WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
SJIF Impact Factor 8.453
Volume 13, Issue 10, 632-638. Research Article ISSN 2277–7105

FORMULATION AND EVALUATION OF HERBAL DUSTINGPOWDER TO TREAT SEBORRHEIC DERMATITIS

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Article Received on
27 March 2024,

Revised on 17 April 2024,
Accepted on 07 May 2024

DOI: 10.20959/wjpr202410-32368

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ABSTRACT

The main aim of this work was to formulate the dusting powder to treat seborrheic dermatitis which is type skin diseases. This herbal dusting powder as per the named contains the herbal ingredients like powder of cinnamon and neem leaves. This herbal dusting powder gives the therapeutic effect against skin diseases and gives the cooling effect and relief from the irritation and pain. This powder can also be used as antimicrobial. This powder was safer to use, cost effective and easy to administration. This powder is formulation for the external use. After the formulation the evaluation test was also performed and the results were satisfactory.

KEYWORDS: Antimicrobial, Seborrheic, Cinnamon, Dusting powder.

INTRODUCTION

Seborrheic dermatitis is a type of skin disease that causes the patches and scaly on the surface on the skin. Its causes the skin irritation, inflamation, fungal infection, bactrial infection etc. For the treatment of this diseases the herbal dusting powder was formulated using the herbal ingredients. This herbal dusting powder acts on stratum corneum of the skin. This herbal dusting powder contains the cinnamon powder and neem powder as its main ingredients. Cinnamon and neem are both the antimicrobial agents. They inhibit the microbial growth.

This both ingredients are also effective against the seborrhoea on the skin. The process of the formulation this herbal dusting powder is given in this article.

Ingredients

Cinnamon powder

Cinnamon comprises of a assortment of resinous compounds, counting cinnamaldehyde, cinnamate, cinnamic corrosive, and various fundamental oils detailed that the hot taste and scent are due to the nearness of cinnamaldehyde and happen due to the assimilation of oxygen The nearness of a wide extend of basic oils, such as trans-cinnamaldehyde, cinnamyl acetic acid derivation, eugenol, L-borneol, caryophyllene oxide, b-caryophyllene, L-bornyl acetic acid derivation, E-nerolidol, α-cubebene, α-terpineol, terpinolene, and α-thujene, has been reported.[1]

It is used as the anti-microbial agent in this herbal dusting powder.

Fig. Cinnamon powder.

Neem powder

Neem appears therapeutics part in wellbeing administration due to wealthy source of different sorts of fixings. The foremost vital dynamic constituent is azadirachtin and the others are nimbolinin, nimbin, nimbidin, nimbidol, sodium nimbinate, gedunin, salannin, and quercetin. Clears out contain fixings such as nimbin, nimbanene, 6-desacetylnimbinene, nimbandiol, nimbolide, ascorbic corrosive, n-hexacosanol and amino corrosive, 7-desacetyl-7benzoylazadiradione, 7-desacetyl-7-benzoylgedunin, 17-hydroxyazadiradione, and nimbiol.Quercetin and ß-sitosterol, polyphenolic flavonoids, were filtered from neem new takes off and were known to have antibacterial and antifungal properties and seeds hold profitable constituents counting gedunin and azadirachtin.[2] It is utilized as a antifungal, antibacterial.

Fig. Neem powder.

Clove oil

Chemical profile of this oil is by and large found by GCMS examination.[7-11] Great quality clove bud contains unstable oil (15 to20%), which primarily comprises of eugenol (70 to 85%),eugenyl acetic acid derivation (10 to 15%), and beta-caryophyllene (5 to12%). Other minor constituents counting methyl amyl ketone, kaempferol, Gallo tannic corrosive, αhumulene, β-humulene, methyl salicylate, crategolic corrosive, and benzaldehyde are capable for the characteristic charming scent of clove.[3]

Fig. Clove oil.

Starch

It is utilized as adsorbent within the detailing. It is insoluble buildup which remains after a granular starch is mostly solubilized by an chemical. Typically utilized as the base for cleaning powder either alone or in combination with other fixings like talc.[4]

Fig. Starch powder.

Talc

It is clay mineral composed of hydrated magnesium silicate. Powder in powdered shape, regularly in combination with corn starch, is broadly utilized substance known as child powder. This mineral is utilized as a thickening operator and grease. It is additionally utilized for the adsorbent action.[5]

Fig. Talc powder.

Kaolin

It could be a clay mineral, portion of gather of mechanical minerals. Kaolin is connected tothe skin to dry or mollify the skin. It moreover utilized for the adsorbent action.[6]

Fig. Kaolin powder.

Zinc stearate

It is broadly utilized as a discharge operator, cleaning operator and a stabilizer. It is utilized in cleaning powders as a dry oil to retain dampness and avoid chafing.[7]

MATERIAL AND METHOD

The cinnamon and neem powder were made in the college. The starch, talc, kaolin, zinc stearate was issued from the college. And the clove oil was purchased from the herbal medical store.

Formula

Sr. no.	Ingredients	Quantity given	Quantity taken	Role of ingredients
01	Cinnamon powder	8 gm	4gm	Antimicrobial
02	Neem powder	6 gm	3 gm	Antimicrobial, antifungal
03	Starch	25 gm	12.5 gm	Adsorbent
04	Talc	55 gm	28 gm	Thickening agents
05	Kaolin	15 gm	7 gm	To dry and soften the skin
06	Zinc stearate	5 gm	2.5gm	Stabilizer
07	Clove oil	0.50 %	0.25%	Reliefs pain

Procedure

1) Firstly, collect the cinnamon bark and neem leaves and wash them and then live forthe sun dry.
2) Take the mortar pestle and clean it.
3) After the leaves of neem and cinnamon bark are dried then transfer them it into themortar pestle. Make the fine powder of them separately.
4) Now, weigh all the ingredients as per the formula.
5) Again, wash mortar pestle and transferred all the ingredients into it.
6) Triturate the ingredients until the fine powder is obtained.
7) Then transferred the powder into the sieve no 120 and finally the product isobtained[8]

Fig. Herbal dusting powder.

Evaluation of the dusting powder

The evaluation of the dusting powder was done as follows[9]

- Physical characteristics: It was done by visual inspection. Characters that werestudied are color and odour.
- Ph: it was calculated by using the ph paper.
- Bulk density and tapped density: The powder was passed through a no. 18 strainer into pre-weighed 25 ml graduated barrel with 0.5ml markings. The bulk volume wasmeasured

after physically tapping the barrel two times on a level tabletop surface. The tapped volume was measured with the tap thickness analyser after tapping in increases of 500, 750, and 1250 taps with 250 drops per diminutive. Bulk thickness Bulk mass/ Bulk volume Tapped thickness = Mass of granules/ volume of granules.

- Particle size: the particle size was analysed by using the sieve shaker.
- Carr's index: The bulk and tapped densities were utilized to calculate Carr's compressibility file to supply degree of the stream properties and compressibility of powders. Carr's index Tap density- bulk density/tap density 100.
- Hausner ratio: It is demonstrative of stream properties. It is inferred property from bulk and tapped thickness. Lower the Hausner proportion is showing superior stream though higher proportion demonstrates destitute stream of granules. Hausner ratio is calculated by the following formula; Hausner ratio=Tap density/ Bulk density.

RESULTS

- Physical characteristics

Colour:- Greenish- white

Odour; - Fagnant neem like

- Ph: ph. of the powder was found to be 7 i.e. neutral.
- Particle size: the particle size of the powder was found to in the range of 120microns.
- Abrasiveness: the Abrasiveness of the powder was found to be smooth.
- Bulk density: the bulk density of the powder was found to be 0.26g/cm3
- Tapped density: the tapped density of the powder was found to be 0.27g/cm3
- Carr’s index: the Carr's index was found to be 3.70
- Hausner ratio: the Hausner ratio was fond to be 1.03

CONCLUSION

The formulation of the herbal dusting to treat seborrheic dermatitis was formulated successfully. The evaluation shows that the dusting powder is effective for seborrheic dermatitis and gives relief from the itching on the skin and gives the cooling effect to the skin and shows the antimicrobial effect. Thus, from this we can conclude that formulation of the dusting powder was good and possess all the properties that need for the dusting powder.

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