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FORMULATION AND EVALUATION OF HERBAL SHAMPOO FROM MURRYA KOHINIGII

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Abstract— the word cosmetic was derived from the Greek word “kosm tikos” meaning having the power, arrange, skill in decorating. The origin of cosmetics forms a continuous narrative throughout the history of man as they developed. The origin of cosmetics were associated with hunting, fighting, religion and superstition and later associated with medicine. Herbal Cosmetics, here in after referred as Products, are formulated, using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetic benefits only, shall be called as “Herbal Cosmetics”. Herbal cosmetic also known as “natural cosmetics”. Herbal cosmetics, here referred as product, are formulated, using various permissible cosmetic ingredients to form the base in which one or more herbal ingredients are used to provide defined cosmetic advantages only, shall be called as “Herbal Cosmetics”.

Keywords: *Herbal Cosmetics, Curry leaves, Reetha, Dandruff. Skin itching, Head Lice, Fenugreek seeds.*

I. INTRODUCTION

Herbal cosmetics were gaining tremendous demand in world market. There is a wide range of herbal cosmetic products used as beauty regime to satisfy the purpose of beautification. Adding herbs in cosmetics is safer for our skin, hairs. Herbal cosmetics are prepared by the association of bioactive ingredients and pharmaceutical products. The presence of no of phytochemical and botanicals in the herbal products have dual significance, one that they are used as cosmetics for body care and another that phytochemicals improve the biological functions of human body naturally results in healthy skin and hairs.

IDEAL PROPERTIES OF SHAMPOO

- Pleasing foam
- Ease of rinsing
- Minimal skin and eye irritation
- Thick or creamy feeling
- Pleasant fragrance
- Low toxicity
- Good biodegradability

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The man in prehistoric times 3000BC used colors for decoration to attract the animals that he wished to hunt and also the man survived attack from the enemy by coloring his skin and adorned his body for protection to provoke fear in an enemy (whether man or animal).

Advantages of herbal shampoo:

- Herbal shampoos are made out of pure and organic ingredients and there are no synthetic additives or surfactants and are free of any side effects.
- These shampoos are not tested on animals, unlike synthetic shampoo brands.
- Are Bio-degradable and earth-friendly.
- Skin-friendly - never causes irritation to the eyes.
- Cost friendly - not much expensive.

Classification of shampoo:

Depend upon Appearance

- Powder Shampoo
- Liquid shampoo or lotion shampoo
- Gel shampoo or Solid shampoo
- Cream shampoo
- Oil shampoo
- Miscellaneous anti-dandruff shampoo or medicated shampoo.

Based on Use or Function

- conditioning shampoo
- Antidandruff shampoo
- Therapeutic shampoo
- Baby shampoo
- Balancing shampoo
- Clarifying shampoo
- Based on origin
- Herbal shampoo
- Egg shampoo

Uses:

a) Dandruff

According to Ayurveda, dandruff is a condition marked by flakes of dry skin on the scalp. This may be due to an aggravated Vata and Pitta dosha. Reetha helps to control dandruff and promotes hair growth due to its Tridosha balancing property. The Tikshna (sharp) nature of Reetha also helps to keep the scalp dandruff-free.

b) Skin itching

Itching may be due to dryness (Vat) and can also be due to cyst formation (Kapha). The skin may feel itchy due to excessive sweating (Pitta). This means all the three Doshas (Vat-Pitta-Kapha) are involved in itching. Reetha helps to reduce itching as well as inflammation because of its Tridosha balancing property.

c). Head Lice

Lice are small insects which reside on the scalp. Head lice develop and survive when they get favourable conditions like excess sweat, dirt on the scalp or any shampoo/soap residue on the scalp. Reetha helps to remove lice.

II. FORMULATION CONSIDERATION:

4.2 Method

Formulation of herbal shampoo:

Sr. No.	INGREDIENTS	BOTANICAL NAME	USES
1	Curry Leaves	Dried leaves of Murrya Koenigii	Prevents hair loss and increase hair growth
2	Fenugreek	Dried seeds of trigonella Foenumgraecum	Conditioning and nourishment of hair
3	Amla	Dried ripe fruit of Emblica Officinalis	Darkening of hair
4	Reetha	Dried fruit of Sapindus mukorossi	Foaming agent

• Formulation of herbal shampoo was done by given quantity to increase the thickness of formulation.

• SLS solution was prepared using 0.1M NaCl, 20ml of herbal extract was added to 20ml SLS solution with 20ml NaCl solution and mixed by shaking gently.

• The final volume was made to 100ml by adding 10ml guar gum extract 2ml of glycerin and 25ml of water to improve aroma in the formulation.

• Sufficient quantity (q.s) of essential oil (lavender oil) was added the shampoo also included one capsule of vitamin E for conditioning activated charcoal for color and 2ml of lemon juice as preservative.

Collection of plants: fresh part of fenugreek (seeds) ginger (rhizomes) orange (peel) rose(petals) koenigii murrya (leaves) collected and washed under running water to remove contaminants they are dried in shade convert into coarse powder and sieved using 60 Meshes the extract were prepared by decoction method and the prepared extract were stored in well closed container.

Preparation of Plant extract

Extract prepared by decoction method individually

Procedure:

50gm powdered Fenugreek , ginger , orange , koenigii murrya were placed in a stainless still vessel and poured 287.5 ml of distilled water and covered the mixture was kept for boiling until the water reduced to one quarter then strain and filtered product is concentrated Formulation of shampoo

Formulation of polyherbal shampoo was prepared by using different proportions of the ingredients. The ingredients were well triturated in a mortar using a pestle and blended an ideal homogenous dispersion was achieved the mixture was then stirred well with show stirring on a magnetic stirrer and there was no sediment remained at the bottom.

III. EVALUATION

Evaluation test of herbal shampoo:

Physical appearance

PH

Percentage solid content
Skin irritation
Foaming stability
Cleansing action
Surface tension
Microbiological examination
Anti-microbial activity

Physical appearance-

The physical appearance of herbal shampoo having the black shining colour and good odour also produce the good foam ability.

1. pH-

The pH of shampoo is near to the skin pH range the range between 5 and 7.8 the PH of shampoo important for improving and enhancing the qualities of hair minimizing irritation of the eyes.

2. Percentage solid content-

The result of percent of solid content was 3% its suggest that it can be washed out easily.

3. Foaming stability-

Although the foam generation has little to do with the cleansing ability of shampoo its importance to the consumer the final formulation produces the good and stable foam.

4. Cleansing action-

The cleansing ability as it was able to remove the both dirt and oil from hair and produce the softness and silkiness of the hairs conditioning property of the herbal shampoo.

6. Surface tension-

The surface tension reduction is one of the implicated in detergency the reduction in surface tension of water (72.8 dyne/cm) by the herbal shampoo is an indication of their good detergent action.

7. Microbiological examination-

The microbiological count of the formulated Shampoo was quite (90cfu) so it is safe to use according to the standard shampoo formulation should not contain more than (10cfu/ml).

8. Anti-microbial activity-

The antimicrobial activity of formulated Shampoo was effective against germs negative bacteria volume but with the less inhibition.

IV RESULT AND DISCUSSION

Result:

Sr. No.	Parameter	Observation
1.	Physical appearance	Black opaque
2.	PH	6
3.	Percentage of solid content	3%
4.	Skin irritation	No
5.	Foaming stability	41 ml arte 10min
6.	Cleansing action	Good
7.	Surface tension	200 dyne/cm ²
8.	Microbiological count	90 cfu/ml

Table no 2: Evaluation parameters

•The shampoo was formulated by admixing the equal amount of the aqueous extracts of all the ingredients with soapnut.

•The above plant extract contains phyto-constituents 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.


- Physical Appearance
- pH
- Solid Content
- Surface Tension
- Wetting Time
- Foaming ability and Foaming Stability
- Dirt Dispersion Test
- Net Content
- Conditioning Performance

V. CONCLUSION

The herbal shampoo functionally effective as compare to synthetic shampoo. The synthetic shampoo does damage the hair. If cuticle leaving it brittle dull and dry then herbal shampoo is safe and effective to use. In present study we will be carrying out investigation and formulate herbal shampoo.

Its preparation is based upon traditional knowledge. To develop shampoo with quality and purity we need to look after few parameters of an herbal shampoo. The herbal shampoo greatly reduces the hair loss during combing as well as strengthens the hair. Herbal shampoo is harmless and more effective and economic too.

VI. REFERENCES

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- [1] Arora P, Nanda A, Maninder K (2011). Shampoo based on Synthetic Ingredients vis-a-vis Shampoo based on Herbal Ingredients: A Review. *International Journal of Pharmaceutical Sciences Review and Research*, 7(1), 41-46.
- [2] Arora R, Singh R. K, Bharakatiya M (2019). Formulation and Evaluation of Herbal Shampoo by Extract of Some Plants. *The Pharmaceutical and Chemical Journal*, 6(4), 74- 80
- [3] Badi K, khan S Comparison of the Herbal Shampoo with the Commercial Shampoo Beni-sufe University Journal Of Basic And Applied Science 301-305 21 nov 2014
- [4] Chandran S, Augusthy A. N, Lindumol K. V, Shirwaikar A (2013). Development and evaluation of antidandruff shampoo based on natural sources. *Journal of Pharmacy and Phytotherapeutics*, 1(4), 10-14.
- [5] Chandran S, Augusthy A. N, Lindumol K. V, Shirwaikar A (2013). Development and evaluation of antidandruff shampoo based on natural sources. *Journal of Pharmacy and Phytotherapeutics*, 1(4), 10-14
- [6] Dhyani A, Sing N, Kumar V. (2019) Formulation and Evolution of Herbal Shampoo Contain Grewia Optiva *International Journal of Engineering and Advanced Technology* vol.8 2249-8958
- [7] 7. Gahlawat J, Sharma D, Takur G, Chobdar J (2019) Formulation and Evaluation of Polyherbal Liquid Shampoo. *European Journal of Biochemical and Pharmaceutical Sciences* vol. 6 149- 154.
- [8] Gubitosa. J, Rizzi. V, Cosma P (2019) Hair Care Cosmetics: form Traditional Shampoo to Solid Clay and Herbal Shampoo , Review .MDPI Open Access Scientific Journal, 6
- [9] Jacob R, Sakthivel (2015) Formulation of Cost Effective Herbal Shampoo Powder: A Comparative Study with Market Shampoo *International Journal of Current Research* vol. 7 12645-12649
- [10] 13. Kancharla K, Lakshmi prasanna B, Aparnadevi M, Nagdevi G, Rajeshwari S (2018). Formulation and Evaluation of Polyherbal Shampoo. *International Journal of Pharmacy and Pharmaceutical Research*, 13(1), 251-268.,
- [11] 15. Mahendran S (2016) Formulation and Evaluation of Herbal Shampoo Containing Rambatan Leaves Extract *International Journal of Pharm and Bio Sciences* 7(4)146-151.