CR Subscription Agency
Exploring and Distributing Knowledge Globally

Research Journal of Medicinal Plants in Ayurveda
Volume 1 Issue 1

Formulation of Herbal Cream to Treat Dry Skin

A. Krishna Sailaja, G. Bhanusri, V. Swetha,
M. Pharmacy Pharmaceutics, RBVRR Women's College of Pharmacy,
Osmania University, Hyderabad, India.
****Corresponding Author***
Email ID:- shailaja1234@rediffmail.com

ABSTRACT

The main aim of the present article is to reduce the adverse effect associated with synthetic dry skin cream by formulating an herbal dry skin cream for treatment of dry skin. Abnormally dry skin Can be occurs due to a dry weather, winter weather, acute deficiency of vitamin A, systemic illness, over exposure to sunlight, or medication. The skin loses moisture. It may crack and peel. Or it may become irritated, inflamed, and itch. Bathing repeatedly, especially with soaps, can contribute to dry skin. This research mainly based on the treatment of dry skin by using various herbs and making poly herbal formulation. Herbs such as cucumis sativus (main fruit juice) used as repair dry skin and damaged skin, moisturizer, azadirachta indica (neem leaves) used as skin moisturizer, rose water(rose water) used as cooling agent, flavouring agent, emollient, tulasi (tulasi leaves) used as antioxidant and skin texture improve, antimicrobial agent, amla (amla fruit) used as antioxidant and vitamin C help to brighten your skin, vitamin E used as moisturizer skin, lotus flower(lotus petals) used as anti-inflammatory and which help balance sebum production, improve the texture and elasticity of the skin, cool. Natural herbal extract in combination effectively utilized for the treatment of dry skin. Use of such product far better than the use of synthetic cream for the control of dry skin.

Keywords: *Herbal Cream, Cucumis Sativus, Antioxidant, Anti-Inflammatory.*

INTRODUCTION

Dry skin is a condition in which the skin lacks the moisture. It can be caused due to sun burn, medications, low humidity, and vitamin deficiency [1]. The appearance of the skin is dependent on the balance between the water content of stratum corneum and surface lipids of skin. Due to exposure to external and endogenous factors it may disrupt this balance which leads to the dry skin condition [1-3]. Disturbance of skin barrier led to various types of skin problems most common condition is loss of water content, roughness, cracks, redness, tightness, itching, stinging. The useful of herbs in cosmeceutical production now a day has been extensively increased and there is a great demand for herbal cosmetics. An herbal cream reduces the side effects and improves the condition of dry skin [5].

SIGNS AND SYMPTOMS

1) Itching
2) Slight to severe flaking, scaling or peeling
3) Fine lines or cracks
4) Red ness
5) Deep cracks that may bleed

CAUSES

There is no single cause for dry skin. Dry skin causes may be classified as external and internal.

External factors are common and easy to address them are cold temperatures, low humidity especially during winter, over

washing with the harsh soaps.Internal factors are age, overall health, genetics, family history, thyroid diseases.

Some of the side effects associated with the synthetic drug is most emollients can be used safely & effectively with no side effects, how ever burning, stinging, redness or irritation may occur. Since in order to overcome such adverse effects now a day's herbal preparations are gaining more access because of its multiple uses associated with the herbs. [Table 1].

Formulation Table: 1

S.no	Ingredients	Family	Uses
1	*Cucumis sativus*	Cucurbitaceae	Promotes cooling effect, soothing effect, emollient, moisturizer
2	*Azadirachta indica*	Meliaceae	Used as Anti-oxidant & anti-microbial agent
3	*Genus Rosa*	Rosaceae	Used as perfume, emollient
4	*Oucimum tenuiflorum*	Lamiaceae	Improves skin texture, used as anti-oxidant, anti-inflammatory
5	*Phyllanthus emblica*	Phyllanthaceae	Reduces suntan, brighten your skin, acts as moisturizer
6	*Vitamin E*		Moisturizes skin
7	*Nelumbo nucifera*	Nelumbonaceace	It hydrates skin, improves skin elasticity & complexion, ani-inflammtaory

PREPARATION OF EXTRACTS

All the active ingredients were extracted by using the maceration and soxhlet apparatus. All the Herbs such as cucumis sativus fruit, azadirachta indica leaves, rose leaves, tulasi leaves, amla fruit, lotus flowers were weighed accurately and aqueous extraction had been done (10 times of the weight of the drug *i.e.* 5gm in 50ml of water on water bath at 80-100oC). As the solution concentrated up to 20 ml, filtered. Residue had been taken and volume was marked up to 40 ml, again boiled. After remaining 20 ml was filtered and collected in the form of powder and the same procedure was repeated again [6-8].

PREPARATION METHOD

Herbal cream is prepared by extracting the active ingredients of herbs by using maceration and weighed quantity of stearic acid, Tri ethanol amine heat in a china dish to a temperature of 70 [2]. Add aqueous phase, herbs extract to oily phase with continuous stirring and let it cool down to room temperature and then add perfume to it [6-8]

EVALUATION OF CREAM

1) **Physical Properties**: The Cream was observed for colour, odour and appearance.
2) **Test for Thermal Stability**: Thermal stability of the formulation was determined by the humidity chamber controlled at 60- 70% RH and 37 ± 1oC [11].
3) **Colour and odour**: Physical parameters like colour and odour were examined by visual examination [13].
4) **Homogenity**: The formulations were tested for the homogeneity by visual appearance and by touch [2].
5) **Determination of pH:** – 5 ± 0.02gm of the Cream was weighed accurately in a 100ml beaker. 45ml of water was added and dispersed the Cream in it.

The pH of the suspension was determined at 27o C using the pH meter [12].

6) **Stability studies**: Stability testing of drug products begins as a part of drug discovery and ends with the demise of the compound or commercial product. To evaluate the drug and formulation stability, stability studies were performed according to ICH guidelines. The cream poured in bottle and kept in humidity chamber maintained at 30 ± 2°C/ 65 ± 5 % RH and 40 ± 2°C / 75 ± 5 % RH for two months. At the end of studies, samples were analyzed for the physical properties and viscosity [12-13].
7) **Patch Test**: About 1-3gm of material to be tested was placed on a piece of fabric or funnel and applied to the sensitive part of the skin e.g. skin behind ears. The cosmetic to be tested was applied to an area of 1sq.m.of the skin. Control patches were also applied. The site of patch is examined after 24 hrs [12-13].
8) **Spread ability studies**: An important criteria for semisolids is that it possess good spread ability. Spreadability is a term indicated to denote the extent of area to which the cream readily spreads on application to the skin. The therapeutic effectiveness of a formulation also depends on its spreading value. Spreadability is expressed in terms of time in seconds taken by two slides to slip off from the formulation, placed between, under the application of a certain load. Less time taken for the separation of the two, better the spread ability. Two glass slides of standard dimensions were selected. The formulation whose spread ability had to be resoluted was placed over one of the slides. The other slide was placed on top of the formulations was sandwiched between the two slides across the length of 5 cm along the slide. 100 g weight was placed up on the upper slide so that the formulation between the two slides was pressed uniformly to form a thin layer. The weight was removed and the excess of formulation adhering to the slides was discarded off. One of the slide was fixed on which the formulation was placed. The second movable slide was placed over it, with one end tied to a string to which load could be applied by the help of a simple pulley and a pan. A 30g weight was put on the pan and the time taken for the upper slide to travel the distance of 5.0cm and separate away from the lower slide under the direction of the weight was noted. The spread ability was then calculated from the following formula: Spread ability= m ×l /tm = weight tied to the upper slide (30g) l =length of glass slide (5cm) t =time taken in seconds [2,12].
9) **Test for microbial growth in formulated creams**: The formulated creams were inoculated on the plates of agar media by streak plate method and a control was prepared by omitting the cream. The plates were placed in to the incubator and are incubated at 37 0C for 24 hours. After the incubation period, plates were removed and examine the microbial growth by comparing it with the control [12,13].
10) **Skin hydration**: Hydration of the epidermis was determined with a non-invasive using an electronic device, Multitester [CASIO, H-21, India] that measured resistance based on the commonly known fact that hydrated skin has less resistance to current flow than dehydrated skin. The level of stratum corneum hydration was assessed by measurement of the changes in skin resistance and is referred to as the galvanic skin response or electrical skin resistance. The skin resistance reported in ohms with electrodes [size 1 cm2] was measured 30min and 6hr after

application of the formulation. [2,5,8,12].

11) **Viscosity**: Viscosity measurements of the formulations were determined using rotational-type viscometer (Brookfield DVII, Germany TA spindle, 25±1°C). Measurements were taken in 3 replications in 100 rpm (n: 3). Viscosity values were recorded in centipoise (cP).

CONCLUSION

The herbs that are used in cream preparation are safer for skin to reduce the dryness of skin and found to be effective than synthetic cream. In case of herbal cream there is increase in the therapeutic effect in comparison to the synthetic cream.Since the cream was prepared by using simple ingredients and simple methods so the cream is also economicaland it can be used as the provision of a barrier to protect skin. So the herbal cosmetics are the most important part of the today's modern life as they are used for the beautifications purpose mainly, their demand increases vigorously. The uses of cosmetic have been improved in many folds in personal care system.

REFERENCES

1. Formulation and evaluation of moisturizing cream containing sunflower wax original article Avish D. Maru, Swaroop R. Lahoti.
2. Formulation and Evaluation of Multipurpose Herbal Cream. Archana Dhyani, VikasChander, Dr.Nardev Singh
3. Medical Definition of Dry skin Medical Author: William C. Shiel Jr., MD, FACP, FACR.
4. Formulation and Evaluation of Moisturizer Containing Herbal Extracts for the Management of Dry Skin Article in Pharmacognosy Journal 2(11):409–417 · August 2010 with 774 Reads DOI: 10.1016/S0975-3575(10)80024-0.
5. Efficacy evaluation of different cream formulations on healthy skin properties mirela moldovan1, lorelai ciortea2.
6. Formulation development and evaluation of cream using rice bran wax for topical application Rajeev Malviya, Dr. M.D. Khirsagar, Dr. A.V. Chandewar
7. Formulation and Evaluation of Herbal Cream containing Curcumalonga.Sujith S Nair, Molly Mathewand Sreena K.
8. Formulation and Evaluation of Multipurpose Herbal Cream Akash S. Mali1, Karekar P, Dr. Yadav A. V.
9. Dry Skin: Types, Risk Factors, and Treatments - Healthline https://www.healthline.com › health › dry-skin.
10. Pathway to Dry Skin Prevention and Treatment <L. Guenther, C.W. Lynde, AnnekeAndriessen, B. Barankin, E. Goldstein, S.P. Skotnicki-Grant, S.N. Gupta, K. Lee Choi, N. Rosen, L. Shapiro, and K. Sloan.
11. Formulation and evaluation of cream from naturally containing plant extracts sk. uddanduSaheb, AduriPrakash Reddy, K. Rajitha, B. Sravani, B. Vanitha.
12. A.Krishna sailaja and P. Amareshwar Preparation of chitosan coated nanoparticles by emulsion polymerization technique. Asian Journal of Pharmaceutical and Clinical Research,2011, 4
13. Formulation and Characterization of Herbal cream containing Fenugreek seed extracts. Jaya Gade, Snehal More, NavinBhalerao.