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FORMULATION AND EVALUATION OF HERBAL CREAM

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ABSTRACT

Herbal cosmetics are the preparations used to enhance the human appearance. The aim of the present research was to formulate the herbal Cream for the purpose of Moistening, Nourishing, lightening & Treatment of various diseases of the skin. Different crude drugs; Aloe barbadensis (Aloe Vera leaves), Ocimum Sanctum (Tulsi-leaves), Azadirachta Indica (Neem-leaves), Curcuma longa (Turmeric-rhizomes), Cedro Oil(Lemon Peel), Myristica fragrans(Nutmeg seeds), Olium rosae(Rose Oil), Orange Oil, Prunus dulcis (Almond oil) were taken. Accelerated stability testing of two final sample has been conducted in the environmental chamber with temperature 25 ± 10C and humidity 60 ± 10% RH. All the products were found to be stable with no sign of phase separation and no change in the color. The patch test for sensitivity testing has also been done and no evidence of skin irritation and allergic signs. This work mainly focuses on the assessment of the microbial quality of Formulated cosmetic preparations. To the surprise, both formulations was found to comply with the microbial limit tests as per the international specifications. Thus herbal cosmetics formulation is safe to use was proved and it can be used as the p.

KEYWORDS: Herbal cream, Anti ageing, Cosmeceutical, Microbial Stabilityrovision of a barrier to protect skin.

INTRODUCTION

Cosmetic products are used to protect skin against exogenous and endogenous harmful agents and enhance the beauty and attractiveness of skin.[1] The use of cosmetics not only developing an attractive external appearance, but towards achieving longevity of good health by reducing skin disorders.[2] The synthetic or natural ingredients present in skin care formulation that supports the health, texture and integrity of skin, moisturizing, maintaining elasticity of skin by reduction of type I collagen and photoprotection etc. This property of

cosmetic is due to presence of ingredients in skin care formulation, because it helps to reduce the production of free radicals in skin and manage the skin properties for long time. The cosmetic products are the best choice to reduce skin disorders such as hyper pigmentation, skin aging, skin wrinkling and rough skin texture etc. The demand of herbal cosmetic is rapidly expanding. This expansion is due to the availability of new ingredients, the financial rewards for developing successful products, consumer demand, and a better understanding of skin physiology.[3,4] The plant parts used in cosmetic preparation should have varieties of properties like antioxidant, anti-inflammatory, antiseptic, emollient, antiseborrhatic, antikerolytic activity and antibacterial etc. Herbal products claim to have less side effects, commonly seen with products containing synthetic agents. The market research shows upward trend in the herbal trade with the herbal cosmetic industry playing a major role in fueling this worldwide demand for herbals.[5]

MATERIALS AND METHODS

Preparation of extracts

Air dried and coarsely powdered (500 gm) of Aloe vera, Cucumis sativus and Daucus carota were placed in soxhlet extractor separately, using petroleum ether and then successively with ethanol. The extracts were then concentrated to dryness under reduced pressure and controlled temperature, respectively and they were preserved in a refrigerator.

Cream formulation

Oil in water (O/W) emulsion-based cream (semisolid formulation) was formulated. The emulsifier (stearic acid) and other oil soluble components (Cetyl alcohol, almond oil) were dissolved in the oil phase (Part A) and heated to 75° C. The preservatives and other water soluble components (Methyl paraban, Propyl paraban, Triethanolamine, Propylene glycol, ethanol extract of Aloe vera, Cucumis sativus and Daucus carota were dissolved in the aqueous phase (Part B) and heated to 75° C. After heating, the aqueous phase was added in portions to the oil phase with continuous stirring until cooling of emulsifier took place. The formula for the cream is given in table 1.

Evaluation of cream pH of the Cream

The pH meter was calibrated using standard buffer solution. About 0.5 g of the cream was weighed and dissolved in 50.0 ml of distilled water and its pH was measured.

Viscosity

Viscosity of the formulation was determined by Brookfield Viscometer at 100 rpm, using spindle no 7.

Dye test

The scarlet red dye is mixed with the cream. Place a drop of the cream on a microscopic slide covers it with a cover slip, and examines it under a microscope. If the disperse globules appear red the ground colourless. The cream is o/w type. The reverse condition occurs in w/o type cream i.e. the disperse globules appear colourless in the red ground.

Homogeneity

The formulations were tested for the homogeneity by visual appearance and by touch.

Appearance

The appearance of the cream was judged by its color, pearlscence and roughness and graded.

After feel

Emolliency, slipperiness and amount of residue left after the application of fixed amount of cream was checked.

Type of smear

After application of cream, the type of film or smear formed on the skin were checked.

Removal

The ease of removal of the cream applied was examined by washing the applied part with tap water.

Acid value

Take 10 gm of substance dissolved in accurately weighed, in 50 ml mixture of equal volume of alcohol and solvent ether, the flask was connected to reflux condenser and slowly heated, until sample was dissolved completely, to this 1 ml of phenolphthalein added and titrated with 0.1N NaOH, until faintly pink color appears after shaking for 30 seconds.

Evaluation

pH of the cream

The pH of the cream was found to be in range of 5.6 to 6.8 which is good for skin pH. All the formulations of cream were shown pH nearer to skin required i.e pH of F1-5.6, F2-5.8, F3-5.9, F4-6.2, F5-6.5, F6- 6.8 and F7-6.7.

Viscosity

The viscosity of cream was in the range of 28001 – 27025 cps which indicates that the cream is easily spreadable by small amounts of shear. But F6 and F7 shows good spreadable property than other formulations.

Acid Value and Saponification value

The results of acid and saponification value of all formulation of cream are presented in table 2, and showed satisfactorily values.

Irritancy test

The formulation F6 and F7 shows no redness, edema, inflammation and irritation during irritancy studies. These formulations are safe to use for skin (Table 3).

Dye test

This dye confirm that all formulation were o/w type emulsion cream. But formulation (F6) shows more stable in o/w type emulsion.

Homogeneity

All formulations produce uniform distribution of extracts in cream. This was confirmed by visual appearance and by touch.

Appearance

When formulation were kept for long time, it found that no change in colour of cream After feel: Emolliency, slipperiness and amount of residue left after the application of fixed amount of cream was found (Table 4).

Type of smear

After application of cream of F6 and F7, the type of smear formed on the skin were non greasy.

Removal: The cream of F6 and F7 applied on skin was easily removed by washing with tap water.

REFERENCES

1. S. Saraf, C.D. Kaur, Pharmacogn. Rev, 2010; 4(7): 1-11.
2. H.S. Datta, R. Paramesh, J. Ayurveda. Integr. Med, 2010; 1(2): 110-113.
3. Rajvanshi, S. Sharma, S.L. Khokra, R.K. Sahu, R. Jangde, Pharmacologyonline, 2011; 2: 1238-1244.
4. M. Singh, S. Sharma, S.L. Khokra, R.K. Sahu, R. Jangde, Pharmacologyonline, 2011; 2: 1258-1264.
5. M.S. Ashawat, M. Banchhor, S. Saraf, S. Saraf, Phcog. Rev, 2009; 3(5): 82-89.
6. S.M. Moghaddasi, S.K. Verma, Int. J. Biol. Med. Res, 2011; 2(1): 466-471.
7. T. Aburjai, F.M. Natsheh, Phytother. Res, 2003; 17: 987-1000.

A. Feil, M.R. Namazi, Ital. Dermatol. Venereol, 2009; 144(1): 85-91.

8. N. Akhtar, A. Mehmood, B.A. Khan, T. Mahmood, H.M.S. Khan, T. Saeed, African Journal of Biotechnology, 2011; 10(7): 1206-1216.
9. A.K. Mishra, A. Mishra, P. Chattopadhyay, T.J.P.R, 2011; 10(3): 351-360.
10. H.J. Rao, J. Clin. Diagnost. Res, 2012; 6(1): 130-135.
11. R.K. Sahu, A. Roy, P. Kushwah, A. Sahu, R.J.T.C.S, 2012; 3(1): 16-19.
12. Sahu RK, Roy A, Kushwah P, Khare M, Mudotiya R. Formulation and development of whitening polyherbal face cream. RJTCS, 2012; 3(1): 23-27.
13. U. Nandal, R.L. Bhardwaj, Int. Res. J. Plant Sci, 2012; 3(3): 38-46.
14. Y.H. Jin, S.J. Lee, M.H. Chung, J.H. Park, Y.I. Park, T.H. Cho, S.K. Lee, Arch. Pharm. Res, 1999; 22: 232- 236.
15. N. Smit, J. Vicanova, S. Pavel, Int. J. Mol. Sci, 2009; 10: 5326-5349.
16. M.B. Mapunya, R.V. Nikolova, N. Lall, Evidence-Based Complementary and Alternative Medicine, 2012; 52: 1-6.
17. H, Kambayashi, M. Yamashita, Y. Odake, K. Takada, Y. Funasaka, M. Ichihashi, J. Dermato. Sci, 2001; 27(1): S19–S25.
18. C. Bayerl. Acta. Dermatoven. A.P.A, 2008; 17(4): 160-166.