Formulation and Evaluation of Churna for Digestive Property

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Abstract:
Ayurvedic medicine play an important role in gastro intestinal problems due to safety and efficacy in it. Hence churna meant for digestive property has been formulated by standard procedures and evaluated by physical and analytical methods. The formulation consists of fine powder(sieve 60 size) of dried rhizomes of Zingiber Officinale, fruits of Foeniculum Vulgareae, barks of Cinnamomum Zeylanicum and roots of of roots of Withania Somnifera in appropriate proportion and mixed well. Physical parameters viz, total ash, acid insoluble ash, water extractive values.

Keywords: Formulation, Evaluation, Churna, Ginger, Funnel, Cinnamon.

I. INTRODUCTION:[1]

Churna is a fine powder made by certain drugs or combination of drugs. Each ingredient is pulverized separately and mixed together. Churna is also called as Raj and Kshada. There are many varieties of Churna and every Chrna has its own demand in the market. Ayurvedic pharmacy comprises of different sections such as Vati, Asava, Arista,lehya, Lepa etc under one unit. The term “Ayurveda” combines the Sanskrit words ayur (life) and veda (science or knowledge). It is one of the traditional medicinal systems, with an established history if many centuries. It is based on the belief that health and wellness depend on a delicate balance between the mind, body and spirit. The primary focus of Ayurvedic medicine is to promote good health and prevent Illness, rather than fight disease.

Types of Churnas [4]

These are solid dosage form of medicament meant for internal use.

These are two types

1. Simple Churnas:-
   - It contains only one medicament.

2. Compound Churnas:-
   - It contains two or more than two medicaments.

II. OBJECTIVES:

1. To reduce side effect of synthetic formulation.
2. To avoid irritation of synthetic and chemical substances.
3. The prepared churna was evaluated for various parameters like, total ash, water soluble extractive values, alcohol soluble extractive values and crude.
4. To formulate effective dosage form on digestive stimulant.

Table I. Drug profile:-

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Common Name</th>
<th>Figure</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Ginger</td>
<td><img src="image1" alt="Ginger Image" /></td>
<td>Carminative, laxative, stomachic, Useful in digestion, aphrodisiac, Inflammations,</td>
</tr>
<tr>
<td>2.</td>
<td>Fennel</td>
<td><img src="image2" alt="Fennel Image" /></td>
<td>Carminative, aromatic, stimulant, Expectorant, flavouring agent</td>
</tr>
</tbody>
</table>
III. MATERIALS AND METHODS:

i. Preparation of Churna:[3]
Preparation of dried powder of Ginger, Fennel, Cinnamon, Ashwagandha. Pass all the powder separately through sieve No.80. mixe all the powderd herbal drugs geometrically. Now pack the powder churna in sutable container.

- Formula:

<table>
<thead>
<tr>
<th>Table 2. Ingredients of Churna for digestive property</th>
</tr>
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<tbody>
<tr>
<td>Sr.No.</td>
</tr>
<tr>
<td>-------------</td>
</tr>
<tr>
<td>1.</td>
</tr>
<tr>
<td>2.</td>
</tr>
<tr>
<td>3.</td>
</tr>
<tr>
<td>4.</td>
</tr>
</tbody>
</table>

IV. PHARMACEUTICAL EVALUATION OF CHURNA: [2,5]
The formulation were evaluate for diferent pharmaceutical parameter

A) Determination of pH:
The pHof formulated churna were determined by using digital pH meter by dissolving 1 gm churna in 100 ml of water.

B) Determination of Ash Values:-

a) Total Ash Values:-
Incinerate about 2 to 3 gm accurately weighed of the ground drug in a tared platinum or silica dish at a temperature not exceeding 600°C until free from carbon, cool in a desiccator for 30 min and weigh without delay. If carbon free ash cannot be obtained in this way, exhaust the charred mass with hot water, collect the residue on an ashless filter paper, incinerate the residue and filter paper and the filtrate, evaporate to dryness and ignite at a temperature not exceeding 600°C. Calculate the percentage of ash with reference to the air dried drug.

C) Determination of Extractive Values:-

a) Water Soluble Extractive Value:-
Proceed as directed for the determination of Alcohol Soluble Extractive, using chloroform water (2.5 ml chloroform in purified water to produce 1000 ml) instead of Ethanol.
b) Alcohol Soluble Extractive Value:-
Macerate 5 gm of the air dried drug, coarsely powdered, with 100 ml of alcohol of specified strength in a closed flask for 24 hours, shaking frequently during 6 hours and allowing to stand for 18 hours. Filter rapidly, taking precautions against loss of solvent, evaporate 25 ml of the filtrate to dryness in a tared flat bottomed shallow dish and dry at 105°C to constant weight and weigh. Calculate the percentage of alcohol soluble extractive with reference to the air dried drug.

D) Determination of Moisture Content (Loss on Drying):-
Dry the evaporating dish for 30 min under the same conditions to be employed in the determination. Place about 5 to 10 gm of powder/drug accurately weighed in a tared evaporating dish. For unpowdered drug, prepare about 10 gm of the sample by cutting, shredding so that the parts are about 3 mm in thickness. Seeds and fruits, smaller than 3 mm should be cracked. Avoid the use of high speed mills in preparing the samples and exercise care that no appreciable amount of moisture is lost during preparation and that the portion taken is representative of the official sample. By gentle, sidewise shaking, distribute the test specimen as evenly as practicable to a depth of about 5 mm generally and not than 10 mm in the case of bulky materials. Place the loaded bottle in drying chamber. Dry the test specimen at 105°C for 3 hours and weigh. Continue the drying and weighing at half an hour interval until difference between two successive weighing corresponds to not more than 0.25 per cent.

V. RESULT:
The primary objective of this work was to develop digestive churna from Ginger, Fennel, Cinnamon and Ashwagandha. The development of formulation will mark an important advancement in the area of phytopharmaceuticals.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Physical Parameters</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>pH</td>
<td>6.57</td>
</tr>
<tr>
<td>2.</td>
<td>Ash Values</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i) Total Ash</td>
<td>8.275%w/w</td>
</tr>
<tr>
<td>3.</td>
<td>Extractive Values</td>
<td></td>
</tr>
<tr>
<td></td>
<td>i) Water soluble extractive value</td>
<td>5.02%w/w</td>
</tr>
<tr>
<td></td>
<td>ii) Alcohol soluble extractive value</td>
<td>1.04%w/w</td>
</tr>
<tr>
<td>4.</td>
<td>Moisture Content (Loss on Drying)</td>
<td>11.5%w/w</td>
</tr>
</tbody>
</table>

VI. CONCLUSION:-
From the all study, we conclude that the Digestive churna by using Ginger, Fennel, Cinnamon, Ashwagandha were prepared by mixing gave satisfactory and acceptable result. The digestive churna by using drug Ginger, Fennel, Cinnamon and Ashwagandha was non-toxic.

VII. REFERENCE:-
[1]. http://www.udyamimitra.in, ayurvedic churna-vidyamitra, NIC code=21003
[2]. The Ayurvedic Pharmacopoeia of India part 1, volume 9, first edition 2016, published by pharmacopoeia commission for Indian medicin and homeopathy GHAZIABAD.