

Formulation And Evaluation Of Herbal Shampoo In The Treatment Of Psoriasis

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Abstract

Herbal drugs or their formulations are viable alternative to synthetic drugs. During the past few decades, there has been a dramatic increase in the use of natural products in cosmetics. Natural botanicals may be used in their crude form or they may be extracted, purified or derivatized to render them more suitable for use in cosmetic. A wide range of active principles of various plants including vitamins, hormones, phyto-hormones, bioflavonoids, enzymes, tannic acid, fruit acids, amino acids, sugars, glycosides and essential oils, are being considered useful in cosmetic formulations.

Keywords: Hibiscus rosa-sinensis, Emblica officinalis, Eclipta prostrata, Aloe barbadensis, Indian Soapberry, Concinna, Sabja Seeds

Introduction

Shampoos are most probably used as cosmetics. It is a hair care product that is used for cleaning scalp and hair in our daily life. Shampoos are most likely utilized as beautifying agents and are a viscous 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. The purpose of using shampoo is to remove dirt that is build up on the hair without stripping out much of the sebum. Many synthetic shampoos are present in the current market both medicated and non-medicated; however, herbal shampoo popularized due to natural origin which is safer, increases consumer demand and free from side effects.

In synthetic shampoos, surfactants (synthetic) are added mainly for their cleansing and foaming property, but the continuous use of these surfactants leads to serious effects such as eye irritation, scalp irritation, loss of hair, and dryness of hairs. Alternative to synthetic shampoo we can use shampoos containing natural herbals. However, formulating cosmetic products containing only natural substances are very difficult. There are a number of medicinal plants with potential effects on hair used traditionally over years around the world and are incorporated in shampoo formulation. These medicinal plants may be used in extracts form, their powdered form, crude form, or their derivatives. To develop a shampoo containing an only one natural substance which would be safer with milder effect, then the synthetic shampoo is difficult and also it should possess good foaming, detergency, and solid content as such synthetic shampoo. Hence, we considered in detailing an unadulterated natural cleanser utilizing conventional technique using regularly utilized plant material for hair washing.

In the present study, herbal shampoo was formulated containing suitable ingredient such as Hibiscus rosa-sinensis, Emblica officinalis, Eclipta prostrata, Aloe barbadensis, Indian Soapberry, Concinna, Sabja Seeds, in different proportions to formulate and evaluate its physicochemical properties. Soap nut and shikakai when shaken with water create rich foam due to their high saponin content it indicates frothing impact. Amla fruit and E. prostrate leaves (Bhringraj) are used to promote hair growth, anti-dandruff agent, strengthen hairs, and prevent hair fall. E. prostrate leaves (Bhringraj) commonly known as

false daisy in English and Bhringraj in India, to promote hair growth and prevent graying of hair. Aloe vera Gel and Hibiscus used as a conditioning agent.

Benefits of Basil Seed-Loaded Antimicrobial Shampoo:

- **Anti-inflammatory properties:** Basil seeds may help reduce inflammation and scaling associated with psoriasis.
- **Antimicrobial properties:** The shampoo could prevent infections and promote a healthy scalp environment.
- **Moisturizing properties:** Although basil seeds themselves aren't typically moisturizing, pairing them with ingredients like jojoba oil or argan oil could help lock in moisture and soothe dryness.
- **Antioxidant properties:** May help mitigate oxidative stress, which can exacerbate psoriasis.
- **Scalp health promotion:** By reducing inflammation and preventing infections, basil seed-loaded shampoo may promote overall scalp health.



Potential benefits of basil seed-loaded shampoo for psoriasis:

- **Reduced scaling and inflammation:** Anti-inflammatory properties may help alleviate symptoms.
- **Improved scalp health:** Antimicrobial properties could prevent infections and promote a healthy environment.
- **Gentle and natural:** May be a suitable option for those seeking natural or complementary therapies.

Basil seeds have shown potential benefits in treating psoriasis due to their antioxidant, anti-inflammatory, antibacterial, and anticancer properties. When loaded into an antimicrobial shampoo, basil seeds could enhance the product's effectiveness in managing psoriasis symptoms.

Herbal Ingredients Used In Shampoo

Sr. No.	Ingredients	Figures	Family	Category
1.	Soap Nut Extract		Sapindaceae	Detergent
2.	Amla Extract		Phyllanthaceae	Anti-dandruff agent
3.	Shikakai Extract		Fabaceae	Detergent
4.	Hibiscus		Malvaceae	Conditioning agent
5.	Bhringraj Extract		Asteraceae	Hair growth
6.	Aloe Vera		Liliaceae	Coolant

7.	Basil Extracts		Lamiaceae	Anti-Microbial Agent, Anti-Oxidants
8.	Lemon Juice		Rutaceae	Reduce Hair Fall
9.	Rose Oil		Rosaceae	Perfume

Shampoo Formulation

Basil Seed Gel Extraction

Method

- 1. Soak seeds:** Soak basil seeds in water for 4-6 hours or overnight.
- 2. Strain and blend:** Strain the water and blend the soaked seeds with water in a blender.
- 3. Filter:** Filter the mixture through a cheesecloth or fine mesh to separate the gel from the seed husks.
- 4. Collect gel:** Collect the gel and discard the seed husks.

Preparation of extract

About 5 g of each powdered plant materials, namely were homogenized. The powdered material was extracted with distilled water by boiling for 20 TO 30 Minutes. The extract of each plant material was separated and evaporated. Formulation of Basil Seeds Loaded Herbal Shampoo was done as per the formula given. 0.5 ml of lemon juice was also added with constant stirring. To improve aroma in the formulation, 0.5ml of essential oil (rose oil) was added and made up the volume to 50 ml with gelatin.

Material Required For Extraction

Material Required	Quantity to be weight
Soapnut Powder	10gm
Amla Powder	5gm
Shikakai Powder	5gm
Hibiscus Powder	5gm
Bhringraj Powder	5gm

**Bhringraj Powder****Shikakai Powder****Hibiscus Powder****Amla Powder****Soapnut Powder**



Extraction Of Herbal Ingredients



Filtration Of Extract

Formulation Table

Materials required	Quantity to be weighed
Soap Nut (Reetha) Extract	25ml
Shikakai extract	5ml
Amla Extract	5ml
Bhringraj extract	5ml
Hibiscus Extract	5ml
Aloe vera Extract	2 ml
Basil (Subja Seeds)	2ml
Lemon Juice	0.5ml
Rose oil	0.5ml

Preparation of herbal shampoo:

1. To 100ml beaker 25ml of Reetha extract and 5ml of Shikakai extract was mixed and stirred well.
2. Then 5 ml of Amla Powder extract was added.
3. 5 ml of Bhringraj extract and 2.55ml of Aloevera extract was added.
4. A 5ml Hibiscus Extract was added as a conditioning agent
5. Gradually Add the 2ml Basil Seeds Gel to the above Mixture
6. 0.5ml Lemon Juice is added as a Cleanser

7. Above extract was stirred for 15 min.
8. 0.5ml Rose Oil a perfuming agent and stirred for 5 min.
9. The shampoo was prepared and placed into a 50ml plastic container (bottle).

Shampoo Evaluation

Organoleptic Evaluation

Colour- Brown

Odour- Aromatic

Physicochemical Evaluation

pH Measurement

Determination of PH: A 10% v/v shampoo solution was constituted in distilled water and the PH of the solution was measured by using a calibrated PH meter

Viscosity Measurement

Viscosity of shampoo was determined by using Ostwald's viscometer. The viscosity of herbal shampoo was measured by counting drops of herbal shampoo form the mark to bottom.



Foam Stability Test

10 ml of the herbal shampoo solution was placed into a graduated cylinder. It was covered with one hand & shaken 10 times. The total volume of foam content after 1min of shaking was recorded. Foam stability was evaluated by recording the foam volume after 1 min & 4min of shake test.



Wetting Time Test

Wetting time was calculated by noting the time required by the canvas paper to sink completely. A canvas paper weighing 0.42gm was cut into a disc of diameter measuring 1 inch. Over the shampoo [1%v/v] surface, the canvas paper disc was kept and the time taken for the paper to sink was measured using the stopwatch.

Physicochemical Properties Of Herbal Shampoo

Evaluation Test	Formulated Shampoo
Color	Brown
Odor	Good
pH of 10% Solution	6.30
Foam Type	Dense Small
Foam Volume	5ml
Wetting Time	157 Sec
Viscosity	3.5cps

Limitations Of Basil Seeds Loaded Herbal Shampoo Herbal Shampoo

User Compliance:

1. Consistency: Users might find it challenging to consistently use the shampoo as part of their daily routine, which could impact its effectiveness.
2. Product Expectations: Users might have unrealistic expectations about the shampoo's ability to completely cure or manage psoriasis.

Future And Scope

The future scope for herbal shampoo including basil seeds for psoriasis of the hair looks promising, driven by growing demand for natural and sustainable products. Here are some potential areas of development:

Key Benefits:

Soothing and Calming: Basil seeds' anti-inflammatory properties could help reduce scalp irritation and inflammation associated with psoriasis.

Hair Growth Promotion: Herbal shampoos with basil seeds might promote hair growth, reduce hair fall, and improve hair strength.

Scalp Health: Basil seeds' soothing properties could help manage scalp conditions like dandruff, itching, and redness.

Research Directions:

Clinical Trials: Conducting studies to evaluate the efficacy and safety of basil seed-based herbal shampoos for psoriasis.

Standardization: Standardizing extraction and formulation processes to ensure consistency and quality.

Market Opportunities:

Growing Demand for Natural Products: Increasing consumer preference for organic and herbal products drives market growth.

Customized Formulations: Developing shampoos tailored to specific hair types and concerns.

Conclusion

The herbal shampoo loaded with basil seeds may be a promising natural treatment option for psoriasis, offering potential benefits for scalp health and symptom relief. Further research and development are necessary to fully realize its potential.

Result

The shampoo was created by mixing soapnut with an equal quantity of each ingredient's aqueous extract (Table 1). Phytoconstituents such as saponins, a naturally occurring surfactant with foaming and detergenting qualities, are present in the plant extract mentioned above. Many natural components have good viscosity, which is necessary for an ideal shampoo. The Main Ingredient Basil seeds Use In Formulating Herbal Shampoo For the Psoriasis of hair.

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