



FORMULATION AND EVALUATION OF HERBAL SHAMPOO.

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Abstract : The globe is currently working to get back to using natural herbal remedies because they don't have any additional negative impacts on illnesses. Our hair is being treated with manmade products, which causes it to lose its beauty, strength, volume, and gloss [1]. The current study project aims to create a natural shampoo that strengthens and grows hair without harming it [2]. In the current situation, Ayurvedic shampoo that contains herbal extract and small amounts of chemicals needs to function better and be safer than the current formulation of synthetic [3] contain active ingredients such as sodium benzoate, water, glycerine, lavender oil, henna, Neem, and Amla. Shikakai selection of herbs has been based on both scientific rationale and traditional usage in the present day. The shampoo's recipe contains Neem leaf, which helps seal hair follicles and treats head lice, and Amla fruit, which is a fantastic source of vitamin A and other minerals that help reduce hair loss [4]. Shampoo contains synthetic surfactants mainly for foaming and cleaning purposes; nevertheless, frequent use of these surfactants can cause hair loss, dryness, and irritation to the eyes and scalp. Although Shikakai formulations are seen to be a good substitute for synthetic shampoo, it can be challenging to formulate cosmetics using just natural raw ingredients [5]. Every component that goes into making shampoo is safer. All the ingredients used to formulate shampoo are safer and physicochemical evaluation showed ideal results, but further research is required to improve its quality and identify the constituents that are responsible for the performance [6].

IndexTerms - Ayurveda shampoo, Amla ,Neem, Shikakai, herbal shampoo.

I. INTRODUCTION

In our daily lives, shampoos are likely for cleaning our hair and scalp. A shampoo is essentially a detergent solution with appropriate additives for additional benefits such as improved solution with appropriate additives for additional benefits such as improved hair conditioning, lubrication, medication. There are many different types of shampoos available today, including synthetic, herbal, medicated, and non-medicated varieties. [7]. Herbal shampoo is a cosmetic preparation which uses herbs from plants and it is meant for washing of hair and scalp just like a regular shampoo. It is an alternative to the synthetic shampoo available in market. [8] Harry defined shampoo as "a preparation of a surfactant i.e surface active material in a suitable form – liquid, solid, powder. But the usage of surface active material becomes very harmful from long time for the youth as well as our environment. Various synthetic compounds, chemicals, dye and their derivative has been proved to cause various skin diseases having numerous side effects [9]. Synthetic agents have accounted for a significant portion of the market over time, but consumers are becoming more conscious of them today. Detrimental effects on the skin, eyes, and hairs. These areas drew the population in with their herbal products because they were less costly and had less adverse effects. Shampoos and other hair cleansers are used for more than just cleaning; they also give hair gloss and help keep it manageable and oily [10]. In the past, people used Reetha powder, Shikakai amala, multani mitti, and other ingredients had less adverse effect. Present formulation includes ingredients like Amla, Shikakai, henna, Neem, Reetha water, glycerine, lavender oil, sodium benzoate. In this present study an Ayurveda shampoo was formulated which contained herbal extract 10% and 90%. The Ingredients were selected keeping in mind that various Characteristics of the shampoo including appearance, foaming ability, detergency, fragrance and after washing hair Manageability.

- **Benefits of Shampoo:**
 1. Increase the shine
 2. Decrease in Hair Loss
 3. Colour That Lasts
 4. Hairs That Are More Fortified and Stronger
 5. Natural, chemical-free products

- **Ideal Properties of Shampoo:**
 1. A nice smell.
 2. There is not much irritation.
 3. Outstanding preservation.
 4. Very strong stability.
 5. Application Simplicity.
 6. Debris removal.
- **Advantages of Herbal Shampoo :**
 1. All of the ingredients are natural and organic.
 2. There are no side effects to using these shampoos.
 3. No artificial additives, such as sodium lauryl Sulphate, are present.
 4. No animal experimentation will be conducted [12].

II. MATERIAL (HERBS) AND METHOD

Table No -1 Formula

Ingredients	Quantity per 100ml
Amla	5mg
Shikakai	5mg
Henna	5mg
Neem	5mg
Reetha	5mg
Water	85ml
Glycerine	5ml
Lavender oil	8ml
Sodium Benzoate	2mg

- **Procedure:**
Dissolve extract of Amla Reetha and in water, mix well and filter.
Add glycerine and lavender oil to filtrate.
Again mix well.
Add sodium benzoate previously dissolved in water with stirring.
- **Evaluation:**
 - **Physical Appearance and Visual Inspection-** Evaluate the shampoo for clarity, colour, odours and foam producing ability.
 - **Determination of pH–** Measure the pH of 10% v/v shampoo solution in distilled water by using pH meter at room temperature.
- **Determination of% solid content –**
Place 4grams of shampoo in a previous clean dry and weight evaporating dish. Weight the dish and shampoo again to confirm the exact weight of shampoo. Evaporate the liquid portion of the shampoo by placing the evaporating dish on the hot plate. Calculated the weight and this% of the solid content of shampoo left after complete drying.

- **Diet Dispersion Test –**

Add two drops of shampoo to 10 ml of distilled water taken in large test tube. To this is solution, add of India ink and then stopper the test tube and shake ten times. The amount of ink in the foam will be indicated by the rubric such as none, light, moderate or heavy.

- **Surface Tension Measurement -**

Measure the surface tension of 10% w/v shampoo in distilled water using Stalagmomter at room temperature.

- **Foaming Ability and Foam Stability –**

Determinations foaming ability by using cylinder shake method. Place 50ml of the 1% commercial or formulated shampoo solution into a 250ml graduated cylinder cover with one hand and shake 10times. Record the total volume of the foam content after 1 minute of shaking. Evaluate foam stability by recording the foam volume after 1 min and 4 min of shake test.

- **Wetting Time Test–**

Cut a canvas paper into 1- inch diameter discs having an average weight of 0.44g. Place the smooth surface of disc on the surface of 1% v/v shampoo solution and start the stopwatch. The required for the disc to begin to sib is noted down as the wetting time.

- **Total saponins Determination-**

Determine total saponins by gravimetric. It should contain 10-12% total saponins.

- **TLC/HPLC Analysis –**

Evaluate extract by TLC and HPLC for presence of sapinoside-B.

III. RESULTS AND DISCUSSION

In the present Research work Total 9 Formulations were made and evaluated for different parameters. Physical Appearance/Visual Inspection, the results of visual inspection of series of formulations as can be seen, all formulations had the good characteristics with respect to foaming. Indian traditional literature and Ethan pharmacological studies present a number of plants/ formulations with proven efficacy as hair formulations. Present investigations were carried out to formulate preparations based upon traditional knowledge and to develop few parameters for quality and purity of herbal powder shampoo. Although these studies are preliminary but presented evaluation parameter will be useful for the standardization of herbalshampoo powder.

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