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Formulation and Evaluation of Fairness Cream

Gajare Akshay N.[1], Dhumal Prathmesh. K.[2], Gunjal Abhishek. P.[3], Dere Shubham. S[4], Prof. Bhalekar Sachin M.[5]
Samarth Institute of Pharmacy, Belhe, Pune, Maharastra[1234]
Assistant Professor Samarth Institute of Pharmacy, Belhe, Pune, Maharashtra[5]

Abstract: *The present study was carried out to prepare and evaluate the herbal fairness cream comprising extracts of aloe vera, curcuma longa, emblica officinalis, Camellia sinensis. The various types of formulations oil in water (O/W) base were formulated by incorporating different concentrations Stearic acid and Cetyl alcohol. And different concentration of methyl paraben into the water and glycol in different amount. The pH, viscosity, spreadibilty, and stability of prepared base were investigated. The base was found appropriate for the preparation of cream. The extracts of varying ratio of turmeric , amla , aloe vera and Camellia sinensis were incorporated in base for the preparation of herbal fairness cream the herbal cream demonstrated good spreadibilty, good consistency, homogeneity, appearance, pH, ease of removal and no evidence of phase separation. All the prepared herbal cream was found to be safe for skin.*

Keywords Formulation, evaluation, aturmuric, amala, Aloe vera, Green tea

I. INTRODUCTION

The demand of cosmeceuticals is rapidly expanding. This expansion is due to the availability of new ingredients, the financial rewards for developing successful products, consumer formulation needs maintenance of quality standard. The quality of a formulation should satisfy the consumer's need in terms of its performance. The plant parts used in cosmetic preparation should demand, and a better understanding of skin physiology. Cosmetics are the products that are created for application on the body for the purpose of cleansing, beautifying or altering appearance and enhancing the beauty.

Cosmetics are developed to reduce wrinkles, fight acne and to control oil secretion. For various types of skin ailments formulations like skin protective, sunscreen, antiacne, antiwrinkle and antiaging are designed using varieties materials, either natural or synthetic. The development process for cosmetic have varieties of properties like antioxidant, anti-inflammatory, antiseptic, emollient, antiseborrhatic, antikerolytic activity and antibacterial etc.

These herbal products claim to have less side effects, commonly seen with products containing synthetic agents. The market research shows upward trend the herbal trade with the herbal cosmetic industry playing a major role in fueling this worldwide demand for herbals

Literature survey revealed that Aloe vera is used as protective agent, soothing the skin. It also act as an anti-microbial agent Literature survey revealed that Aloe vera is used as protective agent, soothing the skin. It also act as an anti-microbial agent Literature survey revealed that Aloe vera is used as protective agent, soothing the skin. It also act as an anti microbial agent Curcuma longa have anti-inflammatory activity and it is used in different types of cream and ointments. It contains curcuminoids as anti-oxidant, curcumin as bactericide, anti-fungal and anti-inflammatory agent. Hence it is beneficial to normal human keratinocytes

1.1 Benefits of Fairness Cream

- Herbal Fairness Cream is enriched with wonderful herbal ingredients can gently lighten skin, clears spots and gives you fairness with an even tone.
- It gives beautiful and healthy complexion. Skin can become smooth, supple, flawless and radiant. Provide sun protection and glowing skin fairness creams are also popularly used to reduce problems such as hyperpigmentation, sun spots, dark spots and various other signs of ageing.
- A good quality product with ethical ingredients is also quite helpful in delivering your skin with incredible anti-ageing benefits.

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II. MATERIAL AND METHODS

Prepration of Plant Extract: Air dried and coarsely powder of Amala ,turmeric , aloe vera and Camellia sinensis were placed in round bottom flask the extract separately, with ethanol (70%). The extraction are 3days in placed then extract wetrer filter and collected then The extracts were then concentrated to dryness under reduced pressure and controlled temperature, respectively and they were preserved in a refrigerator

Preparation of Cream Base: 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) 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 base is given

Cream Formulation: The appropriate base was selected from table and creams were 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, all extracts) 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

Table 1: Composition of cream

Sr. no.	Ingriedient	Quantity gm
1.	Amala Extract	5
2.	Aloe vera extract	5
3.	Green tea extract	5
4.	Termuric extract	5
5.	Steric acid	13
6.	Cetyl alcohol	2
7.	Almond oil	4
8.	Glycrol	3
9.	Methyl parabean	0.02
10.	Triethynolamine	qs
11.	Water	qs

Evaluation of Herbal Fairness Cream

- **pH of the Cream:** The pH meter was calibrated using standard buffer solution. About 0.5g 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
- **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 second
- **Saponification Value**: Introduce about 2 gm of substance refluxed with 25 ml of 0.5 N alcoholic KOH for 30 minutes, to this 1 ml of phenolphthalein added and titrated immediately, with 0.5 N HCL.

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- **Irritancy test:** Mark an area (1sq.cm) on the left hand dorsal surface. The cream was applied to the specified area and time was noted. Irritancy, erythema, oedema, was checked if any for regular intervals up to 24 hrs and reported.
- **Stability testing:** Accelerated stability testing of prepared formulations was conducted for 2 most stable formulations at room temperature, studied for 7 days. They were formulation number 4 and 5 at 40 oC ± 1 oC for 20 days. The formulations were kept both at room and elevated temperature and observed on 0th, 5th, 10th, 15th and 20th day for the following parameters

III. RESULT AND DISSCUSION

pH of the cream: The pH of the cream was found to be in range of 6.3 to 6.8 which is good for skin pH. All the formulation of cream were shown pH nearer to skin required

Table 2: pH of cream

Sr.no.	Parameter	Observation
1	PH	6.5

Viscosity: The viscosity of was cream was in the range of 27015 – 27040 cps which indicates that the cream is easily spreadable by small amounts of shear.

Acid value and saponification value: The results of acid value and saponification value of all formulation of cream base were presented in table, and showed satisfactorily values

Table 3: Acid value and saponification value of cream

Sr. No	Parameter	Observation
1	Acid value	5.8
2	Saponification value	26.2

Irritancy test: The formulation shows no redness, edema, Inflammation and irritation during irritancy studies. These formulations are safe to use for skin Homogeneity All formulations of base produce uniform distribution 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 base

After feel: Emolliency, slipperiness and amount of residue left after the application of fixed amount of cream base was found

Type of smear: After application of cream base, the type of smear formed on the skin were non greasy

Removal: The cream applied on skin was easily removed by washing with tap water

IV. CONCLUSION

From the above discussion of it is concluded that on combining the extracts of aloe vera, turmeric, green tea and amala in different ratio to get multipurpose effect such as whitening, antiwrinkle, antiaging and sunscreren effect of skin. as we known that it not possible to increases the extend of efficiency of medical and cosmetics properties of single plant extract but by combining the plant extract it can be possible to increases the efficacy of extract in this regard .we mix the extract of alo vera turmeric amala green tea to improve as well as synerizes the cosmetic properties of prepared product compare to individual extract further research will carry out to cheak scientific action of selected formulation. the studies suggest that composition of extract of base cream are more stable and safe it may produced synergistic action

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