit's nourishing oils penetrate deep into the hair shaft, repairing damage caused by heat styling, chemical treatments, and environmental pollutants. For those with curly or coarse hair, amla shampoo enhances curl definition and reduces tangles, making detangling easier and less damaging. Its gentle formulation also makes it safe for use on children's hair, providing a chemical-free option for maintaining healthy hair from an early age.[60][61]

Amla shampoo can be easily incorporated into a hair care routine, either as a standalone product or in combination with other Ayurvedic herbs like shikakai, reetha, or hibiscus for enhanced benefits. To use, simply wet the hair, apply a small amount of amla shampoo, and massage it into the scalp and hair lengths, allowing the nutrients to absorb for a few minutes before rinsing thoroughly. For deeper conditioning, amla shampoo can be followed with an amla-based hair mask or oil treatment, which further locks in moisture and strengthens the hair.

While amla shampoo may not produce the same foamy lather as synthetic shampoos, its cleansing power is just as effective, and users often notice improved hair texture and reduced hair fall within a few weeks of regular use.[62][63][64]

For those who prefer DIY hair care, amla shampoo can be made at home by boiling dried amla pieces in water, straining the liquid, and mixing it with other natural ingredients like yogurt or aloe vera gel for added hydration. Alternatively, amla powder can be combined with water to form a paste and applied directly to the scalp and hair, offering a quick and convenient way to reap its benefits. Store-bought amla shampoos are also widely available, but it is important to choose products that are free from sulfates, parabens, and artificial fragrances to ensure the purest form of amla's goodness.[65]

4. Bhringraj (Eclipta Alba)

For centuries, Ayurvedic practitioners have hailed bhringraj (*Eclipta alba*) as the "king of herbs" for hair care, and modern science now confirms its remarkable benefits. This humble plant, with its small white flowers and sprawling leaves, forms the basis of bhringraj shampoo - a potent natural solution that addresses virtually every common hair concern while promoting exceptional growth and vitality. Unlike chemical shampoos that merely clean superficially, bhringraj shampoo works at the follicular level to transform hair health from root to tip.[66][67]

The most celebrated benefit of bhringraj shampoo lies in its unparalleled ability to stimulate hair growth and combat hair loss. Rich in wedelolactone and other bioactive compounds, it extends the anagen (growth) phase of hair follicles while inhibiting the hormone DHT, a primary cause of pattern baldness. Regular use visibly increases hair density, with many users reporting new baby hairs sprouting along hairline and temples within weeks. For those struggling with thinning hair or receding hairlines, bhringraj shampoo offers hope where synthetic products often fail.[68][69]

Beyond growth stimulation, bhringraj shampoo serves as a complete scalp rejuvenator. Its potent antimicrobial properties eliminate dandruff-causing fungi and bacteria, while its anti-inflammatory compounds soothe irritated scalps plagued by conditions like psoriasis or dermatitis. The herb's high magnesium content improves blood circulation to hair roots, ensuring optimal nutrient delivery that translates to stronger, more resilient strands.[70][71] Unlike harsh anti-dandruff shampoos that dry out hair, bhringraj maintains the scalp's natural moisture balance while healing flakiness and itchiness.

Premature graying finds a formidable opponent in bhringraj shampoo. The herb's high iron content and melanin-stimulating properties help restore natural hair color and prevent further pigment loss. [72][73] Those who consistently use bhringraj shampoo often notice their grays becoming darker and fewer in number over time - a benefit few commercial shampoos can claim. The shampoo also contains natural oils that condition hair without weighing it down, leaving strands silky.[75]

For damaged hair, bhringraj works as a reparative miracle. Its proteins fill in gaps along the hair shaft from chemical treatments or heat styling, while antioxidants protect against environmental aggressors like pollution and UV rays. The result is hair that feels thicker, looks shinier, and breaks significantly less. Even color-treated hair benefits, as the gentle cleansing action preserves vibrancy without stripping dye molecules like sulfates do.[76][77][78][79][80] Preparing bhringraj shampoo at home involves simmering fresh or dried leaves in water until reduced by half, then straining the dark green liquid. Many Ayurvedic practitioners recommend combining it with coconut milk for extra conditioning or neem for enhanced antimicrobial action[81][82][83]. When using store-bought versions, seek products listing bhringraj (or *Eclipta alba*) as a primary ingredient rather than a token addition.

While bhringraj shampoo may initially produce less lather than conventional products, its effects accumulate beautifully with consistent use. For optimal results, massage into scalp for 3-5 minutes before rinsing, allowing the active compounds maximum absorption. Follow with bhringraj oil for intensive overnight treatment. Some users experience a mild tingling sensation - this indicates increased blood flow to follicles rather than irritation.[84][85]

CONCLUSION

Herbal shampoos, such as those containing Neem, Aloe Vera, Reetha, and Amla, offer a natural, chemical-free alternative to conventional hair care products. These shampoos are gaining popularity due to their gentle cleansing, scalp-soothing, and hair-strengthening properties. Unlike synthetic shampoos, herbal variants avoid harsh sulfates and parabens, reducing the risk of allergies, dryness, and long-term damage. Neem-based shampoos, in particular, are effective against dandruff, lice, and infections due to their antifungal and antibacterial qualities. Additionally, herbs like Bhringraj and Hibiscus promote hair growth and thickness, making them ideal for holistic hair care. Looking ahead, the future of herbal shampoos is bright, driven by scientific research, sustainability trends, and consumer demand for organic products. More clinical studies will help validate traditional Ayurvedic knowledge, ensuring standardized and effective formulations. Innovations

like waterless shampoo bars, customized herbal blends, and AI-driven scalp analysis could revolutionize the market. The global demand for clean beauty products will further boost the herbal shampoo industry, especially in Europe and North America. Sustainable sourcing of herbs and eco-friendly packaging will also play a key role in attracting environmentally conscious consumers. As awareness grows, herbal shampoos are expected to become mainstream, offering a perfect blend of nature and science. With advancements in biotechnology and green chemistry, future herbal shampoos may provide longer-lasting effects and deeper nourishment. The shift toward personalized, toxin-free hair care will continue, making herbal shampoos a preferred choice for healthy, sustainable living. By embracing these natural solutions, consumers can enjoy better hair health while supporting ethical and eco-friendly practices. The future of hair care lies in going back to roots—literally.

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