

Formulation And Evaluation Of Herbal Anti-Dandruff Shampoo

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Abstract— Shampoos are the products which removes surface grease, dust from the hair shaft and scalp. Majority of ingredients in the shampoos are chemicals and hence have been under severe attack due to its potential risk of side effects with its usage. The main objective of this study was to eliminate harmful synthetic ingredient from anti-dandruff shampoo formulation and substitute them with a safe natural ingredients. An attempt has been made to combine modern formulation technology in to a formula based on natural ingredients. Herbal shampoo was prepared with Ritha fruits, Liquorice stolons, Bengal gram seeds, Brahmi leaves, Greengram seeds were collected from Avurvedic store and remaining like Banana roots, Pomegranate seeds, Hibiscus leaves, Marigold flowers, and Lemon fruits with all ingredient extract and formulated different formulations and stability tested with marketed Dove shampoo. Formulation four was found to be the best formulation based on the evaluation parameters and stability studies. When investigation data were assessed, formulation four of anti-dandruff herbal shampoo contains all good characters of an ideal shampoo and it was found to be harmless, more effective and economical compared to synthetic Dove anti dandruff shampoo, it was quite evident that development of stable, effective anti-dandruff herbal shampoo which may be commercially replacing the existing synthetic shampoo is quite possible.

Keywords: Dandruff, Herbal Anti-dandruff Shampoo,

NTRODUCTION

Dandruff is the major cosmetic problem and great publicconcern both in developed and developing countries.

The word dandruff is combination of 'tan' meaning 'tetter' and 'drof'meaning 'dirty'.Dandruff is a chronic scalp condition leading to scaling, itching,redness of scalp by shedding epidermal cells. Scalp sheds dead cells in nearly invisible way but sometimes sheds as visible flakes calleddandruff.Dandruff is a cluster of coenocytes retained by cohesion with oneanother and detach from surface of stratum carenum. Parakeratosis cells often make up a part of dandruff. In physiological spectrum of scaling about 487,000 cells/sq cm get released after detergent treatment. During the past decades there has been increase in use of natural products in cosmetics. Natural botanical use their crude form, purified extracts. Many herbal shampoo available in market contains herbal ingredients such as plant extracts and essential oils. Tulsi, Henna, Neem, Lemon, shikakai are commonly used plants in shampoo formulations of which somes how anti-dandruff activity.

Classification of Dandruff

Depending upon the symptoms the dandruffis classified into two main types

A) Dry dandruff:

It is also called as pityriasis simplex characterize by excessive formation of minute scales which accumulate on the scalp area. In this type of dandruff there is no excessive hair loss. The inflammation on the skin is not observed. The scales are first found in middle of the scalp and then spread to frontal, parietal and occupational areas.

B) Oily dandruff:

It is also called as pityriadis steatoides. It arrives on the scalp with sebum production. It is mostly found in young men following puberty. Inflammation of varied intensity developed on the scalp alongwith oily scales of dirty yellow colour. Hair fall is most commonly found in this condition. The most common site affected by this type of dandruff is scalp, behind the ears, over breast bone, armpits.

OBJECTIVES

To formulate anti-dandruff shampoo by using ingredients such asNeem and Tulsi.

Evaluation of herbal anti-dandruff shampoo for Appearance, Percentage solid content, pH, Foam volume and antimicrobial activity against Staphylococcus aureus.

The objective of this study is to formulate and evaluate polyherbal shampoo for cosmetic purpose from herbal ingredients.

Herbal anti dandruff shampoo were prepared by using various herbalingredient like Lavender oil, Shikakai Powder, Aloe-Vera gel and then formulated shampoo were subjected to evaluation parameter likePH, Viscosity, foaming stability, inspection satisfactory. Dandruff is a common disorder affecting the scalp condition caused by yeast pityrosporum. Dandruff cannot be completely eliminated but can only be managed and effectively controlled in that way. In present research work the various anti fungal agents.

MATERIALS

Drug Profile and Excipient

Neem



Use :

Antibacterial, Wound healing activity, skin ulcers, fever, cardiovascular diseases, liver problem.

Tulsi





Use;

Reduce gastrointestinal disorder, it relieve signs of asthma, antimicrobial, wound healing activity

Aloevera



Use :

Used in abrasion and skin irritation, Antiinflammatory

Shikakai



Use : Antifungal, Nourish follicles, curb dandruff

Cetosteryl alcohol



Use : Opacifiers in Shampoos, , emollient.

METHODS

Preparation of Plant Extract :

The extract was prepared by simple maceration. Firstly we were take 20 gm of each leaves of plants **Sodium Lauryl Sulphate**

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Use :

Fat Emulsifier, Wetting agent, Detergent in Cosmetics.

such as Neem and Tulsi, Shikakaithey were dried pulverized in air, and then they were soaked with 200ml of water for 48hr. After 24hr solvent was decanted and the residue again soaked with the same solvent for 24hr. The total extract was combined and filter then the evaporation of solvent was done on heating mental this was dried and stored in desiccator for further use.

Guar gum



Use : Thickening agent, Stabilizing agent Lavender oil:



Use :Flavoring agent, Skin application, Used in massage Therapy.

Glycerin



Use :

Minimizing the water loss, keeping the skin hydrated. Formulation of anti-dandruff shampoo:

Shampoo was formulated using simple mixing process. Tulsi, shikakai, Neem extracts were mixed with other ingredients as given in

Sr.No.	Ingredien	Quantity
1	Neem	2ml
2	Tulsi	2ml
3	Shikakai	2ml
4	Aloevera	2ml
5	Cestosteryl Alcohol	1g
6	Sodium Lauryl Sulphate	бg
7	Guargum	0.5g
8	Methyl paraben	0.1g
9	Propyl paraben	0.9g
10	Lavender oil	1ml
11	Glycerin	3ml
12	Purified water	g.s.

PHARMACEUTICAL EVALUATION OF SHAMPOO:

The formulation were evaluate for As per following parameter

Physical Appearance

The formulated shampoo were observed for their visual appearance, transparency, color, consistency.

- Appearance:
- clear Color:
- Brown
- Transparency: Non-
- Transparence Consistency:
- pH –

The pH of formulated shampoo was determined by using digital pH meter by dissolving 1gm shampoo in 100ml of water.

Consistency-

pH Test

The consistency of formulated cream were determined by hand.

Take pinch of shampoo and rubbed it with finger.

Percentage solid content -

The percentage solid content was determined by weighing about 4gof shampoo in evaporating dish. The liquid portion of shampoo wasevaporated by placing in heating Finally the weight and percentage of solid present in shampoo was calculated forcomplete drying.

Antimicrobial Activity

In this method the agar is melted, cooled at 450C, Inoculate with the test microorganism and then pour in the sterile petri plate. In this method when the agar plate has been solidified then holes about 9mm in diameter in the medium with sterile cork borer, Then the antimicrobial agent are placed in the hole and in another hole placed marketed formulation acts as standard, the diameter of zone of inhibition were measured after inoculation at 30-350C for 2-3 days. The diameter of zone of inhibition gives an indication of the relative activity of different antimicrobial substance against tested microorganism.

Foam stability test

The stability of foam was determined by using cylinder shake method.About 50 ml of 1% formulated shampoo taken in 250 ml measuring cylinder and shaken for 10 minutes. The total foam volume was measured after 1 minute and foam stability was determined by recording foam volume from 1 to 4 minute

Stability Studies -

The stability of the formulation was tested by filling the cream inplastic container and placing it in humidity chamber at 450C and 75% relative humidity. The stability of the formulation was inspected for 3 months at interval of One month each.

RESULT

This shampoo could become a media to use these medicinalproperties effectively and easily as simple dosage form.Natural Remedies are more acceptable as they are safer with fewer side effects than synthetic once, so a herbal anti-dandruff shampoo is nontoxic, safe, effective and improve patient compliance as it contain herbal ingredient. From the ancient time. These prepared herbal anti-dandruff shampoo was evaluated for various parameters like appearance, determination of consistency, pH, Foam stability and antimicrobial activity against Staphylococcusaureus.

CONCLUSION

The main aim of formulated herbal anti-dandruff shampoo was to prevent dandruff and their infections. It was concluded that the anti-dandruff shampoo which are prepared from natural sources they shows fewer side effect as compared to shampoo which are prepared from synthetic compound. The prepared wound shampoo was evaluated using various parameter and was found to be satisfied for the application to the hair.

REFERENCE

[1]. JR Krishnamoorthy, African Journal of Biotechnology Vol. 5 (10), pp. 960-962, 16 May 2006.

[2]. Ranganathan and Mukhopadhyay, CME Article2010, Volume-55, page: 130-134.

[3]. Loden and Wessman, International Journal of Cosmetic Science 2001, Volume22, Issue4.

[4]. Associated, Maurya S, Delampasona MP, Catalan CA. A comparison of chemical, antioxidant & antimicrobial studies of cinnamon bark and leaf. Food chemistry & toxicology 2007, 55: 1173 1183.

[5]. Swati Deshmukh, Bindurani Kaushal and Shweta Ghode, (2012),Formulation and evaluation of herbal shampoo and comperative studies with herbal marketed shampoo, Int J Pharm Bio Sci, vol 3(3), pp no 638-645.

[6]. Nowicki R. Modern Management of dandruff Pol MerkulLekarski, 2006; 121-124.

[7]. Tiwari P, Kumar B, Kaur G, Kaur H. Phytochemical screening and Extraction. A review.Int.Pharm science.2011; 1(1):98-t.

[8]. D.K.Shrivastava & Kshma Swarnkar, Antifungal activity of Azadirachta indica, Extraction of neem, Int.J. curr. Microbiol. App.sci, 2014; 3(5): 306.

[9]. Gomathinayagam subramanium, Brij. B.Tewari, Antimic robialproperties of different leaf extract of Tulsi, American International journal of Contemporary research, Vol.4,No.4; August 2014: 151.

[10]. Manimaran.S.Nithya, Praveen TK, International journal of Biological & Pharmaceutical Research, 2014; 5(5); 383-388.

[11]. Anusha Potluri, Hsrish. G,B.Pragathi Kumar, Dr. Durraivel,Formulation and evaluation of herbal anti-dandruff shampoo, IJRPB 1(6),November-December 2013;385

[12]. Vijayalakshmi A, Sangeetha S, Ranjith N(2018), Formulationand evaluation of herbal shampoo, Asian J Pharm Clin Res, Volume11, pp no121-124.

[13]. Badi KA, Khan SA, Formulation, evaluation and comparison of the herbap shampoo with the commercial shampoo. Beni-Suef Univ J Badic Appl Sci 2014,3:301-5.

[14]. Gaud RS, Gupta GD, Practical physical Pharmacy, First edition, New Delhi; C. B. S. Publisher and Distributer; 2001. p.81-105.

[15]. .Dr.Chandrakant Kokre, Prof. And head of f;Pharmacutical microbiological principal and application ;Nirali prakashan; 17.11–17.13.

[16]. Patil SS, Mane YJ, Mhite SK. Formulation and evaluations of hebal shampoo powder. Int J Adv Res 2015; 3;939-46.

[17]. Bharadwaj.S, G.D.Gupta and V.K.Sharm. Topical Gel: A Novel Approach for drug delivery. J.Chem.Bio.Phy.Sci.2012; 2(2): 856-867. Fuizz and C.Richard, 2012 Transdermal delivery system, US patent 5736154.

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