



## Review on Formulation of Herbal Dry Powder Shampoo

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### ABSTRACT :

Shampoos are cosmetics preparations designed to clean hair by removing oil and debris from the scalp and hair shaft. Shampoos are used not only for cleansing purpose but also for imparting gloss to hair and to maintain their manage ability and oiliness for hair. Shampoos are of various types, like powder, clear liquid, liquid shampoo, lotion shampoo, solid gel shampoo, medicated shampoo, liquid herbal shampoo etc. herbal shampoos are concerned in stability criteria. shampoos may be simple or plain shampoo, and antiseptic or antidandruff. Herbal shampoos are a cosmetic preparation made with herbs that is intended to clean the hair and scalp. The following powders were purchased at the local market: hibiscus powder, neem powder, amla powder, Shikakai powder, reetha powder, and aloe powder. These are the ingredients are combined and their organoleptic and physico-chemical properties are assessed. Herbal cosmetics have the advantages of being non -toxic, reducing allergic reactions, free of dirt, lice, grease, and dandruff. Most importantly, it's safety benefits are anticipated. As a result, we have discovered that herbal dry powder shampoo has good qualities and have further optimize its benefits for use as a cosmetic by humans.

**Keywords :** herbal shampoo, evaluation, dry powder

### INTRODUCTION :

Hair is one of the important part of the body derived from ectoderm of the skin. The main constituent of hair is keratin. Keratin is a remarkable protein which is resistant to wear and tear. These shampoos are often formulated with ingredients like amla, tulsi, shikakai, hibiscus, reetha aloe vera, which have been used for hair care in a traditional practices. They can be useful for those who prefer a more natural approach to hair care or need to freshen up hair without a full wash. Since the ancient era people use herbs for cleaning, beautifying, and to manage hair because hair is considered as the integral part of human beauty.

The primary function of shampoo is aimed at cleansing of the hair necessitated due to accumulated sebum, dust, scalp debris etc. various shampoo formulation are associated with hair quality, hair care habit, and specific problem such as treatment of oily hairs, dandruff and for androgenic alopecia. Shampoo is a preparation of surfactant in a suitable form- liquid, solid, or powder which when used under the specific conditions will remove surface grease, dirt and skin debris from the hair shaft.

Dry herbal powder shampoo is a natural, powder-based hair cleanser made from a blend of herbs and botanicals . its free from harsh chemicals, sulfates, and artificial fragrances, making it a gentle and sustainable alternative to traditional liquid shampoos. These powders utilize the benefits of various herbs, such as cleansing, nourishing, and protecting the hair and scalp.

Reetha and shikakai have a high saponin content, they create a rich lather when shaken with water. Additionally, they have been shown to have positive effect on the skin and other organ systems. Amla fruit, which is high in vitamin C, is used in hair treatments as a strengthening agent, anti-dandruff agent, and hair growth stimulator. There are a lot of synthetic, herbal, medicated and non-medicated shampoos on the market these days, but customers are becoming more and more interested in herbal shampoo because they think that since it comes from natural sources, it is safe and doesn't have any negative effects.

Shampoo contains synthetic surfactants mainly for foaming and cleaning purposes; prolonged usage of these surfactants can cause hair loss, scalp discomfort, and eye irritation.

### MATERIALS AND METHODS :

**Materials used :** Reetha Powder, Amla powder, Aloe vera powder, Tulsi powder, Hibiscus powder, Shikakai powder.



#### Preparation of Ingredients :

Materials	Synonym	Biological source	Family	Chemical constituents	Uses
Reetha	Soapnut, soapberry	Dried fruits of sapindus mukorossi	sapindaceae	Saponins, sopindic acid	It is used for lice removal.
Amla	Phyllanthus emblica	Dried fruit of emblica officinalis	euphorbiaceae	Tannins, phenol alkaloid	Promoting hair growth.
Aloevera	Aloe indica royle, aloe ferrox, aloevera mill	Aloe is obtained from dried juice of leaves aloe barbadensis miller	Liliaceae	Aloevera contains 75% potentially active constituents vitamins, enzymes	It can be used to reduce dandruff
Tulsi	Ocimum tenuiflorum	Dried leaves of ocimum sanctum linn	Lamiaceae	Eugenol, apigenin, rosmarinic acid	Improve blood circulation in scalp
Hibiscus	Hibiscus rosa sinensis	The flower of hibiscus rosa sinensis	Malvaceae	Tannin, alkaloid, flavonoid	Thickening and softness of hair
Shikakai	Acacia concinna	It consists the fruit of the plant acacia concinna linn	Fabaceae	Lupeol, acacia acid, lactone, spinasterol, arabinose and rhamnose	Controlling hair fall

#### PREPARATION METHOD:

The following steps are employed for the formulation of herbal dry powder shampoo.

- 1] Drying :** All the ingredients required for the shampoo preparation are dried in sunlight and ground by mixer.
- 2] Weighing :** All herbal powders required for the preparation are weighed separately.
- 3] Mixing :** The fine powders are mixed, to form a homogenous mixture.
- 4] Sieving :** The mixture is passed through sieve no.80, to get uniform size particles and reduce the lumps.
- 5] Packing and labelling :** Finally, the powder was packed and labelled suitably.

#### Steps:

##### 1. Prepare the Paste:

In a small bowl, mix the powder with warm water to form a smooth, spreadable paste.

Optional: Add a few drops of essential oil (lavender, rosemary, or tea tree).

##### 2. Apply to Hair:

Wet your hair thoroughly.

Apply the paste to your **scalp and hair** section by section.

Gently massage using fingertips for 3–5 minutes (like you're shampooing).



### 3. Rinse Thoroughly:

Use warm water to rinse off completely.

Comb with fingers while rinsing to make sure no powder is left.

### 4. Dry Naturally:

Towel-dry gently and let your hair air-dry.

You'll notice soft, clean, fresh-smelling hair!

### Evaluation Test:

#### 1] Organoleptic evaluation:

Parameters	Result
Colour	Reddish brown
Odour	Characteristics
Texture	Smooth
Appearance	Powder

#### 2] Angle of repose :

It is defined as the maximum angle possible in between the surface of pile of powder to the horizontal flow.

Angle of repose	Powder flow
<25	Excellent
25-30	Good
30-40	Passable
>40	Very poor

Evaluation parameters	Formula	Result
<b>Bulk density</b>	Mass of powder/ bulk volume of the powder	Bulk density= $0.5\text{g/cm}^3$
<b>Tapped density</b>	Mass[gm]/tapped volume	Tapped density= $0.83\text{g/ml}$
<b>Carr's index/ compressibility</b>	$\frac{\text{Bulk density (tapped)} - \text{Bulk density (untapped)}}{\text{Bulk density (tapped)}} \times 100$	Carr's index = 39%
<b>Hausner's ratio</b>	Tapped density / Bulk density	Hausner's ratio = $1.66\text{g/ml}$

### RESULT :

This preparation was evaluated organoleptically observing colour, odour, and texture result shows reddish brown colour.

Parameters	Result
Colour	Reddish brown
Odour	Characteristics
Texture	Smooth
Appearance	Powder



## CONCLUSION :

The dry herbal powder such as reetha, amla, aloe vera, hibiscus, shikakai, tulsi has been reported for hair growth and conditioning. The various quality control parameters were checked. All parameters give favourable results. The result obtained on present study shows that the active ingredients of these drugs when incorporated in shampoo give more stable products with good aesthetic appeal. The pH of the shampoo has been shown to be important for improving and enhancing the qualities of hair, minimizing the irritations to the eyes and stabilizing the ecological balance of the scalp. The current trend to promote shampoos of lower pH is one of the minimizing damages to the hair. Such results are estimated out of a formulation to establish strong results for the usage and good results of the product. The evaluation parameters like organoleptic evaluation, general powder characters, physicochemical evaluation, foaming, nature of hair after wash was carried out and was found to be within the standard range.

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