
Review on: Cosmetic Importance of Shikakai

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Abstract

For ages, the Asian climbing shrub known as Shikakai (*Acacia concinna*) has been an essential component of traditional Ayurvedic medicine, mainly for its benefits related to hair maintenance. In addition to being used for hair care, shikakai's anti-inflammatory, antibacterial, and antifungal qualities have been utilized to treat a range of skin issues. Shikakai's uses have grown in the present era, including it into contemporary medicinal and cosmetic formulations. Its potential in treating dandruff, scalp psoriasis, and minor wounds has been highlighted by recent studies. Shikakai's popularity has increased due to the growing trend towards natural and sustainable beauty products, which has resulted in its incorporation in a variety of shampoos, conditioners, and skin care products. This paper examines the cosmetic value of shikakai, emphasizing its pharmacological characteristics, chemical makeup, and role in improving hair health. The anti-fungal, anti-microbial, and mildly cleaning qualities of shikakai are attributed to its abundance of saponins, flavonoids, and vital fatty acids. Because of its capacity to wash without removing natural oils, lessen dandruff, and encourage hair growth, it is frequently utilized in hair care products. Its mild conditioning qualities also aid in enhancing the luster and texture of hair. This article provides a thorough summary of shikakai's effectiveness in cosmetic applications by synthesizing data from numerous research and anecdotes.

Keywords - Cosmetic, Make-up, Anti-Fungal, Anti-inflammatory, Anti-Oxidant, Hair care.

INTRODUCTION

Scientific innovation and the art of improving one's personal beauty and well-being are expertly combined in the broad field of cosmetic science. This area of study clarifies the procedures that transform raw materials into compositions that enhance visual beauty by delving into the intricate chemistry, biology, and technology involved in the manufacture of cosmetics. This comprehensive analysis discusses both the scientific underpinnings that guided the invention of cosmetic products and the enormous societal influence that they have.^[1] Herbal medicine have become more and more popular recently because of all of their benefits.^[2] The traditional South Asian herb Shikakai (*Acacia concinna*) is well known for its advantageous effects on skin and hair care. Shikakai, a fruit that has long been used in Ayurvedic medicine, is known for its ability to promote healthy hair growth, cleanse the hair, and enhance its natural shine. Shikakai's potent blend of saponins, tannins, and vital vitamins not only enhances its cleansing properties but also offers anti-inflammatory and conditioning properties. The need for natural components in cosmetics has increased recently due to public awareness of the possible negative consequences of synthetic

chemicals. Because of its mild yet powerful cleansing qualities, shikakai presents a strong substitute for traditional shampoos and conditioners, making it a desirable component in contemporary the need for natural components in cosmetics have increased recently due to public awareness of the possible negative consequences of synthetic chemicals. Shikakai is a desirable ingredient in contemporary cosmetic formulations because of its mild yet effective cleansing qualities, which make it a convincing substitute for traditional shampoos and conditioners. Its antioxidant qualities may also aid in shielding skin and hair from outside stresses, improving general health and attractiveness. In order to fully understand the complex role that shikakai plays in cosmetics, this review will go into its chemical makeup, historical use, and current uses in hair and skin care products. We hope to demonstrate the potential of shikakai as an essential ingredient in the creation of safe and effective cosmetic products by reviewing the body of research and recent developments. [3,4,5]

Shikakai



Figure 1: Shikakai

Synonym

Shikakai Tree, Soap Pod, Acacia concinna.

Biochemical Source

The dried pods of the Acacia concinna tree, which is indigenous to Southeast Asia and India's tropical and subtropical regions, are used to make shikakai.

Physical characteristics

Dried pods have a dark brown appearance and frequently bend.

Texture: Smooth surface, hard and woody.

Pods normally measure between 5 and 15 centimetres in length.

Chemical Make-Up

Saponins: These are the substances that give it foam and give it cleaning power.

Tannins: Offer qualities that are astringent.

Antioxidants with potential health advantages are called flavonoids. Especially high in vitamin C among the vitamins.

Solubility

Shikakai dissolves easily in water, especially after boiling. When combined with water, its saponins help produce a lather, which makes it a useful natural shampoo. [6]

Shikakai's Pharmacological Characteristics

1. Anti-inflammatory Capabilities

Cytokine Modulation

Shikakai may have an impact on the generation of cytokines that promote inflammation. Research has demonstrated that shikakai extracts can lessen the production of markers associated with inflammation, hence assisting in the reduction of the inflammatory response.

Antioxidant Activity

Shikakai's antioxidant qualities are partly attributed to the flavonoids that it contains. Free radicals are scavenged by antioxidants, which also lessen oxidative stress, which is frequently connected to inflammation. In different tissues, this defensive response can help reduce inflammation.

Inhibition of Enzymatic Activity

Shikakai's saponins have the ability to inhibit the inflammatory pathway-related enzymes lipoxygenase (LOX) and cyclooxygenase (COX). The production of inflammatory mediators may be decreased by this restriction.

Immune Response Stimulation

Shikakai has the potential to increase the activity of specific immune cells, so fostering a well-balanced immunological response that averts excessive inflammation. [7, 8]

2. Antifungal Properties

Phytochemical Composition

Bioactive substances with antifungal qualities, such as flavonoids, tannins, saponins, are found in shikakai. These substances have the ability to damage fungal cell membranes and obstruct their metabolic functions.

Inhibition of fungus Growth

Studies show that shikakai extracts prevent the growth of a variety of fungus species by interfering with the creation of their cell walls and other vital processes.

Antioxidant Activity

By lowering oxidative stress in fungal cells, which causes cell damage and death, shikakai's antioxidant qualities may aid in its antifungal actions.

Biofilm Formation Disruption

Shikakai has the potential to prevent the growth of biofilms, which are protective layers that fungus produce in order to withstand therapy. Shikakai increases the sensitivity of fungi to antifungal drugs by inhibiting the production of biofilms. [9, 10, 11]

3. Antibacterial Properties

Photochemical composition

Among the many photochemical found in shikakai are flavonoids, tannins, and saponins, all of which have natural antibacterial qualities. These substances cause bacterial cell membranes to rupture, which results in cell lyses.

Inhibition of Bio film Formation

Research shows that shikakai extracts can prevent pathogenic bacteria from forming biofilms, which is essential to their survival and ability to withstand drugs.

Change in Metabolic Activity

Shikakai's bioactive chemicals have the ability to impede the growth and proliferation of microorganisms by interfering with their metabolic activities. This is especially true for fungus and bacteria.

Synergistic Effects

Shikakai is a possible adjuvant in antimicrobial therapy since it may increase the effectiveness of standard antibiotics when taken in combination. [12,13,14]

4. Anti-dandruff properties

Antifungal Properties

The chemicals in shikakai have antifungal action, especially against species of *Malassezia*, which are known to cause dandruff. [15]

Scalp Cleaning

By eliminating extra sebum and debris from the scalp, its natural saponins work as powerful surfactants. [16]

Calming Effects

Shikakai's anti-inflammatory qualities might ease dandruff sufferers' discomfort and itching on the scalp. [17]

PH Regulation

By preserving the pH equilibrium of the scalp, it lessens the likelihood that dandruff will form. [18]

Nutritional Advantages

Shikakai, which is abundant in vitamins A, C, and E as well as antioxidants, strengthens hair follicles and improves the general health of the scalp by creating a more favorable environment for the scalp. [19]

Traditional Benefits of Shikakai for Hair

It gives hair shine and softness:

The natural elements and vital nutrients in shikakai help to improve the texture of hair throughout the winter months. This natural surfactant leaves hair softer and glossier while also cleaning the hair follicles and eliminating grease.

Eliminates Dandruff and Hair Lice

To our great relief, Shikakai's strong antifungal and antibacterial qualities are essential in getting rid of hair lice and dandruff from the scalp and hair, respectively. While it removes dandruff well, it keeps the natural oils on the scalp intact, minimizing dry scalp issues that lead to flaking and dandruff. So, say goodbye to the intractable white flakes on your shoulders and scalp and get rid of the hair lice that are causing your continual Itching and clumsiness.

Offers Stronger and Thicker Hair

Everyone wants their mane to be robust, shiny, and healthy. Shikakai's active components supply the vitamins and vital oils required for healthy hair growth. It is very important for getting your hair back to its natural length and shine. It stops breakage, split ends, and hair loss by strengthening the hair from the roots up.

Heals Infections

Shikakai's powerful medicinal qualities have a relaxing and soothing effect. Shikakai calms the pain and has a cooling impact on the scalp, unlike chemical shampoos that could irritate delicate or inflamed skin.

Slows Down Greying

Premature greying of the hair is a common problem among young people nowadays, and it is pretty distressing as it indicates your age. Shikakai keeps black hair looking naturally fresh while also preventing premature greying. [20]

Therapeutic Uses of Shikakai Herbs

Prevents Constipation

The Shikakai pods' suppository and purgative properties make them incredibly helpful in treating constipation as well as indigestion, cramping in the abdomen, and flatulence. It enhances food absorption and makes faces easier to pass through the body.

Treats Gum Infections

Shikakai's antibacterial properties are very important in avoiding gum and tooth infections. In addition, it treats gum conditions including gingivitis and stops tooth decay and plaque accumulation.

Treats Jaundice

The efficaciousness of this powerful herb in treating jaundice is attested to by Ayurveda. It stimulates the liver and restores normal bile secretion.

Skin Care

Because shikakai is a strong anti-bacterial, it can effectively treat a variety of skin illnesses, including scabies, and it also minimizes the appearance of fine lines and wrinkles. ^[20]

Extra Advantages of Using Shikakai

Calms the Scalp

Shikakai's strong anti-inflammatory and antibacterial qualities combine to create an effective, calming remedy for the inflamed, diseased scalp. It restores the health of the hair and creates an infection-free scalp for healthy hair development by keeping the scalp at its ideal pH level.

Limits hair loss

Similar to clogged skin pores, the buildup of dirt, oil, and dust particles frequently causes the pores on the scalp to get blocked. This inhibits the scalp's natural blood flow, weakening the hair and causing it to fall out. For those who adore their hair, shikakai is the perfect way to stop hair loss. Shikakai is used to prevent lice, dandruff, infections, clogged follicles, and itching, which helps to repair the health of the scalp and encourage hair growth

Nourishes Hair Follicles

The basic soap nut powder's wealth of antioxidants and vitamin C stimulate the scalp's creation of collagen. Additionally, it guards against free radical damage, which delays hair graying and promotes healthy hair development.

Cleanses Hair and Scalp

Soap nut, also known as shikakai, is a natural cleanser that cleans hair and scalp without removing natural oils. In addition to keeping hair smooth and silky, the conditioning feature eliminates unpleasant wet odors from hair. ^[20]

Works as a mild untangler

Shikakai's smooth cleaning properties help to gently untangle hair. Hair loss and breakage are decreased as a result. This also lessens the harm that too many chemicals can do to hair. Shikakai can help detangle your knotted mop of hair if you have unruly, curly hair and are attempting to use only natural hair products.

Shikakai avoids horrible split ends

Our hair suffers greatly from split ends as a result of all the chemical hair treatments, straightening, and free radical production. Split ends cannot be repaired; your only option is to get your hair cut and pray that the split ends don't resurface as your hair grows out. Shikakai can save the day in this situation. Antioxidants found in abundance in this straightforward hair cleanser work to counteract free radicals, which cause damage. Additionally, shikakai encourages your scalp to secrete sebum, which hydrates your hair and helps avoid split ends.

Prolonged hair greying

Although some of us really love the salt and pepper look, not everyone can pull it off. Many of us suffer from premature greying of hair as a result of the stressful lives we all lead. When severe hair care products and chemical hair treatments are combined, early greying is inevitable. As a result of its antioxidant content, shikakai helps prevent hair from going gray. Shikakai is an excellent hair nutrient that also repairs damaged scalp tissue and delays the onset of gray hair. [21]

Nutrition for Hair with Shikakai

The shikakai plant has a variety of substances in it by nature. Several of these have remarkable benefits for hair health. These consist of:

Antioxidants

Shikakai's antioxidants are essential for shielding the hair follicles from oxidative damage. Additionally, they maintain and enhance the creation of collagen in the connective tissues of hair follicles, which improves hair development.

Antioxidants to Lower Hair Loss

The goal of shikakai nutrition is to fortify hair follicles. Antioxidants fight against oxidative stress, and vitamins and nutrients support hair growth by nourishing the hair follicles. Because of its deep feeding, hair fall worries are lessened because the hair follicles are kept from growing coarse. In addition, hygral tiredness weakens the hair strands and causes them to break at the ends because it damages the hair follicles through frequent swelling and unswelling. Applying acacia concinna regularly to the scalp treats and prevents split ends by lowering hydral stress.

Vitamins

Shikakai is a good source of vitamins A, C, D, E, and K, among others. These are rich in nutrients and function as antioxidants to protect and nurture hair follicles, which in turn promote hair development.

Vitamins Minimize Early Greying of Hair

The main factor contributing to early graying of hair is malnourishment of the hair follicles. By giving the hair follicles enough nourishment, shikakai replenishes the amounts of melanin, the pigment that gives hair its original colour.

Antimicrobial Compounds

Shikakai has the ability to fight bacteria and mold. Thus, it guards against a variety of microbial skin disorders on the scalp.

The Use of Antimicrobial Compounds to Reduce Dandruff:

Dandruff and other scalp disorders can be effectively treated with shikakai's antifungal and moisturizing qualities. Deep hydration and nourishing lessen dry, stinging flakes, and its antifungal qualities aid in destroying the bacteria that cause dandruff.

Saponin

The fruit pods of the Shikakai plant contain a significant amount of saponin. It helps to maintain healthy shine and luster in hair while also acting as a natural hair cleaner.

Saponin for Enhanced Hair Shine:

Shikakai gently cleanses hair without removing its natural oils, helping to preserve the scalp's natural pH balance. This is a good treatment for damaged and lifeless hair since it preserves the natural sheen of the hair. [22]

How Can You Include Shikakai in Your Hair Care Routine?

Shikakai Shampoo

With the help of nature, shampoo cleanses and nourishes your hair. It's an essential part of any hair care regimen. Shampoo without parabens helps heal severely damaged hair and reduce frizz. It contains natural components to reduce frizz and hair fall, along with a keratin-infused composition that strengthens hair.



Figure 2: Bhlingraj and Amla Shampoo

Shikakai Conditioner

Similar to shikakai, natural hair conditioner smoothes and tames frizz. With no sulphates or parabens, it has a clear formula. Include shampoo and conditioner in your hair routine to help repair damaged hair. Its formula contains argan oil and pro-keratin.



Figure 3: Bhlingraj and Amla Conditioner

Shikakai Hair Oil

Natural herbs that support the treatment of many hair issues are added to this all-natural hair oil. Use it an hour before shampooing your hair in either hot or cold water to promote hair growth and shield it from harm. Dry and brittle hair responds well to this hair oil. Moroccan Aryan Hair Oil

leaves hair feeling silky and glossy while instantly taming frizz. Its recipe with herbs in it also feels pleasant on the scalp.



Figure 4: Bhringraj and Amla Hair Oil

Shikakai Hair Mask

Mask promotes elasticity and luster while providing the hair with deep nourishment. It lessens hair fall and stops hair breaking. The recipe was influenced by traditional Ayurvedic hair treatments.

To repair hair breakage, apply this keratin hair mask. This is for you if your hair has been heat-damaged or chemically treated. The cream gives your hair a silky, glossy mane and acts as a natural protein treatment for your hair. [23]



Figure 5: Bhringraj and Amla Hair Mask

CONCLUSION

Shikakai, known for its numerous advantages for hair and skin care, emerges as a useful natural component in the beauty sector, to sum up. It's a great substitute for synthetic products due to its rich nutrient profile, mild cleansing qualities, and capacity to support hair health. Its anti-inflammatory and antioxidant qualities make it even more appealing in skin care products that target issues like aging and acne. Shikakai is a major actor in contemporary cosmetic applications due to its adaptability and efficacy as customers look more and more for natural and sustainable

beauty solutions. Its potential may be increased by further research and development, opening the door for creative goods that combine its historical advantages with modern aesthetic demands.

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