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REASERCH ON FORMULATION AND CHARACTERIZATION OF HERBAL SHAMPOO BAR

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I. ABSTRACT

Hairs, hairs which play an important role in personality! But in today's world or in today's life our hair is strong or not? Or quality and life span of our hair is getting damaged due to shampoos? Especially shampoos which are made from lots of chemicals. Chemicals that cause baldness, chemicals that cause irritation, and most important chemicals which cause cancers. For this problem, there is only one solution which is to use a shampoo that is made from ingredients obtained from nature. This research involves the development of shampoo bars which is made with natural ingredient which only give protection to your hair but also give soothing and g effect, good health for hair. Use shampoo bars that are chemical-free, SLS-free, natural, abundant, and sustainable.

Keywords- (Shampoo bar, Ayurveda, herbal preparation, antidandruff, Herbal shampoo)

II. INTRODUCTION

In ancient times, people use natural resources and extracts such as leaves, plants, and roots of many plants for health care and cosmetic purpose. After and years there is a lot of development and research work happening in the cosmetic industry like chemicals take place of plants, leaves. But in the name of development, care of health is totally fully ignored. And in that especially care of hairs. Chemicals like sulphates cause dryness and breakage, and polyethylene glycol is actually used as a softener and thickener in shampoo but it may irritate sensitive skin. Seeing these side effects nowadays consumers' demand for natural ingredients in shampoo is tremendously increased. By replacing this harmful chemical with natural extracts, we improve hair growth and take proper care of hair without affecting the user.

In this research work, we use various natural ingredients which are easily available in the market. Ingredients are dry and converted into powder form. The stability studies and various characterization like pH, foam test, and dirt dispersion tests are carried out.

III. Material

Table 2.1 List of Ingredients Used In Formulation

Sr No	Ingredients	Categories
1	Reetha	Foaming agent
2	Shikakai	Antidandruff
3	Fenugreek	Moisturizers
4	Amla	Antioxidant
5	Orange oil	Fragrance
6	Neem	Antibacterial
7	Aloe Vera	Moisturizers and strength
8	Glycerine soap base	Humectant

IV. Drug Profile

4.1 Shikakai



Figure no 4.1 Shikakai

Biological name: - Acacia concinna

Family: - Fabaceae

Chemical constituent: - Citric acid, Tartaric acid, Lactose

Uses: -

- Cleanses Hair-
- Provide More shine



4.2 Amla



Figure no 4.2 Amla

Biological name: - Phyllanthus emblica

Family: - Euphorbiaceae

Chemical constituents: - It contains Vitamin C

Ellagic acid, Gallic acid.

Uses: -

- Strengthen the scalp and hair
- Reduce Hair Loss
- Stimulate Hair Growth

4.3 Neem



Figure no 4.3 Neem

Biological sources: It consists of leaves and other aerial parts of Azadirachta indica.

Family: Meliaceae.

Chemical constituents. The active ingredients are Azadirachtin,

Salannin and Meliantriol

Uses

- Manufacturing of shampoo
- Controls ticks, fleas and lice

4.4 Reetha



Figure no 4.4 Reetha

Biological name: - *Sapindus mukorossi*

Family: -Sapindaceae

Chemical constituents: -

Saponins Sugar mucilage,Protein

Uses:

- Prevents Dryness.
- Good for hair growth.
- Reetha reduces dandruff.
- Prevents the scalp from lice.
- Reetha increases the silkness of hair.

4.5 Aloe

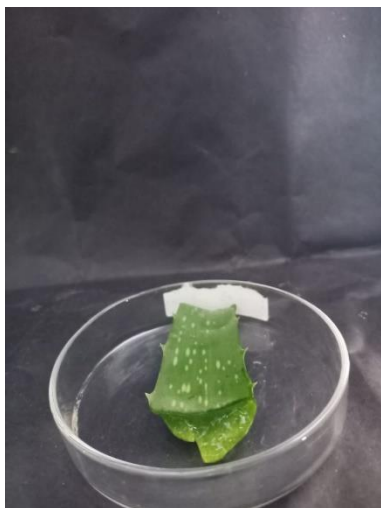


Figure no 4.5 Aloe

Biological sources: dried juice of the leaves of aloe barbadensis miller

Family-liliaceae

Chemical constituents: - Vitamin-E

Uses

- Source of vit-A,C,E
- Used as hair strength

4.6 Fenugreek



Figure no 4.5 Fenugreek

Biological Source :-

It consists of dried seeds of *Trigonella foenum graecum*

Family: - Fabaceae.

Chemical constituents: -

Methi contains Alkaloids such as trimethylamine, neurin, choline, trigonellin, gentianine, carpaine and betain are present. Amino acids such as isoleucine, histadine, lysine are present.,

Uses –

- An anti-inflammatory
- Analgesic
- febrifuge and
- galactogogue

4.7 Orange Oil

Figure no 4.7 Orange Oil

Biological Source: -Extracted from the rind of the sweet orange citrus sinensis

Chemical constituents:

90% Limonene

Citral

Decenal

Uses:

- Flavouring agent
- Perfume

V. FORMULA

Sr No	Ingredients	F1	F2
1	Reetha	3.5gm	3gm
2	Shikakai	2.5gm	2gm
3	Fenugreek	2.5gm	2gm
4	Amla	1.5gm	2gm
5	Orange oil	q.s	q.s
6	Neem	3gm	3gm
7	Aloe Vera	0.5gm	1gm
8	Glycerine soap base	44gm	39gm

VI. Procedure: -

To make shampoo bar first of all we need to convert the solid ingredients into powder form.

Then weight all ingredients which are required for shampoo bar by using digital balance

Take a sterile beaker and labelled it as beaker A. Weight accurately 39 gm of glycerine soap base in it and melt it

Take another beaker and labelled it as a beaker B

Into the beaker B mix all the following ingredients with accurately measuring quantity given into the formula

Reetha 3gm

Shikakai 2gm

Fenugreek (seed powder) 2gm

Amla 2gm

Neem 3gm

Aloe Vera 1gm

After the melting of glycerine soap base mix slowly all the ingredients of beaker B into beaker A with continuous and vigorous stirring and add Orange Oil as a fragrance in quantity sufficient into it.

The Semisolid mixture was poured into a soap mould and allow to solidify. Final shampoo bar is ready

Packed it into a paper

VII. Images



Fig-7.1 Ingredients



Fig-7.2 Mixture A & B



Fig-7.3 Mixture C



Fig-7.4 Poured into soap mould



Fig-7.5 final product(shampoo bar)



Fig-7.6 shapes of shampoo bar

VIII. Characterization Of Shampoo Bar

8.1 Organoleptic evolutions:

colour: Dark green

Odour-orenge fragrance

Appearence-good

8.2 Determination of PH-

5 to 6 ml of the soap was weighed accurately in a 100 ml beaker 40 ml water was added and dispersed the soap in it. The ph of the solution is determined by using digital ph meter. Ph of soap is 7-9



8.1 Determination of PH

8.3 Foaming ability and foam stability-

foam ability was determined by using measuring cylinder shake method brittle 3 ml of the formulation soap solution was placed in cylinder it was covered with a hand and shaken the total volume of the foam content after 1 min of shaking recovered foam stability was evaluated by recording the foam height after 1 min and 4min is 09 to 10.



8.2 Foaming ability and foam stability

8.4 Foam retention

A 100 ml measuring cylinder was filled with 25 ml of the 1% soap solution. Hands were placed over the cylinder and it was shaken ten times. For 4 minutes, the volume of foam was measured at 1-minute intervals.

XI. Conclusion

From the given study it can be concluded that shampoo bar shows better improvement in terms of clinical parameters than chemical shampoo. The customer compliance is also better with once daily application of shampoo bar as compared to chemical shampoo. Shampoo bar which are made from naturally obtain ingredients are more useful. And they are safer with fewer side effects. Therefore, the importance of herbs in shampoo bar is increase and they are useful in personal care and there is more demand for shampoo bar nowadays. In short shampoo bar is non-toxic, safe, easy to use, effective, environmentally friendly and improve the person compliance by using natural product.

X. Reference

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