WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.084
Volume 9, Issue 8, 2073-2077. Research Article ISSN 2277– 7105

FORMULATION AND EVOLUTION OF HARIDRA IN GEL FORM

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Article Received on
15 June 2020,

Revised on 06 July 2020,
Accepted on 27 July 2020,

DOI: 10.20959/wjpr20208-18312

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ABSTRACT

Even in areas here where modern medicine is available the interest on herbal medicines and their utilization have been increasing rapidly in recent years. Plants derived substance and herbal medicines have attracted the great interest towards their versatile application. As medicinal plants are the richest sources of bioactive compound used in traditional and modern medicine.[1] The presents work is to formulate and evaluate the gel of Turmeric (curcuma longa) extract i.e. Haridra, The entholic extracts were prepared by using maceration method the gel base was prepared and formulation of gel was done by incorporating the extract base.[2] After completion of formulation it was evaluated for its physic- chemical parameters like colour, odour, ph, spredіability and diffusion thus it could become a media to use the medicinal properties of Haridra effectively and easily as a simple dosage form.

KEYWORDS: Maceration, Spreadiability.

INTRODUCTION

Turmeric (Haridra) has been in use for thousands of years as a dye, flavoring and medicinal herb. Ancient Indian medicine has touted turmeric as an herb with the ability to provide glow and luster to the skin as well as Vigor and vitality to the entire body. since curcumin has antimicrobial, antioxidant, astringents and other useful properties it is quite useful in dentistry also Curcumin, the most active poly phenollic constituents is the active ingredients in a traditional herb remedy and dietary spice turmeric in gel form it is a component in local drugs delivery system.[1] The objectives of this article are to review the haridra gel.

Along with other dosage forms herbal drugs are also available in the form of gel which is semisolid preparation used topically for several purposes.e.g. protectant, antiseptics, emollients, anti pruritics keratolytics and astringents.[3] The clinical evidence indicates that topical gel is a safe and most effective treatment option for use in the management of skin related disease and used for local action to reduce the side effects associated with other conventional dosage form. Topical drug delivery systems include a large variety of pharmaceutical dosage form like semisolids, liquid preparation, sprays and solid powders.

MATERIALS AND METHODS

Dried rhizomes of turmeric were purchased from local market

Rhizomes of turmeric were collected washed thoroughly with distilled water 150gm pieces was imbibed with 500 ml for 3 hrs. or over height with occasional stirring finally extract was collected and concentrated to get yellowish residue.[4] The extract was stored in airtight container at cool and dark place.[4]

Formulation

Haridra Water	**500ml**
carbopol	4gm
TEA(Trithanolamine)	200 drops
Glycerin	2gm
DMDM	0.1%

Composition of Gel

Carbopol - gelling agent, triethanolamine (TEA) clear gel base, glycerin, DMDM – preservatives, essence-cool water.

Procedure of Preparation of Herbal Gel

Soak the Carbopol in haridra extract till it dissolve completely or put it for soaking overnight.[4] then mix TEA dropwise with the continuously stiring put it till the pH reaches 7 or the gel forms then add DMDM, glycerin mixing homogeneously gradually incorporating baser until to form homogeneous gel.[5] finally transferred in a suitable container.

Evaluation

Color and odor- physical parameters like color and odor were examined by visual examination.

1) CONSISTANCY-Smooth and no greediness is observed.[6]

2) LOD was determined by placing the formulation in petri- dish on water bath and dried for

temperature 105^0c

3) Washability

Formation was applied on the skin and then ease of extend washing with water was checked.

4) Non –Irritancy Test

Herbal gel prepared was applied to skin human being and observed for effect.

5) pH- pH of prepared herbal gel was measured by using digital pH meter.[7] The solution of gel of distilled water and set aside for 2 hrs. pH was determined in triplicate for solution and average value was calculated.

6) Diffusion Study

The diffusion study was carried out by preparing agar nutrient medium. A hole board at center of medium and gel was placed in it. The time taken by gel to get diffused through was noted. (After 60 min).

7) Extrutability

The formulation was filled in collapsible tube container.[8] The extrude ability was determined in terms of weight of gel required to extrude 0.2 cm of ribbon of gel in 5 seconds

8) Stability Test

Physical stability test of the herbal gel was carried out for four weeks at various temperature conditions like 2^0c, 25^0c and 37^0c. The herbal gel was found to be physically stable at different temperature i.e.2^0c, 25^0c,37^0c within 4 hours.

9) Sprediability

The spreadability was determined by placing excess of sample in between two slides which was compressed to uniform thickness by placing a define weight for definite time. The time requires to separate two slides was measured as spreadability.[9] Lesser the time taken for separation of two slides of two results better spreadiability. Sprediability was calculated by following formula

$$S=M \times L/T$$

Where S=Spreadability M=Weight tide the upper slide

L=Length of glass slide

T=Time taken to separate the slides

Analysis of Haridra

Parameters	Test observation
1) Description	a. Colour-yellow b. Odor –unpleasant c. Teste-Bitter d. Size- 4-5cm,1-2 cm diameter
2) Average weight content	100 gm
3) Colors of an aqueous Extract (10%)	Yellow
4) pH of aqueous Extract (10%)	7.63
5) Loss on drying	o.49%
6) Total ash	2.13%
7) Water soluble extractive	63.81%
8) Alcohol soluble extractive	26.42%

Physico Chemical Evaluation of Formulation of Gel

Physico Chemical Parameters of Gel	Observation
1)Color	yellow
2)Odor	Characteristics
3)Consistency	Smooth
4)pH	4.37
5)Extrudability	0.4 gm
6)Diffusion study (after 60 min)	0.7cm
7)LOD	30%
8)Solubility	Soluble in boiling water, miscible with alcohol, ether, chloroform
9) Washability	Good
10)Non-irritancy test	Stable

RESULTS and Discussion %

The presents study was done to prepare and evaluate the herbal gel for this the herbal extracts were prepared by using simple maceration process to obtain a good yield of extract there was no any harm to chemical constituents and their activity the physiochemical properties were studied which shows satisfactory results for extrude ability, wash ability, solubility, loss on drying and others.

Also, the formulation was placed for stability study at different temp. and conditions like 2^0c,25^0c,37^0c within 4weeks. There were no changes observed in diffusion study as well as irritant test.

CONCLUSION

From the ancient time turmeric used for their various medicinal properties like antibacterial, antifungal, and anti-inflammatory etc. This gel could become a media to use these medicinal

properties effectively and easily as simple dosage form.

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