



A Comprehensive Review On Natural Hair Conditioner Made With Fenugreek Seeds

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Abstract :

Introduction:- Herbal hair conditioner aids in smoothing hair strands and replenishing moisture after shampooing, which cleanses and removes oils, resulting in lustrous, soft, and healthy-looking hair. Nowadays, individuals are increasingly curious about the ingredients used in hair products and shampoos, such as fenugreek seeds, hibiscus flowers, fermented rice water, aloe vera, and flaxseeds, which contribute to smooth and shiny hair while enhancing its texture, strength, and promoting hair growth. Herbal hair conditioner aids in smoothing hair strands and replenishing moisture after shampooing, which cleanses and removes oils, resulting in lustrous, soft, and healthy-looking hair. Nowadays, individuals are increasingly curious about the ingredients used in hair products and shampoos, such as fenugreek seeds, hibiscus flowers, fermented rice water, aloe vera, and flaxseeds, which contribute to smooth and shiny hair while enhancing its texture, strength, and promoting hair growth.

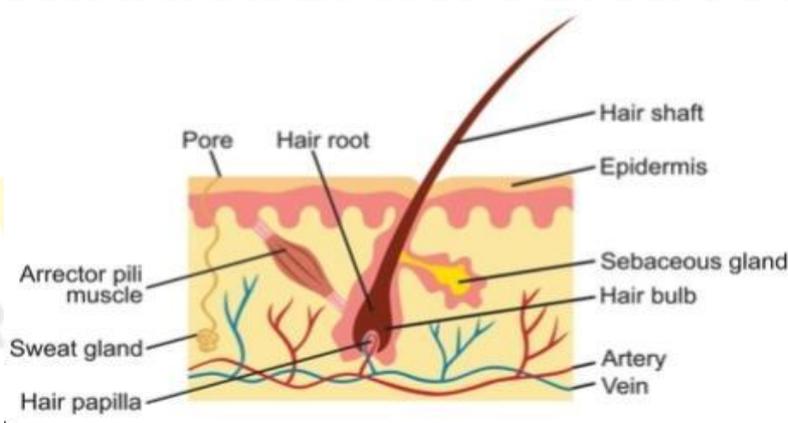
Objective :-This hair conditioner are designed to improve hair manageability, decrease hair static electricity and add luster.

Result:-The results revealed a significant reduction in hair loss.The hair diameters of the subjects did not change significantly.

Discussion and conclusion:-Conditioner containing Trigonella foenum-graecum, Hibiscus rosa-sinensis, Oryza sativa,Aloe barbadensis miller, Linum usitatissimum have been demonstrated to exert therapeutic benefits for reducing hair loss , shiny ,hair and smooth hair.

Keywords:-Herbal, Hair ,Luster ,Smooth, Shampoo, Conditioner.

INTRODUCTION :-



Hair scalp diagram

Hair plays an important role in the overall appeal of one's appearance. Conditioners that enhance shine and help to straighten the hair.(3).Herbal cosmetics are products derived from various approved cosmetic materials that create a foundation for one or more herbal components specifically selected for particular cosmetic advantages.(16) .Recently, a study was conducted on an herbal hair conditioner formulated with ingredients such as Trigonella foenum-graecum, Hibiscus rosa-sinensis, Oryza sativa, Linum usitatissimum, and Aloe barbadensis miller, which contribute to smoother and shinier hair while enhancing texture, strength, and promoting hair growth. Products consist of a combination of organic chemicals that can originate from various processed parts of plants, such as leaves, stems, bark, seeds, fruits, etc.(13). A herbal preparation is a completed herbal product that includes portions of plants and other plant materials as its active components. Currently, it appears unlikely that herbal hair conditioners, despite being more effective and safer than synthetic options, will gain popularity among consumers.(14). A more innovative method to

promote herbal conditioners would involve altering consumer expectations from synthetic conditioners, emphasizing effectiveness, strategy, and safety. Formulators should take an active role in informing consumers about the possible harmful effects of synthetic detergents and other chemical additives found in conditioners.(1). Surfactants are specific conditioners but there are many other materials used as conditioners, such as asparaffin and lanolin. There are also many other materials that serves as conditioners like peptides,egg derivatives and synthetic resin. These materials were added in shampoo formulation as hair conditioner and hair shining agents. This herbal conditioner promotes healthy hair and is a great way to maintain clean and smooth locks.(23). Hair conditioners enriched with strong antioxidants can minimize UV harm to your hair, such as alterations in color and damage to proteins. Conditioners derived from plants include various chemicals and sulfates.(24).Herbal conditioners are designed to address a variety of hair concerns. As they are made from natural ingredients, these conditioners do not contain harmful chemicals. The primary component utilized is fenugreek seeds, which are a great source of iron and protein—both vital nutrients for promoting hair growth. Additionally, they possess a distinct combination of plant compounds, such as flavonoids and saponins.(25). Across the globe, there is a growing trend toward embracing herbal products and adopting a more natural lifestyle. Individuals are increasingly opting for natural foods, herbal cosmetics for hair care, herbal medicinal preparations, and natural healing methods to promote health. The variety of herbal hair care products has expanded significantly within this specific care sector, resulting in a substantial demand for herbal hair care cosmetics.(26).

TAXONOMICAL DESCRIPTION OF PLANT MATERIAL

Sr.no	Common name	Botanical name	Taxonomical classification	Part used
1	Fenugreek Seeds	Trigonella Foenum-graecum	Kingdom: Plantae Subkingdom: Viridiplantae Division: Tracheophyta Class: Magnoliopsida Order: Fabales Family: Fabaceae Genus:Trigonella L. Species:Trigonella Foenum-graecum	Seeds
2	Hibiscus flower	Hibiscus rosa-sinensis	Kingdom: Plantae Subkingdom: Tracheobionta Division: Magnoliophyta Class: Magnoliopsida Order:Malvales Family: Malvaceae Genus: Hibiscus L. Species:Hibiscus rosa – sinensis .	Flower
3	Fermented rice water	Oryza sativa	Kingdom: Plantae Subkingdom: Tracheobionta Division: Magnoliophyta Class: Liliopsida Order:Poales Family:Poaceae Genus: Oryza Species:Oryza sativa	seeds
4	Flaxseeds	Linum usitatissimum	Kingdom: Plantae Subkingdom: Viridiplantae Division: Magnoliophyta Class: Magnoliopsida Order:Malpighiales Family: Linaceae Genus: Linum Species: L.usitatissimum	Seed
5	Aloe Vera	Aloe barbadensis-miller	Kingdom: Plantae Subkingdom: Tracheobionta Division: Magnoliophyta Class: Magnoliopsida Order:Sapindales Family: Meliaceae Genus: Azadirachta A. Juss Species:Azadirachta indica	Leaf

ABOUT PLANT : –

1) Fenugreek Seeds :-



- a) **History:** -The fenugreek extract has important role in reducing hair loss and its conditioning mode (Wichtl, 1994). Therefore, this study was designed to formulate shampoos containing fenugreek extract and its physicochemical properties were studied.(2).

b)Uses:-This plant is used to treat skin diseases like black spots and annoying odor of body, mouth, and sweat. It can treat dandruff if it is used as a shampoo .(32).In ancient rome ,it was widely used in labour pain and delivery . The fenugreek extract has play important role in reducing hair loss.

c)Chemical constituents:-Fenugreek Leaves contain about 86.1% moisture,(33)., seeds contain total dietary fiber, 4.2% accessible carbohydrates, 3.7% starch, 23% crude protein, 8.8% moisture, 6.4% total lipids, and 3.4% ash [69,70]. On the other hand, fresh fenugreek leaves contain approximately 86% moisture, 6% carbohydrates, 4.4% proteins, 1.5% ash, 1.1% fiber, and 0.9% fat.(31).

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2) Hibiscus flower: -



- a) **History:** Hibiscus sabdariffa Linn belonging to the Malvaceae family have long been used in indigenous system of medicine for treating hypertension (Oliver, 1960) and it is also used in the hair conditioner for lusters and hair growth. The extracts of HS exert Potent antioxidant effects in vitro, achieved via the presence of several active constituents chief among which are flavonoids and vitamins. (11).

b)Uses:Hibiscus flower petals have been used to stimulate thicker hair growth and prevent premature graying. Hibiscus leaves have been used to relieve headaches or swellings. Hibiscus is used in cosmetics as an essential oil to preserve skin elasticity and flexibility.

c)Chemical constituents: Quantitative phytochemical evaluation of the flowers of Hibiscus rosa-sinensis revealed that the amount of flavonoids was 0.171 mg/g, total phenols 0.092 mg/g, tannins 0.073 mg/g, carbohydrates 0.356 mg/g, protein 0.247 mg/g, thiamine 0.072 mg/g, niacin 0.075 mg/g, ascorbic acid 0.0339 mg/g, riboflavin 0.087 mg/g, calcium 0.0127%, phosphorus 0.4113% and iron 0.771%.(15).

3)Fermented rice water :-



- a) **History:** As a key source of nutrition, the importance of rice as a staple food has been recognized. In 2015, the worldwide production of rice paddy reached 739.1 million tonnes, resulting in 490.5 million tonnes of white rice after the milling process. In Asia, rice paddy production was 668.4 million tonnes, which represents 90% of the total global output, highlighting that the majority of rice consumption occurs in Asian nations. The adaptability of rice cultivation to different temperatures, humidity levels, and soil types makes it a viable crop on a global scale.(17)

b)Uses: 1.Increase protein and reduce the fat content.

2.Increase gut bacteria .

3.Healthy skin and hair .

4.Fermented rice water good for ulcer.(18)

c)Chemical constituents: In the process of bran removal or polishing, 85% of the fat, 15% of the protein, 75% of the phosphorus, 90% of the calcium, and 70% of the B vitamins (B1, B2, and B3) are eliminated.(19)

4) Flaxseeds :-



a) **History:** Flaxseed is considered one of the oldest oilseed crops globally. Between 2016 and 2020, the average area cultivated worldwide was approximately 3.39 million hectares. The global flaxseed production (29). In 2020, France and Canada were the top two exporters of flaxseed and flax fiber (30).

b) **Uses:** colon cancer, Rheumatoid Arthritis, Obesity, diabetes, Antioxidant, Respiratory diseases. (27)

c) **Chemical constituents:** The seed is made up of roughly 40% lipids, 30% dietary fiber, and 20% protein. The chemical makeup can vary significantly between different varieties and is also influenced by the environmental conditions under which the plant is cultivated. The cotyledons hold 75% of the lipids, while 76% of the protein is located in the seed. In contrast, the endosperm contains merely 23% of the lipids and 16% of the protein. (28).

5) Aloe Vera :-



a) **History:** The Aloe Vera plant and its products have been significant in medicine and healthcare since at least the 4th century B.C., when ancient Greek physicians sourced aloe from the island of Socotra in the Indian Ocean. There are numerous accounts of its use—particularly that Egyptian Queens Nefertiti (1353 B.C.), celebrated as “the most beautiful woman who ever lived,” and Cleopatra VII (69-30 B.C.) incorporated it into their beauty routines and medical treatments. Allegedly, in 333 B.C., Alexander the Great was convinced by Aristotle to seize the Island of Socotra for its renowned aloe supplies, which were essential for treating his injured soldiers. The ancient civilization of Kemet (known as “the Land of the Blacks,” now referred to as ancient Egypt, a name derived from the Greek word Aigyptos and later Latinized to Aegyptus, which originates from “Hekaptah,” meaning “Land of the temple of Ptah”) utilized Aloe for healthcare, beauty treatments, and embalming purposes (Manvitha and Bidya, 2014). (20).

b)Uses: 1.Acts as an anti-inflammatory agent .

2.Provides relief in liver infection.

3.Relieves itching Aids healing .

4.Antiviral and anti-tumor activity.(21).

c)Chemical constituents:The unprocessed pulp of Aloe vera is composed of roughly 98.5% water, whereas the gel or mucilage contains around 99.5% water. The remaining 0.5 to 1% of solid substances is made up of various compounds, which include water-soluble and fat-soluble vitamins, minerals, enzymes, polysaccharides, phenolic compounds, and organic acids.(22).

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