

## Overview of Herbal Shampoo

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### ABSTRACT:

The purpose of the current study is to create and formulate a herbal shampoo, evaluate its physiochemical function, and eliminate dangerous synthetic chemicals in favour of safe natural ones. Shampoo is a liquid or cream formulation of soap or detergent used to cleanse hair. Since shampoos are a common cosmetic item used in daily life, the shampoo industry likely has the highest unit sales of all hair care products. However, synthetic preservatives and detergents have occasionally had negative effects on consumers. Fenugreek seeds, Acacia concinna, and other natural ingredients were used to create this herbal shampoo (shikakai). Mukorossi Sapindus (reetha). Aloe vera, Ocimum sanctum (mulsi) (aloe). Rosa Hibiscus officinalis (china rose). A preparation for hair treatment that contains Embelica officinalis (amla), Lawsonia inermis (henna), and Citrus lemon (lemon) has been made.

**Key words:** Hair formulation, Herbal shampoo, natural and healthy, evaluation of shampoo.

### I. INTRODUCTION:

Shampoo is a washing agent for both hair and skin. They are primarily water-based products with surfactants in them. Its main purpose is to rid the hair of built-up sebum, scale, debris, and product residue from hair styling. Even though it performs better and is safer than synthetic shampoo, herbal shampoo. [1] Most likely, herbal shampoo is utilised as cosmetics. Herbal shampoo is a type of cosmetic preparation that, like ordinary shampoo, uses traditional Ayurvedic herbs to clean the hair and scalp. There are many different kinds of shampoos, including lotion shampoo, solid gel shampoo, medicinal shampoo, liquid herbal shampoo, and powder shampoo. Depending on the nature of the contents, herbal shampoos may be

simple or plain shampoo, antibacterial or antidandruff shampoo, or nutritious shampoo with vitamins, amino acids, and proteins hydrolysed. Shampoo's main components include detergents (surfactants), conditioners, ingredients that promote hair growth, and additives that change the effect of surfactants (such as viscosity control agents, foam stabilisers, and viscosity modifiers), preserve the product (preservatives), and improve the product's appearance (fragrances, essence). To improve the stability and safety of a shampoo composition, some of these compounds must be included [2]. Aqueous solutions, liquids, lotions, creams, pastes, gels, dry shampoos, etc. are the most common forms in which shampoos are created [3].

### 1.1. Ideal Properties of herbal shampoo -

1. Smooth and shiny hair.
2. Generate a lot of foam.
3. It shouldn't irritate the skin, eyes, or scalp.
4. Herbal shampoo gives hair a pleasing fragrance.
5. The stability of herbal shampoo is good [4].

### 1.2. Classification of Herbal shampoo:

1. Based on appearance –
  - powder shampoo
  - Liquid shampoo or lotion shampoo
  - Gel shampoo or solid shampoo.
  - Cream shampoo
  - Oil shampoo
  - Medicated shampoo
2. Based on function –
  - conditioning shampoo
  - Antidandruff Shampoo
  - Baby shampoo [5]

### 1.3. Materials And Methods:

a) **Formula for herbal Shampoo –**

Table No .1- formula for herbal shampoo.

Ingredients	Quantity
Fenugreek seeds	0.4 gm
Amla	2.55 gm
Shikakai	2.55 gm
Hibiscus	2 gm
Aloe vera	0.5 gm
Lemon juice	0.5 gm
Rose oil	0.5 ml
Ritha	0.85 gm
Distilled water	Q.S [6,7]

#### b) Use Of Ingredients –

##### 1) Fenugreek Seeds –

- stimulates hair growth and revives damaged hair.
- It supports a healthy scalp.
- It is used to treat dandruff with an antimicrobial agent.
- It lessens hair shedding and loss
- It prevents hair from prematurely graying [6].

##### 2 )Amla

- It promotes hair growth and aids in the prevention or treatment of bacterial and fungal hair and scalp infections.
- Amla Reduce early hair greying or pigment loss.
- It treats or prevents scalp and dandruff
- Amla lessen hair loss
- It enhances the appearance of hair in general [6].

##### 3)shikakai -

- It nourishes the hair and is used to encourage quick, healthy hair development.
- Give the hair more lustre
- Shikakai can stop grays [6]

##### 4) Hibiscus-

- Encourage hair growth and volume loss
- It serves as a baldness preventative.
- Hibiscus is used to treat itchy scalp and dandruff
- It prevents early graying [6].

##### 5) Aloe vera:

- This plant is used to thoroughly clean oily hair, and its proteolytic enzymes help to heal dead skin cells on the scalp.
- It promotes hair growth.
- It helps to lessen frizziness[7].

##### 6) Lemon juice:

- Split ends; lowers hair loss
- Gives hairs a natural colour.
- Decreases hair loss [7].

##### 7) Rose Water:

- It causes hair damage but promotes hair growth.
- It is utilised to lessen dandruff [7]

##### 8)Ritha

- It is employed in the manufacture of shampoo.
- It serves as a shampoo foaming agent.
- It can also be used as a hair cleaner.
- It is additionally employed to eliminate lice from hair [8].

#### 2.Formulation of Herbal Shampoo –

1. The formula for the herbal shampoo was followed.
- 2.Each component was weighed in accordance with the recipe. The following morning soak it overnight
3. Cool the mixture and filter it after boiling the ingredients in the same water.
- 4.Additionally, 1ml of lemon juice was added while being constantly stirred.
- 5.Preservatives were then added, and the created shampoo was kept in an appropriate container and used for the subsequent assessment.[9].

#### 3.Evaluation of herbal shampoo:

- 1.To evaluate the prepared formulations quality control tests Including visual assessment and physicochemical controls Such as pH and viscosity were performed.
- 2.Also to assure the Quality of products, specific tests for shampoo formulations Including the determination of dry residue and moisture Content tests were carried out.
- 3.The results were compared with marketed formulations [11].

#### 1)Physical appearance/visual assessment –

- The formulations were assessed for fluidity, clarity, and capacity to produce foam [10].

## 2) Calculating pH-

At room temperature, pH paper was used to determine the pH of the shampoo solution in distilled water [10].

## 3) Solids content as a percentage-

A clean, dry evaporating dish was weighed after being filled with 4 grammes of herbal shampoo. Only the exact weight of the shampoo was estimated, and then the dish filled with shampoo was set on a hot plate to evaporate the liquid. After drying, the weight of the Shampoo (solids) alone was calculated [10].

## 4) Rheological examination –

A viscometer was used to determine the shampoo's viscosity. We measured the viscosity of the shampoos. The sample containers' size and temperature were maintained. The study's constants [10].

## 5) Dispersion of dirt-

10 ml of distilled water and a big test tube with two drops of shampoo were added. Test tubes were filled with one drop of ink, stopped, then shaken ten times. None, light, moderate, or heavy ink content was judged to be present in the foam [10].

## 6) A skin sensitivity test-

This test is carried out on volunteer human subjects' skin to determine whether it causes skin irritation or not [11].

## 7) Stability test-

It results showed that formulations were chemically and physically stable and that their organoleptic qualities (odour and colour) were acceptable after storage for two months [11].

## 8) Foam stability and foam production-

Cylinder shake method was used for determining foaming Ability. 50 ml of the 1% shampoo solution was put into a 250 ML graduated cylinder and covered the cylinder with hand and shaken for 10 times were recorded. The total volumes of the foam contents after 1 minute shaking. The foam volume Was calculated only. Immediately after shaking the volume Of foam at 1 minute intervals for 4 minutes were recorded [11].

## 9) Nature of hair after washes-

The nature of hair after wash can be done by collecting the Responses of volunteers [11].

## 3.1. Evaluation parameters –

Table No .2 – Evaluation parameter for herbal shampoo.

Sr.No	Evaluation Test	Results Obtained
1	Physical appearance	Dark brown
2	pH	5
3	Percent of solid contains	3.8%
4	Dirt Dispersion	Light
5	Skin sensitisation	No irritation on skin
6	Stability test	Stable after 2 months
7	Foaming ability	50 ml
8	Nature of hair after washes	Softmanageable [11]

## 4. Advantages of herbal shampoo -

- 1) It is inexpensive and simple to produce.
- 2) Widely accessible and present in both number and variety.
- 3) have no adverse side effects and did not cause an allergic reaction.
- 4) Simple to integrate into skin and hair. [12,13]

## II. RESULTS–

The shampoo was created by combining soapnut with an equal amount of each ingredient's aqueous extract. The plant extract mentioned above includes phytoconstituents such saponins, a natural surfactant with detergent and foaming properties.

Many natural chemicals have good viscosity, which is a necessary quality for an optimal shampoo. The 10% gelatin solution exhibits pseudoplastic behaviour and forms clear solutions. One millilitre of lemon juice added to the shampoo acts as an anti-dandruff agent, a natural antioxidant, a chelating agent, and preserves the formulation's acidic pH [14].

## III. CONCLUSION-

The formulated shampoo was not only safer than the chemical conditioning agent but also greatly reduce the hair loss during Combining as well as strengthens the hair growth the phof of the

shampoo was adjusted to retain the acidic mental of scalpthe Physiochemical approach used for preservation of the formulation to avoid the risk posed by chemical preservativesherbal shampoo Better in performance and safer than the synthetic one will be popular with consumers [ 15]

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