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PHYTO-CHEMICAL ANALYSIS DASAMOOLA BALA MASHA KWATHACHOORNA

Ayurveda

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ABSTRACT

Ayurveda, a science of life that has been practiced for thousands of years, describes "Dashmoola" as a combination of ten roots from different plants, with "Dash" meaning ten and "Moola" meaning roots. These ten roots, taken in equal proportion, are categorized into two groups: Brihat Panchamoola and Laghu Panchamoola. The Brihat Panchamoola consists of roots from five trees—Bilva, Gambhari, Agnimantha, Patala, and Shyonaka—while the Laghu Panchamoola includes roots from five shrubs—Brahati, Gokharu, Kantakari, Prishniparni, and Shalaparni. The ingredients of Dashmoolibala masha kwatha are Bilva, Agnimantha, Shyonaka, Patala, Gambhari, Shalaparni, Prishniparni, Gokshura, Kantakari, Brihati, Bala, Masha. Attempt has been made to study physicochemical analysis of the drug. The ingredients of the drug are mainly needed for treating Viswachi. a. This study highlights the results of standardization (identity, purity & strength) tests, physicochemical screening. All the said tests are conducted in State Drugs Testing Laboratory (INDIAN MEDICINE) Arignar Anna Government Hospital for Indian Medicine Campus, Arumbakkam , Chennai , Tamil Nadu. These studies are important in way of establishing quality-control, efficacy & accept ability of herbal drugs.

KEYWORDS

Physicochemical analysis, Viswachi, Dasamoola bala masha kwatha

INTRODUCTION

Ayurveda, the traditional medicinal system of India, is renowned globally. It incorporates plants, animals, minerals, and metals into its formulations. Dashmoola is considered one of the most potent herbal combinations in Ayurveda, primarily targeting the Vata Dosha to help alleviate its imbalances. When combined with the herbs Bala and Masha, it enhances the effectiveness of reducing both Vata and Kapha imbalances. Vishwachi is a condition explained under the Vatavyadhis, in which vayu afflicts the kandara extending from bahuprushta to has presenting with karmakshaya of bahu. Bhavaprakasha And Chakradatta Vatavyadhi chapter explained Dasamoola Bala Masha Kwathamin viswachi treatment

The future advancement of pharmacognostic analysis of herbal drugs relies heavily on reliable methodologies for accurate identification, standardization, and quality assurance. Utilizing pharmacognostic protocols such as macromorphology, micromorphology, organoleptic tests, ash value determination, histochemical studies, and UV fluorescence analysis will aid in authenticating drugs, as these tests yield specific results unique to each drug. Authentication and standardization are essential prerequisites, especially for herbal drugs and their formulations in traditional systems of medicine. The aim of the present study is to carry out preliminary physicochemical analysis of the plant materials which are used in the preparation of Dasamoola Bala masha Kashaya powder.

Aims And Objectives

To study in detail about Physicochemical properties of Dasamoola Bala masha Kashaya powder

Detail Study Of Ingredients Of Dasamoolabala Masha Kashaya Choornam

Drug	Botanical Name	Family	Rasa	Guna	Virya	Vipaka	Part Used
Bilva	Aegle marmelos	Rutaceae	Madura, Tikta, Kashaya	Laghu	Ushna, Sheeta	Katu	Moolatwak, Patra, Phala, stem bark
Agnimantha	Premna mucronata	Verbenaceae	Katu, Tikta, Kashaya Madura	Ruksha, Laghu	Ushna	-	Moolatwaka, Patra
Shyonāka	Oroxylum indicum	Bignoniaceae	Katu Tikta Kashaya Madura	Laghu, Ruksha	Sheeta	Katu	Moola Twak
Pātalā	Stereospermum suaveolens	Bignoniaceae	Tikta Kashaya	Guru Laghu	Ushna	Katu	Moolatwak, Pushpa, Patra, Beejakshara
Gāmbhāri	Gmelina arbore	Verbenaceae	Tikta Madura Kashaya	Guru	Ushna	Katu	Moola Twak, Phala
Shālaparni	Desmodium gangeticum	Papilionaceae	Madura, Tikta	Guru, Snigdha	Ushna	Madura	Panchanga
Prishniparni	Uraria picta	Papilionaceae	Madura Katu Amla Tikta	Laghu Sara Snigdha	Ushna	Madura	Panchanga
Gokshura	Tribulus terrestris	Zygophyllaceae	Madura	Guru Snigdha	Sheeta	Madura	Panchanga
Kantakāri	Solanum xanthocarpum	Solanaceae	Katu Tikta	Laghu Rooksha Tikshna	Ushna	Katu	Panchanga
Brihati	Solanum indicum	Solanaceae	Katu Tikta	Laghu Rooksha Tikshna	Ushna	Katu	Moola, Phala
Bala	Sida cordifolia	Malvaceae	Kashaya Tikta Madura	Laghu Snigdha	Ushna	Madura	Moola, beeja
Masha	Phaseotus mungo	Leguminosae	Madura	Guru Snigdha	Ushna	Madura	Phalla (beeja)

MATERIALS AND METHODS

Source of Data

1. Classical text book of Ayurveda
2. Text books of Modern science
3. Published articles from periodic journals and other magazines

Physicochemical Analysis Of Dasamoola Bala Masha Kwatha Choorna

The preliminary physicochemical screening test was carried out for Dasamoola Bala Masha Kashaya Choorna as per the standard procedures mentioned hereunder.

1. Loss on Drying

An accurately weighed 1g of Dasamoola Bala Masha Kashaya Choorna formulation was taken in a tarred glass bottle. The crude drug was heated at 105°C for 6 hours in an oven till a constant weight. The Percentage moisture content of the sample was calculated with reference to the shade dried material.

2. Determination of total ash

Weighed accurately 2g of Dasamoola Bala Masha Kashaya Choorna formulation was added in crucible at a temperature 600°C in a muffle furnace till carbon free ash was obtained. It was calculated with reference to the air-dried drug.

3. Determination of acid insoluble ash Ash

above obtained, was boiled for 5min with 25ml of IM Hydrochloric acid and filtered using an ash less filter paper. Insoluble matter retained on filter paper was washed with hot water and filter paper was burnt to a constant weight in a muffle furnace. The percentage of acid insoluble as was calculated with reference to the air-dried drug.

4. Determination of water-soluble ash

Total ash 1g was boiled for 5min with 25ml water and insoluble matter collected on an ash less filter paper was washed with hot water and ignited for 15 min at a temperature not exceeding 450'C in a muffle furnace. The amount of soluble ash is determined by drying the filtrate.

5. Determination of water-soluble Extractive

5gm of air-dried drug, coarsely powered Dasamoola Bala Masha Kashaya Choorna was macerated with 100ml of distilled water in a closed flask for twenty-four hours, shaking frequently. The Solution was filtered and 25 ml of filtrated was evaporated in a tarred flat bottom shallow dish, further dried at 100° C and weighted. The percentage of water-soluble extractive was calculated with reference to the air-dried drugs.

6. Determination of alcohol soluble Extractive

1 gm of air-dried drug coarsely powdered Dasamoola Bala Masha Kashaya was macerated with 20 ml alcohol in closed flask for 24 hrs. With frequent shaking,it was filtered rapidly taking precaution against loss of alcohol 10ml of filtrate was then evaporated in tarred flat bottom shallow dish, dried at 100°C and weighted. The percentage of alcohol soluble extractive was calculated with reference to air dried drug.

SL No	Parameters	Result of Analysis
1	Description	Brown Color Course Powder
2	Total ash	5.33 %
3	Acid insoluble Ash	1.24%
4	Loss on Drying at 105°C	10.26%
5	Water Soluble Extractive	4.95%
6	Alcohol Soluble Extractive	0.99%
7	Heavy metals Limit tests	
	1.) Test for Arsenic	BOQ< 0.3ppm
	2.) Test for Lead	BOQ< 0.1ppm
8	Microbiological Assay	
	1) Total Bacterial Count	3×104 cfu/gm
	2) Total Fungal Count	1×102 cfu/gm
	3) E. coli	Absent
	4) Salmonella sp/g	Absent
	5) Staphylococcus aureus/g	Absent
	6) Pseudomonas aeruginosa /g	Absent

DISCUSSION

As herbal drugs possess medicinal properties, it is essential to maintain their quality and purity for effective use. Physicochemical properties are crucial in product development, including studies on the biological performance of these drugs. These tests involve various physical and chemical analyses that offer valuable insights into the identity, composition, and characteristics of herbal products. The active ingredients are extracted and purified through appropriate methods to isolate phytopharmaceuticals. Extractive values are also useful in estimating specific components that are soluble in particular solvents. Microscopic evaluation is a key aspect of physicochemical testing in herbal medicine. Microscopic evaluation involves examining the cellular structures and morphological features of plant materials under a microscope, offering valuable insights into the identity, purity, and quality of herbal products. In contrast, macroscopic evaluation involves assessing the visible physical characteristics of plant materials with the naked eye or under low magnification. This process provides crucial information about the identity, quality, and authenticity of herbal drugs. These macroscopic characteristics serve as diagnostic criteria and assist in evaluating the purity of the drugs.

CONCLUSION

India has a rich history of traditional medicine, based on six systems, with Ayurveda being the most important. Understanding its fundamentals and the complete science can be challenging. Considerable research is needed to establish a strong foundation and grasp its basic concepts. In ancient times, Vaidyas treated patients individually and prepared drugs according to each patient's specific needs. The situation has changed significantly; medicines are now produced on a large scale in pharmaceutical units. Manufacturers face various challenges, including ensuring the availability of high-quality raw materials, authenticating these materials, establishing standards, standardizing individual drugs and formulations, and adhering to quality control parameters.

A comprehensive study of crude drugs is crucial for quality control and analysis. This research has provided valuable information about Dasamoola Bala Masha Kwatha Choorna, confirming its purity and establishing its basic chemical profile. The authors hope that the insights from this study will be beneficial for further research on Dasamoola Bala Masha Kwatha Choorna.

REFERENCES

1. Acharya YTed.Susrutha Samhita of Susrutha with the Nibandhasangraha Commentary of Sri Dalhanacharya and the Nyayachandrika Panjika of Sri Gayadasacharya on Nidanasthana, Nidanasthana1st chapter75thverse, Varanasi:Chaukhamba Sanskritsansthan 2017,Pn. 268
2. Chakrapani virachita chakradatta, Edited by Prof. P.V. Sharma, Chaukhamba Sanskrit Pratisthan, 3rd Edition 2002.
3. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4458905/#:~:text=The%20application%20of%20pharm acognostic%20protocols, results%20for% 20a%20particular% 20drug
4. Nagani KV, Kevalia J, Chanda SV. Pharmacognostical and phytochemical evaluation of stem of Cissus quadrangularis L. Int I Pharm Sci Res./, 2011; 2: 2856-2862.
5. Mukharjee P.K. Quality Control of herbal drugs. Business Horizons, New Delhi, 2002; 110-113.
6. https://www.slideshare.net/LavanyaSA/drlavanyasa-standardization-of-herbal-drugs.