

# Preparation and Evaluation Cosmetic Science

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**Abstract:** *This study aims to develop and assess a botanical-based shampoo for cosmetic applications utilizing plant-derived ingredients. A liquid or creamy hair cleansing product, shampoo removes impurities, grime, and excess oil from the hair and scalp. Hair washing is a unique it our grooming practice. The herbal shampoo formulated in this study targets not only cleansing but also conditioning, smoothing, and promoting overall hair well-being, including dandruff prevention, and ensuring safety. To popularize herbal shampoo, this research adopts a holistic approach, shifting consumer expectations towards as after, effective, and eco-friendly alternative. The primary goal is to replace harsh synthetic additives with natural, harmless alternatives in shampoo formulations.*

**Keywords:** Herbal shampoo, evaluation, formulation, radical approach, physicochemical approach

## I. INTRODUCTION

"Shampoo is the cosmetics preparation of the hair and scalp". Thought here are different types of skin cleansers, but the hair cleansing preparations can be grouped into only one category and are called as shampoo. its Primary function is of cleansing the hair of accumulated sebum, scalp, debris and residues of hair grooming preparations. In the present scenario, it seems improbable that herbal shampoo, although better in performance and safer than the synthetic ones, will be popular with the consumers. A more radical approach in popularizing herbal shampoo would be to change the consumer expectations from a shampoo, with emphasis on safety and efficacy. Shampoos are typically composed of 10 to 30 ingredients.

### Objective:

- To improve the compliance of user.
- The marketed preparation having chemical added higher side effect such as hair fall, irritation on scalp.
- To clean your scalp. To formulate the herbal shampoo.
- To evaluate the herbal shampoo.

## II. LITERATURE REVIEW

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**Formulation and Evaluation of Herbal Liquid Shampoo:**

**Amla fruit :**

Synonyms : dhatriphala , amalaki, shriphala, dhatrika, dhatri, amrita, shita, gayatrei, vrushya, rocani, tishyaphala, pancarasa, kayastha, amala.

Biological Source : : Dried ripe fruits of Embelicaofficinalis.

Family : Euphorbiacea

**Morphological Characteristics:**

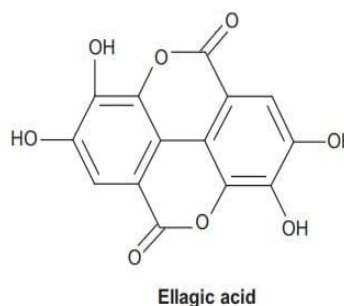
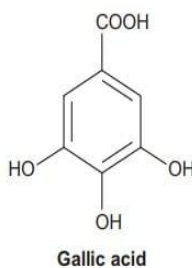
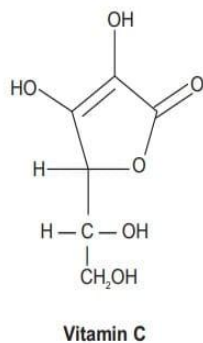
The tree is small to medium in size, reaching 1–8 m (3 ft 3 in–26ft 3in)in height. The branch lets aren't glabrous or finely pubescent, 10–20cm(3.9–7.9 in) long, usually deciduous; the leaves are simple, subsessile and closely set along branch lets, light green, resembling pinnate leaves. The flowers are greenish-yellow. The fruit is nearly spherical, light greenish yellow, quite smooth and hard on appearance, with six vertical stripes or furrows. Ripening in autumn, the berries are harvested by hand after climbing to upper branches bearing the fruits.



**Chemical Constituents :**

The fruit of Amla is rich in vitaminC(ascorbic acid) and contains several bioactive phytochemicals, of which majority are of polyphenols (ellagic acid, chebulinic acid, gallicacid, chebulagic acid, apeigenin, quercetin, corilagin, leutolin, etc.)

**Structure of Amla**



**Uses :**

Vitamin C in amla increases the antioxidants in your body. Amla purifies the blood and enhances hair natural colour by preventing premature greying of hair. It has antifungal and antiviral properties, which prevent dandruff and other fungal infections and improves scalp health.

**Procedure:**

Weighed all the ingredients according to the formula.

Decoction of all powdered ingredients such as Amla was prepared in water.

Boil the all ingredients on the low flame then cool the mixture.

Filtrate with constant stirring.

Collect filtrate.

Mixed xanthum gum as a thickening agent for maintenance of consistency of herbal shampoo as like semisolid nature.

Perfume was added lastly.

**Evaluation of Herbal Liquid Shampoo :**

To evaluate the prepared formulations, quality control tests including visual assessment and physicochemical control pH performed. Also, to assure the quality of products, specific tests for shampoo formulations including the determination of dry residue and moisture content, total surfactant activity, mechanical stability and detergency tests were carried out.

**Organoleptic Properties :**

Physical appearance/visual inspection : The formulations prepared were evaluated in terms of their clarity, foam producing ability and fluidity.

Evaluation Parameter :

1] Determination of pH : The pH of shampoo solution in distilled water was determined at room temperature by using pH meter.

2] Stability test : Stability and acceptability of organoleptic properties( odour and colour) of formulations during the storage period of 15 days indicated that they are chemically and physically stable.

3) Foaming ability and foam stability : Cylinder shake method was used for determining foaming ability. 20 ml of the 1% shampoo solution was put into a 100 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 3 minutes were recorded.

**III. CONCLUSION**

The herbal shampoo preparation was formulated based up on traditional knowledge and emphasis was to formulate a stable and functionally effective. The formulated shampoos were safer than the chemical conditioning agents, also greatly reduce the hair loss during combing as well as strengthen the hair growth. It was found to be harmless, more effective and economical.

**IV. DISCUSSION**

The formulation where prepared using Amla Fruit, in different composition of crude drug. This formulation where prepare during in ascending order by weight and with continuous trituration. The preparation where evaluated organolytically observing colour , order and texture. Result shows slightly changes only the pH was found to be 5.5 of the formulation. Observations of foaming tests shows foaming capacity for A1 was 9, A2 was 11, and A3 was 10 in ml. The result shows the powder capacity it may be due to higher percentage of shikakai in formulation.

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