

Formulation and Evaluation of Multipurpose Herbal Cream

Mr.Nitin F.Vanarase, Ms.Bhavana Tambe

Student¹SMBT Institute of D.Pharmacy, Dhamangaon, Nashik, Maharashtra - 422403 India.

Lecturer²SMBT Institute of D.Pharmacy, Dhamangaon, Nashik, Maharashtra - 422403 India.

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ABSTRACT:

Herbal cosmetics are the preparation used to enhance the human appearance. The main Aim of our work is to develop an herbal cream which can give multipurpose effect like moisturizer, reduce acne and skin irritation. We have used four herbal ingredients in our preparations, which are aloe Vera gel (aloe barbadensis), neem (Azadirachta indica), tulsi (Ocimum sanctum) and cucumber. All the products were found to be stable with no sign of phase separation and no change in color. The cream was prepared by using the cream base that is Bees wax, liquid paraffin, Borax, Methyl paraben, Distilled water, Rose oil, Aloe Vera gel, Dimethyl sulphoxide, Extracts of Neem, Tulsi and Cucumber. By using slab technique, we have developed three batches of our herbal cream, namely F1, F2, and F3. All three batches were evaluated for different parameters like appearance, P^H, viscosity, washability, spreadability, greasiness. All the three formulations F1, F2 and F3 showed good appearance, P^H, viscosity, washability, spreadability and greasiness was observed. Also the formulations F1, F2, F3 showed no redness and irritation during irritancy study and they were easily washable. All the three formulations were stable at room temperature.^[4,5]

Azadirachta indica (Neem) and Ocimum sanctum (Tulsi) are well known for its medicinal value in Indian traditional system of medicine. There is growing demand cosmetics for herbal in the world market and they are invaluable gifts of nature. Therefore, I tried to make multipurpose Herbal cream containing the extract of Azadirachta indica and Ocimum sanctum.

Keywords: Herbal Drugs, Azadirachta indica (Neem) and Ocimum sanctum (Tulsi), Herbal Drugs extracts, Herbal multipurpose cream, Evaluations.

I. INTRODUCTION :

Cream is a semisolid emulsion that is mixture of oil and water, intended for application on the skin or mucus membrane. Creams are of two

types namely oily creams and aqueous creams. The oily creams are w/o emulsion which are employed as emollients and cleansing agents. The aqueous creams are o/w emulsions^[3]. These are useful as water washable bases. Herbal formulations always have attracted considerable attention because of their good activity and comparatively lesser or nil side effects with synthetic drugs^[2]. Herbal cosmetics are defined as the beauty products which possess desirable physiological activity such as healing, smoothing appearance, enhancing and conditioning properties because of herbal ingredients. Nowadays there is a great demand for the herbal cosmetics. Cosmetics are the substances intended to be applied to the human body for cleansing, beautifying, promoting attractiveness and altering the appearance without affecting the body structures and functions.^[2]

The main aim of our work is to develop a herbal cream which can give multipurpose effect like moisturizer, reduce acne, skin irritation and reduce skin diseases. We have used four herbal ingredients in our preparation, which are Aloe vera gel, Neem, Tulsi, cucumber^[6,8,15]

II. MATERIALS AND METHODS:

Collection of Material: Aloe vera leaves, Neem Leaves, Tulsi leaves and Cucumber was collected from SMBT Campus and the local area in Dhamangaon, Nashik and Dimethyl Sulfoxide, Beeswax, Liquid paraffin, Borax, Methyl paraben, Rose oil was collected from Pharmaceutics lab (SMBT IODP, Dhamangaon).



Figure .1: Herbal Drugs

Extraction Processes:

Aloe vera gel: Take a fresh aloe vera leaves & washed with purified water. Then the outer part of the leaf were dissected using a sterile knife. Remove the aloevera gel, using the sterile knife. Then it is blend in blender to form aloe vera gel.

Extraction of Neem leaves: Take Neem leaves and washed with purified water & dried in hot air oven. After proper drying leaves was powdered with help of blender. Then take 2gm neem leaves

powder and add 20ml dimethyl sulphoxide in a volumetric flask, and shaken for 1 day on mechanical shaker. Then the solution was heated on a water bath at 80 to 100 °C and then filtered using muslin cloth to remove impurities. Then the filtrate, which is a clear solution or clear extract of Neem leaves, was used in the further formulation^[1]

Extraction of Tulsi leaves: Tulsi leaves was collected, washed & dried in a hot air oven. Then after proper drying the leaves was powdered. Then take 2gm of Tulsi leaf powder ,add 20ml dimethyl sulphoxide in a volumetric flask and then shaken for 1 day on mechanical shaker. Then the solution was heated on water bath at 80 to 100 °C for few minutes ,then filtered using muslin cloth to remove all types of impurities. Then the filtrate in which a clear solution or clear extract of Tulsi leaves was used in the further preparation^[1].

Extraction of Cucumber : Take a fresh cucumber & washed with purified water. Then it is blend in blender to form cucumber gel. This gel is used for further preparation.



Figure .2 : Extraction of Neem leaves and Tulsi Leaves

Roles of Each Ingredients :^[7,9-14]

Sr.No.	Ingredients	Roles
1.	Neem	Relieves skin dryness,itching and Redness
2.	Tulsi	Antibacterial,promote wound healing
3.	Aloe vera gel	Anti-ageing,anti-inflammatory,moisturizer,reduce acne and pimples
4.	Cucumber	Anti-oxidant,soothing and cooling effect
5.	Bees wax	Emulsifying agent,stabilizer
6.	Liquid paraffin	Lubricating agent
7.	Borax	Alkaline agent which reacts with emulsifying agent to form soap
8.	Methyl paraben	Preservative
9.	Rose oil	fragrance

Formulation of cream:

Oily phase: Heat Bees wax, liquid paraffin in Petri dish at a temperature 75°C in water bath.

Aqueous phase: Dissolve borax in a beaker add methyl paraben and distilled water. Mix the all

ingredients with continuous stirring. Heated 75°C. temperature. Transfer the aqueous phase into oily phase with continuous stirring and add aloe vera gel, Neem extract, cucumber and Tulsi extract in with continuous stirring and finally add rose oil



Figure .3 : Formulation of Herbal Cream

Formulation Table:

Sr.No.	Ingredients	F1	F2	F3
1.	Aloe Vera Gel	1.5 ml	1ml	1 ml
2.	Neem Extract	0.5ml	0.2ml	0.4ml
3.	Tulsi Extract	1.5ml	1ml	1 ml
4.	Cucumber Extract	0.5ml	0.5ml	0.5ml
5.	Liquid Paraffin	10ml	15ml	12ml
6.	Borax	0.2gm	0.4gm	0.3gm
7.	Methyl paraben	0.02gm	0.04gm	0.03gm
8.	Beeswax	3gm	3.5gm	3.2gm
9.	Rose oil	Q.S	Q.S	Q.S
10.	Distilled water	Q.S	Q.S	Q.S

Evaluation Table :

Sr.No.	Evaluation tests	Observations		
		F1	F2	F3
1.	Physical Evaluation			
	Color	Yellowish Green	Faint Green	Green
	Odour	Pleasant	Pleasant	Pleasant
	Texture	Smooth	Smooth	Smooth
2.	Washability	Easily Washable	Easily Washable	Easily Washable
3.	pH	6.8	7	6.6
4.	Viscosity	0.98 gm/mol	0.99 gm/mol	0.99 gm/mol
5.	Spreadability	Easily spreadable	Easily spreadable	Easily spreadable
6.	Greasiness	No Greasiness	No Greasiness	No Greasiness

Evaluation Of Cream:^[1]

A) Physical Evaluation

Formulated herbal creams was further Evaluated by using the following physical parameter physical parameter colour, odour, consistency, and state of the formulation.

1.Colour: The colour of the cream was observed by visual examination.

2.Odour: The odour of cream was found to be Pleasant.

3.State: The state of cream was examined visually.

4.Consistency: The formulation was examined by rubbing cream on hand manually. The cream having smooth consistency.

5.P^H:P^H of prepared herbal cream was measured by using digital ph meter. The solution of cream was prepared by using 100 ml of Distilled water and set aside 2h. Ph was determined in three times for solution and the average value was calculated.

6.Spreadability : Spread ability of formulated cream was measured by placing sample in between two slides then compressed to uniform thickness by placing a definite weight for defined time. The specified time required to separate the two slides was measured as Spreadability. Lesser the time taken for separation of two slides results showed better Spreadability.

7.Washability: formulation was applied on the skin and then ease extends of washing with water was checked.

III. RESULT AND DISCUSSION:

I was prepared Three Formulations F1,F2 and F3, From which the F2 formulation shows good color,P^H Viscosity and consistancy as compared to other formulations. Also, all formulation shows no itching,no redness and irritation to the skin and they were easily washable. The formulation were stable at room temperature.

The extracts of Azadirachtaindica promote wound healing, relieves skin dryness, itching and redness. The extract of Ocimum sanctum has antibacterial activity.aloe vera gel also given smothing effects ,viscosity modifier,reduce acne and pimples and Cucumber shows cooling soothing effects and reduces dark spots from the skin.

IV. CONCLUSION :

By using Aloe Vera gel, Neem and Tulsi the cream showed a multipurpose effect and all these herbal ingredients showed significant different activities. Based on results and discussion, the formulation were stable at room temperature and can be safely used on the skin. It promote wound healing, relieves skin dryness, itching and redness. The extract of Ocimum sanctum has antibacterial activity.

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