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PHYSICO CHEMICAL ANALYSIS OF MURVADI YOGA

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ABSTRACT

Murvadi Yoga is a herbal formulation with ingredients such as *Murva*, *Bala* and *Chitraka*. This formulation is used in the treatment of Patients having *Pandu Roga*. The ingredients such as *Murva* and *Bala* have properties like *Guru Guna*, *Madhura Vipaka* and *Sita Virya* which will help the Patients as they will be having symptoms such as *Daurbalya*, *Shrama*, *Bhrama* etc. meanwhile another ingredient *Chitraka* which is having *Tikshna Guna*, *Katu Vipaka* and *Usna Virya* will cure the symptoms of digestive system such as *Aruchi* and *Agnimandhya* etc. Preliminary Physico chemical study was done using standard procedure with aqueous, chloroform, ethanol, methanol and acetone extracts of *Murvadi Yoga*. The inference from this study can be used as reference standard in further quality control research.

KEYWORDS: Physico Chemical Analysis, *Pandu*, *Murvadi Yoga*, Iron Deficiency Anemia.

INTRODUCTION

In Recent years the demand and scope for Herbal Medicine has increased in the society. The Patients interest towards Ayurvedic line of Management has increased. Before administering any drug to the Patient its quality should be checked first and Standardization of the drug is must. Standardization of Drug Provides safe and effectiveness in treatment. Standardization and quality control of herbal drug is very important for its global acceptance.

Pandu is a *Rasapradoshaja Vikara*¹ and can be correlated to Iron Deficiency Anemia. Many herbal medications have shown great result in this disease, here *Murvadi Yoga*, a unique combination of herbs such as *Murva*, *Bala* and *Chitraka* are administered to cure the disease and this formulation is explained in *Gada nigraha* in the context of *Pandu roga*². All these content has *Pitta hara* property. *Murva* which is *Pitta shamaka* is very effective in *Pandu*. The botanical source of *Murva* is *Marsdenia tenacissima* W & A. *Bala* and *Chitraka* also has *Pitta hara* property and its botanical source is *Sida Cordifolia* Linn and *Plumbago zeylanica* Linn

respectively. Hence this drug will have wonderful effect on Patients of *Pandu*. An effort is made here to study the chemical composition of drug to validate the formulation.

AIM AND OBEJECTIVES

To Study in detail about Physico Chemical Properties of drug

MATERIAL AND METHODS

Source of data

- Classical text books of Ayurveda and text book of modern science.

DETAIL STUDY OF INGREDIENTS OF *MURVADI YOGA*:

DRUGS	BOTANICAL NAME	FAMILY	RASA	GUNA	VIRYA	VIPAKA
<i>Murva</i> ³	Marsdenia tenacissima W& A	Asclepiadaceae	<i>Madhura, Tikta</i>	<i>Guru, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>
<i>Bala</i> ⁴	Sida Cordifolia Linn	Malvaceae	<i>Madhura</i>	<i>Guru, Snigdha</i>	<i>Sheeta</i>	<i>Madhura</i>
<i>Chitraka</i> ⁵	Plumbago zeylanica Linn	Plumbaginaceae	<i>Katu</i>	<i>Teekshna</i>	<i>Usna</i>	<i>Katu</i>

PHYSICOCHEMICAL ANALYSIS OF *MURVADI YOGA*:

The Preliminary Physicochemical screening test was carried out for *MURVADI YOGA* as per the standard procedures mentioned here under.

1. Loss on Drying

An accurately weighed 1g of *MURVADI YOGA* 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 *MURVADI YOGA* 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 1M 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 4500C 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 *MURVADI YOGA* 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 1000C 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 *MURVADI YOGA* 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 a tarred flat bottom shallow dish, dried at 1000C and weighted. The percentage of alcohol soluble extractive was calculated with reference to air dried drug.

RESULTS OF TEST:

SI.NO	Parameters	<i>Murvadi Yoga</i>
1	Moisture wt %	7.32
2	Ash Content wt %	6.22
3	Acid Insoluble Ash %	1.17
4	Water Soluble Ash wt %	1.94
5	Water soluble extraction wt %	5.61
6	Alcohol soluble extraction wt %	4.37

DISCUSSION:

The Physicochemical study invoke the pharmacological response on the receptor, which can be a biological molecule or system with which it interacts and this is very useful and informative while using a drug. This study also helps in the evaluation of Purity of drug.

The observed values of physio-chemical properties of drug are loss on drying (7.32 %), Total ash value (6.22%), Acid insoluble ash (1.17%), Water Soluble ash (1.94%), Water soluble extraction (5.61%), Alcohol soluble extraction (4.37%). The tests Performed above helps to determine the moisture content of a sample, quality of medicine and adulteration in the medicine. This Confirms the drug action and it's Purity.

CONCLUSION:

Along with the fundamentals and theories of *ayurveda* the scientific tests like Physicochemical analysis of drug *Murvadi Yoga* is necessary to Standardize the drug. In the ancient era *Acharyas* have mentioned various wonderful drugs which can cure the *Pandu Roga* one such drug is *Murvadi Yoga*. From this study, we have been able to gather important information regarding the *Murvadi Yoga* which has ascertained its purity as a drug and this study will surely help in further studies.

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