Formulation And Evaluation Of Herbal Shampoo

Altaf Sharif Shaikh, Prof.S.B.Deshmukh, and Dr.Santosh Jain Sir .Aditya Institute Of Pharmaceuticals, Beed
Dr.Babasaheb Ambedkar Technological University,Lonere

Abstract— The objective of this study is to formulate and evaluate poly-herbal shampoo for cosmeticpurpose from herbal ingredients. Hibiscus powder, Neem powder, Henna powder, Amla powder, Shikakai powder, Ritha powder, Alo-vera gel was procured from local market inpowdered form also gel form Banyan root powder and Soya milk is prepared by homemademethod, then prepared decoction of these ingredients and mixing with each other and evaluated for its organoleptic and physico-chemical characteristics. Herbal shampoo is usedto cleansing of the hair also conditioning, smoothing, of the hair surface, good health of hair,hair free of dandruff, dirt grease and lice above all, it's safety benefits are expected.

KEYWORDS Herbal shampoo; Eclipta prostrata, Sapindus indica, Evaluation of shampoo
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INTRODUCTION: Shampoos are most probably used as cosmetics. It is a hair care product that is used for cleaning scalp and hair in our daily life. Shampoos are most likely utilized as beautifying agentsand are a viscous solution of detergents containing suitable additives preservatives and active ingredients. It is usually applied on wet hair, massaging into the hair, and cleansed by rinsing with water. The purpose of using shampoo is to remove dirt that is build up on the hair without stripping out much of the sebum. Many synthetic shampoos are present in the current market both medicated and non medicated; however, herbal shampoo popularized due to natural originwhich is safer, increases consumer demand and free from side effects. In synthetic shampoos, surfactants (synthetic) are added mainly for their cleansing and foaming property, but the continuous use of these surfactants leads to serious effects such as eye irritation, scalp irritation,loss of hair, and dryness of hairs. Alternative to synthetic shampoo we can use shampoos containing natural herbals. However, formulating cosmetic products containing only natural substances are very difficult. There are a number of medicinal plants with potential effects on hair used traditionally over years around the world and are incorporated in shampoo formulation .These medicinal plants may be used in extracts form, their powdered form, crudeform, or their derivatives.

BENEFITS OF HERBAL SHAMPOO

1. More Shine
2. Less Hair Loss
3. Long Lasting Colour
4. Stronger and More Fortified Hairs
5. All Natural, No Chemicals
6. Wont Irritate Skin or Scalp
7. Keep Healthy Natural Oil

FIG.1 AMLA

FIG.2 RITHA

FUNCTION OF HEARBAL SHAMPOO

- Lubrication
- Conditioning
- Hair Growth
- Maintenance of Hair Colour
- Medication.

ADAVANTAGES OF HERBAL SHAMPOO

- Pure and Organic Ingredient
- Free from Side Effects
- No Surfactants

Fig no: 3Natural shampoo

INGREDIENTS

Materials required	Quantity to be Weighed
Soap nut extract	0.5 g
Amla extract	0.5 g
Shikakai extract	0.5 g
Hibiscus	0.5 g
Bhingraj extract	0.5 g
Senna extract	0.5 g
Gelatin	q.s

TABLE NO : 1

USE OF INGREDIENTS

Soap Nut Extract –

a. Stops Hair Fall

b. Prevents Dandruff

c. Fight Against Scalp Infection

Fig no: 4 soap nut extract

1. Amla Extract :-

A. Strengthen the Scalp and Hair.

B. Reduce premature pigment loss from hair, or greying.

C. Stimulate Hair Growth. iv. Reduce Hair Loss.

D. Prevent or treat dandruff and dry scalp.

E. Prevent or treat Fungal and Bacterial hair and Scalp infections.

F. Improve overall appearance of Hairs

Fig no:5 Amla Extract

1.Shikakai Extract :–

- Cleanses Hair.
- Add more Shine to the Hairs,.
- Prevents Grays.
- Crubs Hair Loss
- Prevents Lice, Psoriasis, Eczema & Scabies.
- Provides Nourishment to the hair and promote healthy and rapid hair growth.
- Prevents Split ends.

Fig no: 6 Shikakai Extract

Bhringraj Extract: –

- Treats baldness and helps in growth of hairs.
- Makes Hair Lustrous

Fig no : 7 Bhringraj Extract

FORMULATION OF HERBAL SHAMPOO

Formulation of the herbal shampoo was done as per the formula given in Table 1. To thegelatin solution (10%), added the herbal extract and mixed by shaking continuously at the timeinterval of 20 min. 1 ml of lemon juice was also added with constant stirring. To improvearomain the formulation, sufficient quantity of essential oil (rose oil) was added and made upthe volume to 100 ml with gelatin.

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Particulars	Uses	F1
Maka(Eliptalb)	Hair growth	2g
Aloe(Aloebarbadensis) leaf	Conditioning, Hair lustring	2g
Neem(Azaradicta indica) leaf	Antiseptic and antibacterial	2g
Shikakai(Acacia concinna) fruit	Foam base	2g
Ritha(Sapindus trifolatus) fruit	Saponins	2g
Amla(Emblica officinalis) fruit	Hairgrowth promoter	2g
Brahmi(Centella asiatica) leaf	Supporthealth of hair	2g

EVALUATION OF HERBAL SHAMPOO :–

(I) Organoleptic evaluation :-

Organoleptic evaluation on the parameters like colour, odour taste and texture was carried out. Colour and texture was evaluated by vision and touch sensation respectively. For taste and odour evaluation a team of five taste and odour sensitive persons was formed and random sampling was performed.

General powder characteristis:

General powder characteristics includes evaluation of those parameters which are goingto affect the external properties (like flow properties, appearance, packaging criteria etc.)of the preparation, Characteristics evaluated under this section are powder form, particle size angle ofrepose and bulk density. Sample for all these evaluation were taken at three different level i.e. from top, middle and lower level.

Particle size

Particle size is a parameter, which affect various properties like spreadability, grittiness etc., particle size was determined by sieving method by using I.P. Standard sieves by mechanicalshaking for 10 min.

Angle of repose

It is defined as the maximum angle possible in between the surface of pile of powder to the horizontal flow. Funnel method Required quality of dried powder is taken in a funnel placedat a height of 6 cm from a horizontal base. The powder was allowed to flow to form a heap overthe paper on the horizontal plane. The height and radius of the powder was noted and recorded the angle of repose (θ) can be calculated by using the formula. Open - ended cylinder method ISSN 2320-5407 International Journal of Advanced Research (2015), Volume 3, Issue 3, 939- 946 942 Required amount of dried powder is placed in a cylindrical tube open at both ends is placed on a horizontal surface. Then the funnel should be raised to form a heap. The height andradius of the heap is noted and recorded. For the above two methods, the angle of repose (θ) canbe calculated by using the formula. $\theta = \tan^{-1}(h / r)$ Where, θ – Angle of repose, h – Height of the heap, r – Radius of the base

Bulk density

Bulk Density is the ratio between the given mass of a powder and its bulk volume. Required amount of the powder is dried and filled in a 50 ml measuring cylinder up to 50 ml mark. Then the cylinder is dropped onto a hard wood surface from a height of 1 inch at 2 secondintervals. The volume of the powder is measured. Then the powder is weighed. This is repeatedto get average values. The Bulk Density is calculated by using the below given formula.

PHYSICOCHEMICAL PROPERTIES OF HERBAL SHAMPOO:-

Evaluation test	Formulated Shampoo
Colour	Brown
Transparency	Clear
Odour	Good
pH of 10% solution	7
Solid contents (%)	23.25
Foam volume (ml)	25
Foam type	Dense, small

LIMITATIONS OF HERBAL SHAMPOO:–

Natural products affect product uniformity, Quality control.

Seasonal variation of plant constituents.

Less stable, So preservatives should be added.

Vary in consistency from batch to batch.

Air loss shampoos contain essential vitamins and minerals, which supposedly can stopyour receding hairline with regular usage.

Most of these shampoos are priced in between $10-200 per bottle, which is why theyaresuch an appealing choice to treat hair loss.

Plus, unlike other hair treatments, you can get shampoos in just about any retail store oronline, which is convenient.

However, while inexpensive shampoos may seem promising as a simple solution to malepattern balding, many of them cannot back up their claims for the most part.

Additionally, many of the shampoo products on the market today contain sodium laurylsulfate, which has been linked to a worsening of thinning hair in men.

Hair loss is a complicated situation and can be caused by any one of many things.

One of the most common causes is an imbalance in hormones, which cannot be treatedby shampoos.

Specifically, high DHT levels are the most common cause of alopecia in men and noshampoo alone can block DHT from causing your hair to fall out if you are already experiencing it.

RESULT:

The shampoo was formulated by admixing the equal amount of the aqueous extracts of allthe ingredients with soap nut . The above plant extract contains phytoconstituents like saponins which is a natural surfactant having detergent property and foaming property. An ideal shampoo must have adequate viscosity and many natural substances possess good viscosity. The gelatin solution (10%) behaves as a pseudoplastic forming clear solutions.

Lemon juice (1 ml) added to the shampoo serves as anti-dandruff agent, natural antioxidant, and chelating agent and maintains the acidic pH in the formulation

CONCLUSION

The present study was carried out with the aim of preparing the herbal shampoo that reduces hair loss during combing, safer than the chemical conditioning agents as well as to strengthen the hair growth. Herbal shampoo was formulated with the aqueous extract of medicinal plants that are commonly used for cleansing hair traditionally. Use of conditioning agents (synthetic) reduces the protein or hair loss. To provide the effective conditioning effects, the present study involves the use of shikakai, amla, and other plant extracts insteadofsynthetic cationic conditioners. The main purpose behind this investigation was to develop a stable and functionally effective shampoo by excluding all types of synthetic additives, whichare normally incorporated in such formulations. To evaluate for good product performance ofthe prepared shampoo, many tests were performed. The results of the evaluation study of the developed shampoo revealed a comparable result for quality control test, but further scientificvalidation is needed for its overall quality.

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