



PREPARATION & STANDARDIZATION OF AN AYURVEDIC HERBAL CHURNA

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ABSTRACT:

Background:

An Ayurvedic Herbal Churna is a popular polyherbal ayurvedic formulation used in the treatment of Common Cold, Strengthens of bones, improve blood circulation, Control Of Cholesterol, Pain Relief and Respiratory Affection & Control Of Diabetes. Ayurvedic medicines play an important role in gastrointestinal 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 method.

Objective: The present study was aimed to justify the classical use of antioxidants And Antibacterial claim by performing lipid-soluble antioxidants protect cell membranes from lipid peroxidation. These compounds may be synthesized in the body or obtained from the diet.

KEYWORDS: Ayurvedic Medicine, Digestion, Complementary Therapies, Herbal Churna, Physico-chemical, Polyherbal, Formulation, Standardization.

INTRODUCTION:

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 Churnas and every Churn 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 of 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. Other traditional systems include Siddha, Unani, Iranian, Islamic, Vietnamese, Chinese, Acupuncture, Muti, Ifá, African and other treatments all over the globe. When adopted outside of its traditional culture, traditional medicine is often called complementary and alternative medicine (CAM)

There are three kinds of ingredients used in Ayurvedic medicines:

- ❖ Herbal
- ❖ Mineral and
- ❖ Animal

The herbal medicines dominate the practice decreased in the 20th century as these were believed to be less profitable than synthetic drugs and medicines. Post 1960, increasing concerns over the side effects of the synthetic drugs and medicines led to an increase in the demand for traditional alternative medicines across the world. Herbal medicine is still the mainstay of about 60% of the world population, mainly in developing countries for their primary healthcare needs.

This potential also needs to be tapped since our country has a lot of medicinal plants, plants with essential oils and the demand in the overseas markets for its concentrates is growing fast. Since the flavourists and

perfume experts are facing the challenging tasks of creating and developing complex compositions to meet the present and future consumer demand, it is also necessary to set up world standard research and development facilities in this sector.

The proposed manufacturing facility for Ayurveda Churna would be a GMP certified facility, licensed by the State Drug controlling authority. The facility will focus on new generation medicines instead of classical Ayurvedic products.

a polyherbal ayurvedic medicine which is use in the proper digestion in food and Antibacterial and antifungal property: Amala, Taiphala, Bole, Funnel seed, Ajwan to this ingredient is use in the prepration of herbal churna is prepare in house preparation and the marketed drug have been Standardized on the basis of organoleptic character physical characteristic, and physico-chemical properties. Were found to be sufficient evaluate the churna and can be used as reference Standards for the quality Herbal quality assurance laboratory of a pharmaceutical house.

MATERIAL METHODS PREPARATION OF CHURNA

An Ayurvedic Herbal Churna Consists Of 5 ingredients Amla, Bela, Jaiphala, Funnel seed, Ajwain. All these ingredients were procured from the local market of Bhusawal, Maharashtra, India and were authenticated by Mrs. Sandhya Ahire Professor of the Kai Yashoda Bai Daagdu Saraf Charitable Trust's Collage Of Pharmacy.

The authentication is carried out based on the microscopic characteristics of powdered drug. The finely powdered raw materials were passed through sieve number 60 and mixed in appropriate ratios The churna was packed in an air tight glass container.



EVALUATION OF PHYSICAL PARAMETERS:

1) Determination of pH:

The pH of 1% solution of formulated churna was determined using pH meter (Elico pH meter).

2) Determination of Moisture content

The moisture content of churna was found using halogen moisture determining apparatus (Mettler Toledo).

3) Determination of Ash Values

Total Ash Value 2gms of churna was weighed accurately in a previously ignited and tarred silica crucible. The material was then ignited by gradually increasing the heat to 500-600° C until, it appeared white indicating absence of carbon. It is then cooled in a dessicator and total ash in mg per gm of air dried material is calculated.

I. Acid Insoluble Ash Value

To the crucible containing total ash, 25ml of Hcl was added and boiled gently for 5minutes, then about 5ml of hot water was added and transferred into crucible. The insoluble matter was collected on an ashless filter paper. This was then washed with hot water until filtrate is neutral and the filter paper along with the insoluble matter was transferred into crucible and ignited to constant weight. The residue was then allowed to cool and then weighed.



RESULT

An Ayurvedic Herbal churna aqueous extract at the dose of 20 gm and An Ayurvedic Herbal Churna methanolic extract at the doses of 1 gm and 20 gm showed better protection with oxidants in the cell cytosol and the blood plasma, while lipid-soluble antioxidants protect cell membranes from lipid peroxidation. These compounds may be synthesized in the body or obtained from the diet.

DISCUSSION:

The churna consisting of fine powder of herbs in appropriate ratio was subjected to standardisation by means of various physical, chemical and microbiological methods.

- The physical parameters such as pH was determined to avoid gastric irritation and the moisture content was determined to find out any increase in weight caused by moisture absorption.
- The value obtained was found to be within the standards. Since ashing process involves oxidation of components of product, an increase in ash value indicates contamination, substitution and adulteration. The total ash value is an indicative of total amount of inorganic material after complete incineration and the acid insoluble ash value obtained is an indicative of silicate impurities, which might have arised due to improper washing of crude drugs. Both the ash values obtained were found to be within the standard limits.
- The extractive values namely water- soluble and alcohol soluble indicates the amount of active constituent in given amount of plant material when extracted with respective solvents, a lower value compared to standard value indicates presence of exhausted material. In the present study both the extractive values were found to be more than the standard values.
- The determination of crude fibre content is an indicative of fibre content in formulation and was found to comply with the standard value. Heavy metals if present in formulations will have a deleterious effect on different organs of body in particular kidneys and leads to renal toxicity. Hence evaluation of heavy metals is an important role. Heavy metals include arsenic, iron, lead and mercury. In the present study arsenic was evaluated by means of spectrophotometry, iron & lead by means of limit test where the allowed maximum limit were 20ppm respectively and were found to be within the limits.
- The presence of mercury was determined qualitatively and found to be absent. The formulated churna was finally subjected to microbiological evaluation namely for E.coli and was found to be absent hence the formulated churna complied with the WHO requirements. The biological activity of churna was evaluated by means of evaluating amylyolytic, lipolytic and proteolytic activity in comparison with the standard marketed formulation GASTRAP.
- The amylyolytic activity involves the break down of starch into maltose by the action of amylase enzyme. Determination of amylyolytic activity brings out the ability of churna to digest starch. In the present study the amylyolytic activity of formulated churna was found to be 1.4% greater than that of marketed formulation GASTRAP.
- Hence the formulated churna was considered to possess the activity of digesting starch. Lipolytic activity is another enzymatic activity that involves the break down of lipids into fatty acids by the action of lipase enzyme. Determination of lipolytic activity brings out the ability of digesting lipids by particular substance. In the present study the lipolytic activity of formulated churna was found to be slightly lesser than that of GASTRAP.
- Proteolytic activity is an enzymatic activity that involves break down of proteins into aminoacids by the action of protease enzyme. Determination of proteolytic activity brings out the ability of digesting proteins by a particular substance. In the present study it was determined by means of using folin- ciocalteau method where the phenolic group present in the liberated aminoacid namely tyrosine forms a complex with the reagents added and found to absorb in a wavelength of 660nm.
- The intensity of colour depends on the amount of aromatic aminoacids present and hence gives the proteolytic activity of churna. In the present study the proteolytic activity of formulated churna was found to be almost equal to that of marketed formulation GASTRAP.



CONCLUSION

The above results, it has been justified that An Ayurvedic Herbal Churna can be used to treat Common Cold, Diabetes, Respiratory Affection And Control Of Cholesterol.

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