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Formulation and evaluation of cream with Different Emolient by Using Bakuchi and Licorice Extract

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ABSTRACT:
The aim of present study was to formulation and development of herbal face cream containing extracts of plant materials such as Psoralea corylifolia and Gycyrrhizaglabra . Different types of formulations Oil in water (O/W) base cream was prepared from the ethanol extract of P. corylifolia and G. glabra namely F1 to F3 were formulated by incorporating with different emollient.The evaluation of cream was done on different parameters like pH, skin irritancy homogeneity, spreadabilty, and stability test were examined. The herbal cream showed good spreadabilty, good consistency, homogeneity, appearance, pH, ease of removal and no evidence of phase separation. The formulation F1 and F3 were shown good spreadability and consistency than F2.

KEYWORDS:Psoralea corylifolia, Gycyrrhiza glabra, emollient, homogeneity and spreadability

I. INTRODUCTION:

Over the last decades the treatment of illness have been accomplished by administrating drugs to human body via various roots namely oral, sublingual ,rectal, parental ,topical ,inhalation etc. Topical delivery can be defined as the application of a drug containing formulation to the skin to directly treat cutaneous disorder or the cutaneous manifestations of a general disease (eg. psoriasis) with the intent of containing the pharmacological or the effect of drug to the surface of the skin or within the skin semisolid formulations in all their diversity dominate the system for topical delivery, but foams, spray , medicated powders, solutions and even medicated adhesive systems are in use.

Advantages of topical drug delivery system like avoidance of first pass metabolism, convenient and easy to apply, inconveniences of intravenous therapy and of the varied conditions of absorption like pH changes presence of enzymes gastric emptying time etc, achievement of efficacy with lower total daily dosage of drug by continuous drug input are make to select transdermal route over other.

Bakuchi is an erect herb which grows upto 300 to 1800 centimeters. Branched stems are covered with thin white colored hair like projections Leaves have petiolate arrangement. Bakuchiol is a useful compound against oral pathogens. It has a great potential for use in food additives and mouthwashes for preventing and treating dental caries. Bakuchiol have proven anti-tumor activity. It is useful in treatment of cancer. Bakuchiol showed broad antioxidant activities It has shown bioactivityagainst various Candida species associated with oral biofilm. It could serve as a better alternative over currently available antifungal drugs.

An extract of Glycyrrhiza glabra (Family Leguminosae) is rich of natural antioxidants. The most popular antioxidants component in extract of G. glabra is glycyrrhizin (glycyrrhizic acid) and flavonoids. The therapeutic effect of G. glabra extract on skin is mainly due to its antioxidant property particularly to its potent antioxidants triterpene saponins and flavonoids. It is commonly used in skin for skin whitening, skin depigmenting, skin lightening,antiaging, emollient, anti-acne and photoprotection.Therefore, an attempt has been made in this study to combine these plants in preparation of herbal cream.

II. MATERIALS AND METHODS

Preparation of alcoholic extract of crude drugs:

All above mentioned powdered crude drugs of 5gms were taken into the conical flask and then100ml. of ethanol was added to it, then the conical flask was capped with aluminium foil. Then this mixture was placed for maceration for 5 days.[6]

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Preparation of cream formulation:
Moisturising cream are o/w emulsion based preparations containing aqueous phase and oil phase.

Preparation of oil phase:-
The oil phase (stearic acid ,cetyl alcohol, beeswax [F1],petroleum jelly [F2],cocoa butter[F3])was mixed together by melting in a china dish on constant stirring upto 75˚C.The oil phase was mixed together by melting in a china dish on constant stirring.keep it aside for cooling. .

Preparation of aqueous phase:-
Components of aqueous phase (TEA,Propyleneglycol,propyl paraben and water[q.s])were mixed together in a separate container and warmed to about same temperature of oil phase. Keep it aside for cooling.

Development of cream:
Aqueous phase was added to oil phase drop by drop on constant stirring. Perfume was incorporated when the formulation begins to solidification. The preservatives propyl paraben and were added after cooling. And required quantity of herbal extracts were also added to the cream and stirred till the formulation aquires cream consistency.

Table1:FORMULA FOR CREAM DEVELOPMENT

INGRIDIENTS	WORKING FORMULA (W/F) 30G		
	F1	F2	F3
Herbal Extract	5%	5%	5%
Stearic Acid	3g	3g	3g
Beeswax	2.93g	-	-
Petroleum Jelly	-	2.93g	-
Cocoa Butter	-	-	2.93g
Cetyl Alcohol	0.363g	0.363g	0.363g
Propylene Glycol	0.363ml	0.46ml	0.52ml
Triethanolamine	0.9ml	0.7ml	0.85ml
Liquid Paraffin	0.6ml	0.6ml	0.6ml
Water	30ml Qs	30ml Qs	30ml Qs
Propyl Paraben	0.000013	0.000013	0.000013

III. RESULT AND DISCUSSION:

Organoleptic characteristics : Drug-loaded formulations were tested for physical appearance, colour, odour, texture, consistency and homogeneity. These characteristics were evaluated by visual observation.

Homogeneity and texture: It was tested by pressing a small quantity of the formulated cream between the thumb and index finger. The consistency of the formulations and presence of coarse particles were used to evaluate the texture and homogeneity of the formulations. Immediate skin feels (including stiffness, grittiness, and greasiness) was also evaluated.

pH: This is basically refers to acidity levels of substances. The normal value of Ph (cream)) is pH 4-7. This test was measured either by using digital pH meter or by pH paper. Result were shown in table 2.

Irritancy study : Mark an area of 1sq.cm on the left-hand dorsal surface.The cream was applied to the specified area and time was noted. Irritancy, erythema, edema was checked, if any regular intervals up to 24hrs and reported.Result were shown in table 2.

Washability test : A portion of cream was applied over the skin of hand and allowed to flow under the force of flowing tap water for 10 minutes. The time when the cream completely removed was noted. Result were shown in table 2.

Phase separation: The prepared cream was transferred in a suitable wide mouth container. Set aside for storage, the oil phase and aqueous phase separation were visualizing after 24h.Result were shown in table 2.

Spreadability: The spreadability of cream was determined by the parallel plate method. Two glass slides of 20/20 cm were selected. About 1g of the

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cream formulation was placed over one of the slides. The other slide was placed upon the top of the cream such that the cream was sandwiched between the slides and 125g weight was placed upon the upper slide so that cream between the two slides as pressed uniformly to form a thin layer. The weight was removed and the spread diameter was measured. Result were shown in table 2.

After Feel: Emoliency slipperiness and amount of residue left after the application of the fixed amount of cream was found to be good.

TABLE 2: EVALUATION RESULT OF FORMULATIONS

Parameter	F1	F2	F3
Color	White	Pale yellow	White
Odor	Pleasant	Pleasant	Pleasant
Texture	Smooth	Smooth	Smooth
pH	6.8	6.2	6.7
Spreadability	7.4g/cc	6.85g/cc	7.8g/cc
Washability	Easily washable	Easily washable	Easily washable
consistency	smooth	smooth	smooth
Irritancy test	Non irritant	Non irritant	Non irritant
Phase separation	No	No	No
After feel	Emollient	Emollient	Emollient

IV. CONCLUSION:

This study is to prepare and evaluate herbal face cream using herbal extract of Psoralea corylifolia and Gycyrrhiza glabra with different emollient such as bees wax, petroleum jelly and cocoa butter. This formulation is o/w type of emulsion, hence all three formulaion was easily washed with plane water after application. The prepared formulation was shown good organoleptic characters, homogeneity, spreadability and pH. The cream does not show any type of phase separation during storage. The formulation was non irritant, non greasy, and not harm to the skin. Out of three formulation F1 and F3 with bees wax and cocoa butter respectively has shown good consistency, spreadabilty and homogeniety than F3 with petroleum jelly.

REFERENCE:

[1]. Chauhan L, Gupta S, Creams: A Review on Classification, Preparation Methods, Evaluation and its Applications, Journal of Drug Delivery and Therapeutics. 2020; 10(5-s):281-289

[2]. Kajal Nivrutti Tangadkar,Talekar Sakshi Karbhari,Shinde Ashok Lahu, Prof.Akshada Dilip Suryawanshi.© 2022 JETIR June 2022, Volume 9, Issue 6. Formulation and Evaluation of Herbal Moisturizing Cream .

[3]. Formulation and Evaluation of Herbal Moisturizing Cream ,Subhash Sunil Shinde, Prof.H.N.Ghule, Dr.PrachiUdapurkarKishori College Of Pharmacy Beed, Dr.Babasaheb Ambedkar Technological University Lonere IJIRT | Volume 10 Issue 1 | ISSN: 2349-6002

[4]. Moisturizers: The Slippery Road,Sethi A, Kaur T, Malhotra SK, Gambhir ML. Moisturizers: The slippery road. Indian J Dermatol 2016;61:279-87.

[5]. A Review Article On:Pharmaceutical Creams and their use in wound healing Shaikh Asif Ayub1 , Shaikh Sana M Jafar Shaikh2 , Dipak Sopan Nandurkar3 , Sopan Kondiba Ghuge4 , Sahil Iqbal Tamboli4 , Dnyaneshwar Subhash Giri5 , Mohammad Shoab Shaikh diler6 , Jamir Akbar Shah7 , Mahesh Dadasaheb Kadam8 ,Vol-9 Issue-1 2023 IJARIIE-ISSN(O)-2395-4396.

[6]. Formulation and Evaluation of Vanishing Herbal Cream of Crude Drugs,Ashwini S. Dhase*, Somishwar S. Khadbadi and Shweta S. Saboo; American Journal of Ethnomedicine, 2014, Vol. 1, No. 5, 313-318

[7]. Skin Cream as Topical Drug Delivery System: A Review Tanesh Sahu, Tarun Patel, Sagar Sahu, Bina Gidwani*.Sahu et al., J Pharm Biol Sci 2016; 4(5): 149-154.