

## Formulation and Evaluation of Anti-Hair Fall Onion Shampoo

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### ABSTRACT :<sup>(1,6)</sup>

Cosmetic are the skin care products used for protect, exfoliate, and cleanse the skin. Cosmetic are product used to make the human body look different. Often cosmetics are used to make someone more attractive to one person, or to aculture or sub-culture. Cosmetics are pharmaceutical products. These products are available in various forms, like shampoo, Cream, lotion, Foundation, Lipstick, etc.

Haircleansingcosmeticconsistofshampooandrinse whichremove fromthe scalp ad hair, and keep it in a clean condition. Most important to skin hygiene iswashing off the dirt on the skin's surface and maintaining it in a clean condition. Cleansing products are used with this purpose in mind. In the present study ,herbal shampoo was formulated containing suitable ingredient such as Alliumcepa (onion), Emblicaofficinalis (Amla), Trigonellafoenum (Fenugreek), Sapindusmukorossi (Reetha), Acacia concinna (Shikakai), Camellia sinensis (Green tea),Aloe barbidensis (Aloevera) Oryza sativa (Rice) in different proportion toformulate and evaluate its physiochemical property. Herbal shampoo wasevaluated by different types of parameters like pH test, Foam ability test, Skinirritation test, Dirt dispersion test, Percentage of solid test, Viscosity test, Stabilitytest.

**Key Words:** Herbal Shampoo, Cleansing cosmetic, Evaluate its phytochemical properties.

### I. INTRODUCTION :<sup>(3)</sup>

Herbal shampoo is a cosmetic product widely used for cleansing hairs and scalp inour daily life. The herbal shampoo is important as people nowadays prefer herbalproducts than chemical ones for they proved to enhance health. They areusedforremovalofoids,dandruff, environmentalpollutionsetc.Shampoo is a basic hair care product representing the largest segment of hair care cosmetics. Shampoo is typically in the form of a viscous liquid with some exception of waterless solid form such as a bar. Shampoo was developed to replace soap for cleansing scalp and hair by removing unwanted sebum, dandruff,

environmental dust, and residues of hair care products.

### Hair :<sup>(5,11)</sup>

As a hair are considered to be one of the essential / vital parts thatcomplement the beauty of a person, itis important to take right care ofthehairs.

Hair is defined as “improved epithelial structure formed as a result ofkeratinization of germinates cells”, hairs are the outgrowths from thefollicles present on the skin. Scalp is a important area in human hairsystem. The dirt consist of sebum secreted by scalp, sweat residue,flakes of superfluous horny layer flakes (dandruff), dust and othereexternal matters and residue for hair care cosmetics which have fulfill theirdesigned purpose.

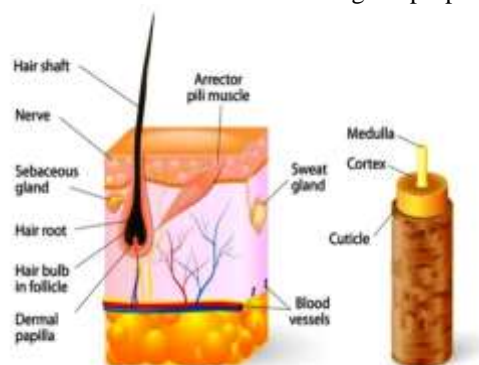


Fig.1.Anatomy of Hairs

### Shampoo :<sup>(7)</sup>

Most important to skin hygiene is washing of the dirt on the skin'ssurface and maintaining it in a clean condition. Cleansing products areused with this purpose in mind. Solid soap has the longest history as a general skin cleanser and is still wieldy used today for cleansing thebody when taking a bath because of its low price and the refreshingfeeling it gives. However, the demand for it has reached a peak andnow with changing consumer lifestyles and their diversifying needs, it I becoming necessary to be considered as essential part of skin care

and, as a result, safety and usefulness came to be sought in them.








**Ideal properties of Herbal Shampoo :**<sup>(7,4)</sup>

- It should effectively and completely remove dust or soil, excess sebum or other fatty substances and loose corneal cells from the hair.
- It should produce a good amount of foam to satisfy the psychological requirements of user.
- It should be easily removed on rinsing with

water.

- It should leave the hair non-dry, soft, lustrous with good manage ability and minimum flyaway.
- It should impart a pleasant fragrance to the hair.
- It should not cause any side-effects /irritation to skin or eye.
- It should not make the hair rough and cheap

**Material and method :**<sup>(13,9)</sup>

Sr. No.	Name of Crude Drug / Medicinal plant	Botanical name	Uses	Picture
1.	Onion powder	Allium cepa	Anti-bacterial	
2.	Amla powder	Embelica officinalis	Anti-microbial	
3.	Fenugreek seed powder	Trigonella foenum	Anti-dandruff	
4.	Green tea leaves	Camellia sinesis	Hard growth enrichment	
5.	Shikakai powder	Acacia concinna	Retains natural oil of hair, keeps hair healthy	
6.	Reetha powder	Sapindus mukorossi	Controlling hair fall and removing dandruff	
7.	Aloe vera	Aloe barbadensis	Conditioning hair	

**Table.1: Herbal Drugs and their uses**

**Methods :**<sup>(2,11)</sup>

**1. Extraction method**

- Ethanol extraction of onion powder, amla powder, fenugreek powder, and green tea leaves was prepared by soxhlet apparatus.
- For Onion extraction 75gm of onion powder and 420ml of \*ethanol.

- For Amla extraction 50gm of amla powder and 120ml of ethanol.
- For Fenugreek extraction 50gm of fenugreek powder and 130ml of ethanol.
- For Green tea extraction 50gm of green tea leaves and 120ml of ethanol.



Onion Extract

Amla Extract

Fenugreek Extract

Green tea Extract

Fig.2.Herbal Extract

**2. Preparation method of Shampoo**

- Place cup of rice with water in a clean bowl for over a night and then filter it.
- Take reetha powder with a water in a clean bowl for over a night and the filter it. And
- Take shikakai powder with a water in a clean bowl for over a night and filter it.
- Take a appropriate amount of carbapol add sufficient amount of aloe vera gel and traturate it clock wise.
- Then add sufficient amount of fermented rice water, onion, amla, fenugreek, green tea, reetha, shakakai extract one by one and traturate properly.

**Formulation Table:**

Ingredients	F1	F2	F3
Aloe Vera gel	5gm	7gm	6gm
Fermented rice water	7ml	10ml	8ml
Onion extract	3ml	7ml	6ml
Fenugreek extract	2.5ml	4ml	3.5ml
Amla extract	2.5ml	4ml	2ml
Green tea extract	2ml	3.5ml	3ml
Shikakai extract	4ml	6ml	6ml
Reetha extract	4ml	5ml	5ml
Methyl paraben	0.02gm	0.02gm	0.02gm
SLS	1.5gm	2gm	2gm
Carbapol	1.5gm	2gm	2gm

Table.2 Formulation Table

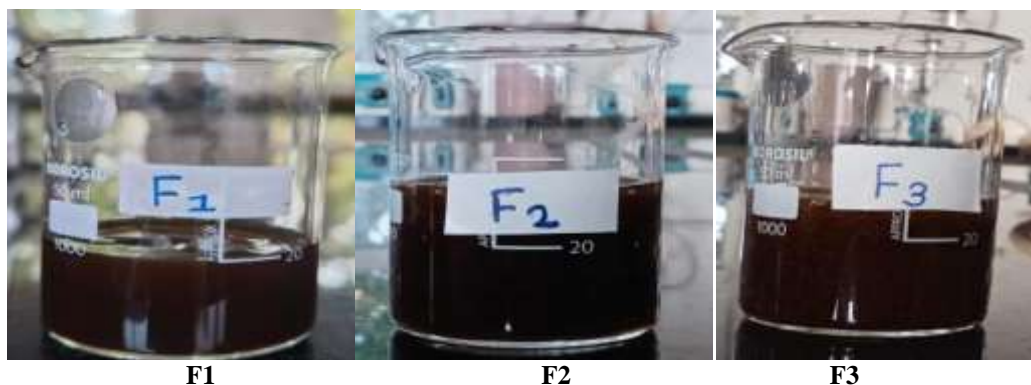


Fig.3 Formulation of Herbal Shampoo

**Evaluation of Herbal Shampoo :**<sup>(8,10)</sup>

**1. Organoleptic properties:**

The prepared formulations are evaluated in terms of color, odor, texture etc.

**2. P<sup>H</sup> Determination:**

The pH of the shampoo is measured by using pH meter.

**3. Foam ability test:**

The cylinder shake method is employed in the foaming ability test. In this method 50 ml of the 1% shampoo solution is taken in a 250 ml graduated cylinder and covered the cylinder with hand. The cylinder is then shaken for 10 times. The volume of the foam appeared due to shaking is measured after every one minute consecutively for 5 minutes.

**4. Dirt dispersion test:**

To 10ml of refined water two drops of cleanser were included and taken in a wide-mouthed test tube. To the formulated shampoo, added one drop of Indian ink and shaken for 10

min after closing the test tube with a stopper. The volume of ink in the froth was measured and the result was graded in terms of none, slight, medium, or heavy.

**5. Skin irritation test:**

The solution of prepared shampoo on skin and kept for 5 minutes and observed for redness of skin and irritation there, were no any red coloration and the irritation to the shin.

**6. Percentage of solid content determination:**

4gm of shampoo previously weighed evaporating dish and evaporated by placing the evaporating dish on hot plate. The final weigh is noted down. Percentage of solid contents of shampoo left after complete evaporation is calculated.

**7. Viscosity:**

Viscosity was determined by using the brook field viscometer.

**Evaluation Test of Herbal Shampoo:**

Sr. No.	Evaluation Test	F1	F2	F3
1.	Organoleptic properties: Color Odor Texture	Light Brownish Pleasant Smooth	Brownish Pleasant Smooth	Brownish Pleasant Smooth
2.	pH	3.36	5.42	4.17
3.	Foam ability	4ml	3.5ml	4ml
4.	Skin irritation test	No itching or redness	No itching or redness	No itching or redness
5.	Dirt dispersion test	Moderate	Moderate	Moderate
6.	Percentage of solid content determination	20%	22%	15%
7.	Viscosity	2800cP	3000cP	2700cP

## II. RESULT & DISCUSSION:

Medicinal plants used in the formulation of onion anti-hair fall shampoo were found in novel drug. These plants were Onion, Amla, Fenugreek seed, Green Tea leaves, Fermented rice water, Shikakai, Reetha, Aloe Vera gel The prepared formulation is completely herbal in nature so it might be have less side-effect. I have prepared F1, F2, F3 formulation. In all formulation F2 is better than F1 and F2 because they show Proper P<sup>H</sup> and appropriate solid content.

## III. CONCLUSION:

The main purpose behind this formulation was to prevent loss of hair and to reduce dandruff. Traditional herbs, herb extract and fermented rice water were used to create a herbal shampoo that is very safe and effective to use. To provide the effective conditioning effects the present study involves the use of aloe gel, shikakai, reetha, onion, amla, fenugreek, green tea, extracts instead of synthetic.

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