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Research Article

Preparation And Evaluation Of Herbal Shampoo (Ocimum Tenuiflorum)

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ABSTRACT

The primary objective of this research is to formulate and evaluate a herbal shampoo, as well as to find out its physicochemical performance with a focus on product safety, efficacy and quality. Herbal shampoo is a natural hair care solution that removes grease, dirt and dandruff and promotes hair growth, strength and thickness. It also gives softness, smoothness and shine to the hair. Shampoo for cosmetics is made up of different types of drugs. Consequently, efforts are being made to produce herbal shampoos that are free from adverse effects. The main objective of this study was to remove harmful synthetic ingredients from the formulation of shampoos and replace them with safe natural ingredients.

INTRODUCTION

Herbal Shampoo is widely used beauty product for inhancing Hair health. They are used to remove foil, bran, dirt, environmental pollution etc. Natural shampoo is important, because nowadays people choose natural products rather than chemical products to beautify their health, hair is one of the external barometers of the internal conditions of the body. This shampoo cleanses sebum, dirt, dandruff, promotes hair growth, strengthens and darkens hair. Additionally, it also acts as a conditioning agent. This natural shampoo powder does all these things without affecting or damaging the hair.

Human Hair:

Human hair is about 65-95% protein by weight, with an additional 32% water, lipid pigments and various other components. Chemically, about 80% of human hair is made up of a protein known as keratin, which is high in sulfur. Keratin is a

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laminated complex formed with the help of specific structures, which gives hair strength, elasticity, durability and performance. The physico-chemical home and appearance of hair is a direct end result of the corporation of its various structural components, proteins being the most significant. Hair follicles describe hair shape: large hair follicles produce "terminal" hair (scalp), small follicles produce exceptional "vellus" hair (body hair), curved follicles produce curly hair in all breeds

Structure Of Hair:



Fig.no.1 Structure of Hair

- Each hair consists of a hair shaft and a hair root. The shaft is the visible part of the hair that sticks out from the skin. Hair roots are located in the pores and skin and extend to the deeper layers of the skin. It is surrounded by hair follicles (covering pores and skin and connective tissue), which is additionally associated with sebaceous glands.
- Each hair follicle is attached to a small muscle (arrector pili) that makes the hair stand up. Many nerves sense hair movement and touch even the slightest draft.
- At the base of the hair, the hair follicle widens into a rounded hair bulb. The hair papilla, which supplies the hair roots with blood, is found in the posterior part of the hair bulb. New hair cells are constantly present in the hair bulb, enclosed in a papilla.
- An entire strand of hair develops from this union of rigid hair cells. As the newly hardened cells adhere to the hair from below, it is gradually pushed out of the skin. Thus, a hair on your head grows at a rate of about 1 cm per month.

Ideal properties of herbal Shampoo:

1. Dirt or soil, immobile sebum or different fatty supply and unattached corneal cells must be properly and thoroughly removed from the hair
2. The right amount of foam must be created to meet the user's psychological needs.
3. It should be removed without problems after washing with water.
4. This hair should be non-dry, soft, shiny and with proper manageability
5. Hair needs to smell first class.
6. No more side effects / infection intended for pores and skin or eyes
7. It should not be hard and chapped hands now.

Ingredients Used In Herbal Shampoo :

1. **Tulsi (Ocimum Tenuiflorum):**

- Moisture in your scalp
- Improves blood circulation
- Reduces itchiness and dryness
- Strengthens the hair follicles
- Makes the roots healthy.
- Useful in treating premature graying of hair as well as hair fall.



Fig.no.2 Tulsi Powder

2. Aloe (Aloe Barbedensis):

- Promote hair growth.
- Soothes itchy scalp.
- Deep clean oily hair.
- Natural smooth curls.
- Reduce the crispness.



Fig.no.3 Alov vera Powder

3. Ritha (Sapindus Mukorossi):

- Hair fall stops.
- Prevents dandruff.
- Fight against scalp Infections



Fig.no. 4 Ritha Powder

4. Shikakai (Acacia Concinna):

- Controls hair fall.
- Prevents dryness.
- Cleans scalp.
- Slows down premature graying of hair & Promotes faster hair growth.



Fig.no.5 Shikakai Powder

5. Badam (Prunus Dulcis):

- Moisturizes Hair
- Strengthens Hair
- Helps Hair Grow
- Treats Dandruff
- Smoothens Frizz
- Prevents Premature Greying



Fig.no. 6 Badam Powder

6. Amla (Phyllanthus Emblica):

- Treats Hair Fall
- Dandruff Treatment
- Treating Premature Graying
- Hair Growth
- Shields Hair From External Damage
- Reduces For Hair Loss



Fig.no. 7 Amla Powder

7. Bramhi (Bacopa Monnieri):

- Promotes hair growth.
- Prevents split ends.
- Thickens hair.
- Acts as a natural conditioner.
- Prevents dandruff.
- Helps with hair fall.
- Prevents greying of hair



Fig.no.8 Bramhi Powder

8. Hibiscus (Hibiscus Rosa Sinensis):

- To Stimulate Hair Growth
- To Condition Hair
- To Prevent Premature Graying

- To Prevent Dandruff



Fig.no.9 Hibiscus Plant

9. Fenugreek (Trigonella Foenum):

- Treating scalp problems.
- Treating dandruff.
- Dryness of the scalp.
- Clogged pores.
- Oily texture.
- Inflammation problems.



Fig.no.10 Fenugreek Powder

10. Rose Water (Rosa Centifolia L):

- Mild astringent which may help to reduce oiliness and dandruff .
- Anti-inflammatory properties
- The scent might even help relieve headaches and reduce irritability.
- Many women with curly hair swear by rose water's ability to calm down frizz and add shine.



Fig.no. 11 Rose Water

11. Foaming Agent :

Produce foam while using.



Fig. no.12 Shampoo Base

FORMULATION OF HERBAL SHAMPOO

Sr. No.	Name Of Ingredient	Quantity
1.	Tulsi	10 gm
2.	Aloe	4 gm
3.	Ritha	3 gm
4.	Shikekai	3gm
5.	Badam	2 gm
6.	Amla	2.5 gm
7.	Bramhi	2 gm
8.	Hibiscus	2 gm
9.	Fenugreek	3 gm
10.	Rose Water	q.s.

PROCEDURE:

1. Firstly take all ingredients in pure form.
2. Dry All ingredients on sundrying.
3. After complete drying make the powder or triturate ingredients by mortor and pestle.
4. Weight all ingredients properly by using electronic balance.
5. Take 2 gm of Tulsi and add 5 ml of methanol or alcohol stay it for 24 hr.
6. After this dry it on air for 24 hr.
7. Now take sample of dried powder and in that add foaming agent. Mix it properly or constantly.
8. After this add flavoring agent that is rose water.
9. Now add q.s. preservative (methyl and propyl paraben.)
10. Stir it with glass rod.
11. After proper mixing fill it in container.



Fig. no.13 Shampoo After Preparation.

EVALUATION TESTS :

To evaluate the quality of commercial and prepared formulations, several quality control tests including visual assessment, physicochemical controls conditioning performance tests were performed.

1. Physical Appearance :

A shampoo like any other cosmetic preparation should have good appealing physical appearance. The formulated and marketed shampoos were evaluated for physical characteristics such as colour, odour and transparency. Our prepared shampoo was transparent, light green and had good odour. No significant difference was observed in terms of odour, transparency and foaming characteristics between commercial and formulated shampoo except for colour.

2. Foam Producing Ability:

Take some amount shampoo on hand and wash it under runny water and there is foaming of foam.

3. Dirt Removing Test:

After appling Shampoo on hair all dirty or dandruff present on hair is totally removed all make hair silky and make hair curly to straight.

4. Surface Tension :

The term indicates the amount of surfactant present in shampoo to reduce the surface tension. Lesser the surface tension stronger is the cleaning ability of the shampoo.

Advantages:

1. Make hair curly to straight Make hair silky
2. Make hair grayish to black
3. Clear dirty and Dangroff form hair

CONCLUSION

The aim of this study was to formulate a completely herbal shampoo which is at par with the synthetic shampoo available in the market. We formulated a herbal shampoo by using plant extracts which are commonly used traditionally and lauded for their hair cleansing actions across Asia. All the ingredients used to formulate shampoo are safer than silicones and polyquaterniums synthetic conditioning agents and vis a vis can greatly reduce the hair or protein loss during combing. Instead of using cationic conditioners we have used Tulsi, Ritha, Sheekaki, Amla, Bramhi, Badam, Fenegreek, Hibiscus, Rose Water and other plant extracts to provide the conditioning effects. Several tests were performed to evaluate and compare the physicochemical properties of both prepared and marketed shampoos. Our prepared shampoo showed comparable result with that of marketed shampoo for quality control tests but further research and development is required to improve it's over all quality.

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