



# A Research On: Formulation and evaluation of herbal shampoo

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## Abstract:-

Shampoos are the cosmetics arrangements intended for cleaning the hair with the aid of using elimination of the dust grease from the hair shaft and scalp.

Herbal shampoo is a beauty practice which makes use of herbs and intended for cleaning the hair and scalp similar to everyday shampoo.

artificial shampoo suggests dangerous impact at the hair and scalp like dryness of hair and keratin loss.

The main aim of this research is to formulate the herbal shampoo that are the good for hair hygiene.

**Keyword:-** Herbal shampoo, natural hair cleanser, hair hygiene, hair care.

## Introduction:-

Hairs are the fundamental a part of human. Hair is likewise a crown for human beings for this reason, hair require unique care to maintain it shiny, smooth, tough to damaged and smooth to combed. People are the usage of natural merchandise for handling hair, cleaning, and beautifying cause due to the fact historical er. Shampoos are usually used as a beauty product it's miles a hair care product this is used for cleaning, beautifying, handling hair in our day-by-day life. Shampoo is one of the beauty merchandise which are used to cleanse dust this is building up at the hair. Shampoos are a viscous answer detergent containing appropriate components preservative and lively ingredients. Nowadays many natural, artificial, medicated and non- reflected shampoos are to be had in market. As the time has exceeded artificial agent have taken a massive proportion however these days human beings are becoming aware about their dangerous outcomes on hair, pores and skin and eyes. However natural shampoo popularized because of herbal beginning that's safer, will increase purchaser call for and negligible side. Shampooing is the maximum not unusual place shape of hair remedy. Various shampoo formulations are related

to hair quality, hair care addiction and precise issues together with remedy of oily hairs, dandruff and for androgenic alopecia. Shampoos are liquid, creamy or gel like preparations. Indian ladies use herbals together with shikakai, gooseberry and Retha which are herbal cleaning marketers without dangerous outcomes. Shampoos are of numerous types, Shampoos[1]. Hairs are the quintessential part of human beauty. People are the usage of herbs for cleaning, beautifying and handling hair because the historical era. As the time has handed artificial marketers have taken a huge proportion however nowadays humans have become aware about their dangerous results on hairs, pores and skin and eyes. These areas drawn to network in the direction of the natural products, which might be much less highly-priced and feature negligible facet results. Hair cleansers or shampoos are used now no longer most effective for cleaning motive however additionally for providing gloss to hair and to preserve their manageability and oiliness for hairs [2]. Shampoo is the maximum not unusual place hair care cosmetic. It is to be had both in viscous liquid or powder form, implemented for cleansing hair and scalp from dirt, residues of formerly implemented hair styling merchandise and environmental pollutants[3]. A liquid or cream preparation of soap or detergent to wash the hair is called as shampoo. Shampoo is a hair care product, typically in the form of a viscous liquid that is used for cleansing hair [4]. Herbal shampoo become formulated containing appropriate aspect inclusive of Hibiscus rosa-sinensis, Emblica officinalis, Acacia concinna, Sapindus indica, Eclipta prostrata, Aloe barbadensis, and Cassia auriculata in distinctive proportions to formulate and compare its physicochemical properties [5]. Shampooing is the maximum not unusualplace shape of hair treatment. Shampoos have in the main been merchandise geared toward cleaning the hair and scalp. The variety of characteristics demanded from an amazing shampoo with the aid of using today's patron is going some distance past this wellknown function. Selected substances of shampoo which have been famous with the patron are presently beneath assault due to capability dangers related to their use (e. g halogenated natural compound, formaldehyde, musk perfume and crude coal tar) [6].

### **Ideal properties of herbal shampoo:-**

1. Herbal shampoo are made out of pure and organic ingredient and there are no systemic additives or surfactants and free form any side effects.
2. It should be bio-degradable and earth friendly.
3. It should be nontoxic and non-irritating to the hair and scalp.
4. It should deliver an optimal level of foam to satisfy the expectations of the user

### **MATERIAL AND METHOD: -**

#### **Chemical: -**

1. Gelatin Solution
2. Methyl paraben

## Plant collection :-

The following ingredients are collected from P.P.C.O.P campus, local area and local market.

1. Reetha
2. Amla
3. Shikakai
4. Fenugreek Seed
5. Rose oil

## Formulation:- [7]

### Method 1 :-

The following steps are employed for the formulation of polyherbal shampoo powder:

- **Drying:** All the ingredients required for the shampoo preparation are dried and grinded.
- **Weighing:** All herbal powders required for the preparation are weighed separately.
- **Size reduction:** The weighed materials are subjected to size reduction using hand driven mixer individually.
- **Mixing:** The fine powders are mixed methodically using mixer to form a homogenous mixture.
- **Sieving:** The mixture is passed through sieve no 80, to get uniform size particles and reduce the lumps.
- **Packing and Labelling:** Finally, the powder was packed and labelled suitably.

### Method 2 :-

The following steps are involved in the preparation polyherbal liquid shampoo:

- **Collection of materials:** Ingredients required for the preparation are collected and washed thoroughly and dried.
- **Weighing:** Ingredients are weighed individually and soaked overnight.
- **Decoction preparation:** Ingredients are boiled in the same water used for soaking on medium flame, allow to cool and filter.
- **Incorporate preservative** (eg: Methyl paraben) to prevent microbial growth.

### Making of herbs powder :-[8]

1. First wash Reetha, Amla, Shikakai, Fenugreek seed with water.

2. After the washing of dry the herbs in the shade presence of sunlight for 2 or 3 days
3. When the herbs are dried then they are grinding in a grinding machine separately
4. The grinding of herbs should be fine in size
5. Then the obtain powder is pass through the 80.no sieve
6. The store in tightly close container

### Composition :- [9].

#### Composition table of herbs :-

Sr No.	Ingredient	Quantity(g)	Uses
1.	Reetha Extract	5g	Foaming agent
2.	Amla Extract	5g	To provide nourishment to hairs
3.	Shikakai Extract	5g	Antidandruff
4.	Fenugreek Seed Extract	5g	Fenugreek has antioxidant

#### Composition table of chemical :-

Sr. No.	Ingredient	Quantity(g)	Use
1.	Citric acid	0.03g	Antimicrobial
2.	Gelatin solution	5g	Base, hair growth
3.	Methyl paraben	0.6g	Preservative
4.	Water	q.s (Upto 30 ml)	Vehical

**Evaluation of Shampoo:-** [10] [11][12][13]**1. Physical appearance:-**

The prepared shampoo showed good characteristics in terms of foaming effect and appearance on the visual inspection of the formulation.

**2. Solid contain :-**

Shampoo with high solid content will be very difficult to rinse and hard to work with the hair. The prepared shampoo contains 23.25% of solid content. Thus, they considered easy to wash out when having less solid content during preparation of shampoos.

**3. Determination of PH:-**

The pH of shampoo solution in distilled water was determined at room temperature by using pH paper.

**4. Foaming ability and foaming stability:-**

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.

**5. Stability test:-**

Stability and acceptability of organoleptic properties (odour and color) of formulations during the storage period of 2 months indicated that they are chemically and physically stable.

**6. Skin irritation/ Skin irritation study:-**

Skin irritancy of shampoo can be checked by taking small amount of product on skin, after few minute to check whether local irritation or any inflammatory reaction are produced or not. As all-natural product of know scientific herbal origin are utilized, it is safe to utilize it on skin after appropriate processing, and pH balancing.

**RESULT AND DICUSSION:-****Physical Examination:-**

Sr.No	Parameters	Observation
1.	Colour	Brownish
2.	Odour	Pleasant
3.	Observation	No side effect

**Evaluation Result:-**

Sr.No	Parameters	Observation
1.	Physical appearance	Smooth, visually pleasing brown to coppery in colour.
2.	Solid Content	8.25%
3.	Determination of PH	Range :- 6.4-9.8.
4.	Foaming ability and foaming stability.	50 ml
5.	Skin irritation	No irritancy. Non-irritant
6.	Stability test	Stable after two month

**Conclusion: -**

Herbal shampoo shows the good action to maintaining the hair fall. The herbal shampoo shows the safer minimum side effects. The formulated herbal shampoo is evaluated by different tests like Physical appearance, pH determination, Solid Content, Foaming ability and foaming stability, Skin irritation, Stability test etc.

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