IJARSCT
International Journal of Advanced Research in Science, Communication and Technology
International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal
ISSN: 2581-9429
Volume 5, Issue 3, June 2025
Impact Factor: 7.67

Formulation & Evaluation of Kayamchurna

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Abstract: *Ingredients - Senna leaves Kala namak Nishoth Ajwain Haritaki Swarjikshra Yashtimadhu Standardization is a system that ensure a predefined amount of quantity and quality and therapeutic effects of ingredients each dose. Herbal product can not considered scientifically if drug is tested has been authenticated and characterized in order to product reproducibility in the manufacturing of the product*

Keywords: Herbal product

I. INTRODUCTION

Ingredients - Senna leaves Kala namak Nishoth Ajwain Haritaki Swarjikshra YashtimadhuStandardization is a system that ensure a predefined amount of quantity and quality and therapeutic effects of ingredients each dose. Herbal product can not considered scientifically if drug is tested has been authenticated and characterized in order to product reproducibility in the manufacturing of the product. More ever many dangerous and lethal side effects have been recently reported, including direct

toxic effect, allergic reaction, from contaminates and interaction of herbal drug. Churna is defined as a fine powder of drug or drugs in Ayurvedic system of medicine. Drugs mentioned, are cleaned properly, dried thoroughly, pulverised and then sieved. The churna is free flowing and retains its potency for one year, if preserved in an air tight containers. Kayam churn is powder form churn.

*Churna is taken in water 1 spoon recently been reported, including direct toxic effects, allergic reactions, effects from contaminants, and interactions with herbal drugs. The development of authentic analytical methods which can reliably profile the phytochemical composition, including quantitative analyses of market, bioactive compounds and other major constituents.

In view of the above, standardization is an important step for the establishment of a consistent biological activity, a consistent chemical profile, or simply a quality assurance program for production and manufacturing of an herbal drug. The authentication of herbal drugs and identification of adulterants from genuine medicinal herbs are essential for both pharmaceutical companies as well as public health and to ensure reproducible quality of herbal medicine. Standardization of herbal formulation requires implementation of Good Manufacturing Practices (GMP). In addition, study of various parameters such as pharmacodynamics, pharmacokinetics, dosage, stability, self-life, toxicity evaluation, chemical profiling of the herbal formulations is considered essential. Other factors such as pesticides residue, aflatoxine content, heavy metals contamination, Good Agricultural Practices (GAP) in herbal drug standardization are equally In latest years, there has been great direct for plant subsequent products in grown countries. These products have been increasingly being sold out as medicinal products, nutraceuticals as great as cosmetics.

Kayam churna is a very famous Ayurvedic medicine for constipation. It is not a traditional Ayurvedic medicine. It is a proprietary Ayurvedic medicine. It means that the formula of Kayam churna is not mentioned in any Traditional Ayurvedic text books. The manufacturer of Kayam Churna, Sheth Brothers, formulated a combination of few Ayurvedic herbs that benefit in constipation, blended them into powder form and labeled it as Kayam churna. Churna is defined as a fine powder of drug or drugs in Ayurvedic system of medicine. Drugs mentioned, are cleaned properly, dried thoroughly, pulverised and then sieved. The churna is free flowing and retains its potency for one year, if preserved in an air tight containers.

There have been around 6000 herbal manufacturers in India. More than 4000 units have been producing

Ayurveda medicines. Due to miss of infrastructures, learned man power arguable methods as great as difficult regulatory laws most of these manufacturers furnish their product upon really indeterminate basis.

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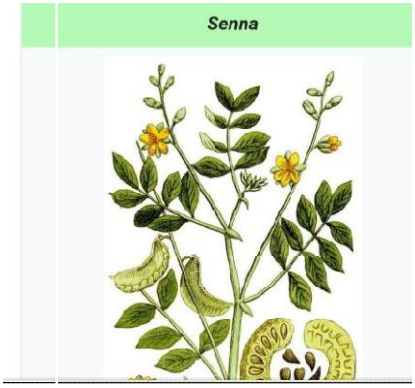
Modern day awareness of the needs for Herbal Standardization and Evaluation have been aptly summarized in the words of Drugs Controller of India, Mr. Ashwini Kumar: "In earlier days, the activity of herb procurement, preparation and dispensing remained mainly the responsibility of practitioners and was on a one to one relationship between physician and his patients. It was a matter of sacred trust. However, the socio-economic changes in modern times, the technological advances, commercial factors, consumer preferences, changing lifestyles, etc. has influenced the way Herbal drugs are being 'manufactured' and distributed in the country. The Practitioner as well as the Consumer now seek assurance from the manufacturer
about quality, safety and efficacy of a readymade Herbal Supplement or Medication.
As the standardization of herbal formulation is great concern for its safety and efficacy for that reason this work is aimed to standardization of herbal formulation (Kayam Churna).

Aim:
To evaluate the therapeutic efficacy and quality parameters of Kayam Churna, an Ayurvedic polyherbal formulation, primarily used as a laxative and digestive aid.
Objectives:
To understand the pharmacological action of Kayam Churna based on its herbal ingredients, such as Senna, Haritaki, and Ajwain.
To evaluate the physicochemical parameters like: Moisture content (Loss on drying) Total ash and acid-insoluble ash
Extractive values (alcohol and water soluble) pH value and flow properties
To assess the organoleptic characteristics such as:Color Taste
To perform phytochemical screening for the presence of active constituents like alkaloids, flavonoids, tannins, and glycosides.
To ensure quality control by comparing with standards provided in the Ayurvedic Pharmacopoeia of India and WHO guidelines.
To evaluate its therapeutic use as a natural laxative and digestive remedy based on classical Ayurvedic texts and modern studies.
To compare the formulation with other similar marketed herbal laxatives, if applicable.

INGREDIANTS -



Seena leaves (cassia angustifolia) :
Senna, the Senna's, is a large genus of flowering plants in the legume family (Fabaceae, subfamily Caesalpinioideae, tribe Cassia ser. Aphylla). This diverse genus is native throughout the tropics, with a small number of species.

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Kala namak (Black salt) Uses:
*Black salt is helps to improve digestion by increasing the bile production in the liver due to laghu and ushna properties
*Drinking black salt along with water on empty stomach in the morning helps to remove toxins from the body.

Ajwain (Trachysperum ammi) :

Active enzyme in ajwain improve the flow of stomach acids, which can help to relive indigestion, bloating, and gas. The plant can also help to treat peptic ulcer as well as sores in the esophagous, stomach, and intestines.

Infection prevention
Many of the essential oils in ajwain, most notably thyme and carvacrol, can help to fight the growth of bacteria and fungi. They also may be fight bacteria like salmonella and E.coil, which can lead to food poisoning and other stomach issues.

NISHOTH :
*The fruit possess stimulant, antispasmodic and, carminative properties and is used traditionally as an important remedial agent for flatulence, atonic dyspetsia, diarrhoea, abdominal tumors, abdominal pains, pulled and bronchial problems, lack of appetite, galactogogue, asthma and amenorrhoea.
Haritaki (Terminalia chebula) :

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*Terminalia Chebula, commonly known as black or chebulic myrobalan, is a species of Terminalia, a native to south Asia from India from Nepal east to southeast China (Yunnan), and south go Sri- Lanka, Mala-Siya, and Vietnam.
Svrjikshara : (Sodium bicarbonate)

It works from all symptoms in acidity including sour test in the mouth burning in throat chest in the chest, stomach discomfort, heaviness and burning in the stomach.

Yashtimadhu (glyceria glabra):

Liquorice or licorice is the common name Glycyrrhiza glabra flowering plant of the bean family fabaceae, from the root of which a sweet, aromatic flowerings is extracted. The liquorice plant is an herbal.
Requirement:
Appratus: mortar pestle, beaker, spatula, weighing machine.
Drug : The raw material for extraction Senna Leaves, Black Salt, Nishoth, Ajwain, Haritakki, Svrjikshara, Yashtimadhu.

MATERIALS AND METHODS

Plant Material Collection:
The all plant materials and marketed formulation of Kayam Churna were purchased from local market. The dried parts were coarsely powdered in grinder and powder materials was sieved through 60-120 mesh and subjected for preparation of a poly herbal churna (Kayam
Churna)

Table1: Formulation table.

Ingredients	Quantity %
Senna leaves	50gm
Kala namak	10gm
Nishoth	10gm
Ajwain	10gm

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Haritakki	10 gm
Svrjikshara	10gm
Yashtimadhu	10gm

PREPARATION OF CHURNA:
Category: Ayurvedic Medicine – Churna (Powder Form)
Purpose: Used as a laxative for relieving constipation and improving digestion.
Ingredients:
Procedure:
• Weighing: Accurately weigh all the raw ingredients as per the formulation.
• Cleaning: Clean each ingredient to remove dust, stones, and foreign particles.
• Drying: If any ingredient is moist, dry it in the shade to preserve phytochemicals.
• Grinding: Pulverize each ingredient into a fine powder using a grinder.
• Sieving: Sieve the powders through a mesh (e.g., 60 mesh) to ensure uniformity.

Storage:
Store in a cool, dry place away from direct sunlight.
Dosage:
1–2 teaspoons at bedtime with warm water or as directed by a physician.
Uses:
Acts as a mild and effective laxative Promotes digestive health Helps relieve gas and bloating

EVALUATION OF PHYSICALPARAMETERS:
Determination of Organoleptic Evaluation :
Color: Usually brown to dark brown. Odor: Characteristic, slightly pungent. Taste: Bitter and slightly astringent.
Significance: Indicates the presence and balance of the expected ingredients.
Determination of Moisture Content / Loss on Drying :
Method: Gravimetric method using a hot air oven at 105°C until constant weight. Acceptable limit: Usually below 10%.Significance: High moisture may lead to microbial growth and spoilage.
Determination of Total Ash Value :
Method: Incineration in a muffle furnace at 500–600°C. Acceptable limit: Varies; typically below 10%. Significance: Indicates the total amount of inorganic content (minerals, impurities).
Determination of Acid Insoluble Ash :
Method: Treatment of total ash with HCl and filtration. Significance: Measures siliceous matter like sand or soil.
Determination of Water Soluble Ash :
Method: Difference between total ash and residue after water extraction. Significance: Indicates amount of water-soluble salts.
Determination of Extractive Values (Alcohol and Water Soluble) :
Method: Cold or hot maceration with respective solvents.
Water-Soluble Extractive: Indicates presence of sugars, tannins, mucilage. Alcohol-
Soluble Extractive: Indicates presence of alkaloids, flavonoids, etc. Significance: Reflects the strength and therapeutic value.
Determination of Flow Properties (Powder Form) :
Angle of Repose Bulk Density and Tapped Density
Carr's Index and Hausner Ratio Significance: Relevant for packaging and handling

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Determination of Particle Size Analysis :
Method: Sieve analysis.
Significance: Ensures uniformity, affects dissolution and absorption.
Determination of pH of 1% Solution :
Method: Digital pH meter.
Significance: Should be mildly acidic or neutral, depending on formulation

Benefits of Kayam Churna:
• Relieves constipation – Acts as a natural laxative.
• Improves digestion – Enhances appetite and digestive enzymes.
• Reduces gas and bloating – Carminative herbs like Ajwain and Saunf relieve flatulence.
• Cleanses the colon – Aids in detoxification and bowel regularity.
• Balances Vata and Kapha doshas – Restores digestive balance.
• Soothes the gut – Licorice (Yashtimadhu) protects the intestinal lining.
• Supports weight management – Indirectly helps reduce bloating and improve metabolism.

Side Effects of Kayam Churna:
• Abdominal cramps – Due to strong laxative action (especially from Senna).
• Diarrhea or loose motions – If taken in high doses.
• Dehydration & electrolyte imbalance – With prolonged or excessive use.
• Dependency – Regular long-term use may lead to laxative dependence.
• Not safe during pregnancy – May stimulate uterine contractions.
• May interact with other medications – Especially diuretics or heart medicines.

Result and Discussion :

The formulated Kayam Churna complied with the standard organoleptic and physicochemical parameters as per Ayurvedic Pharmacopoeial guidelines. The moisture content was low, suggesting good stability. Extractive values indicated high solubility of active constituents. The flow properties showed fair flow, suitable for manual packaging.
Pharmacologically, the formulation is likely to exert a laxative effect due to the
presence of senna (anthraquinone glycosides) and haritaki, which enhance intestinal peristalsis. The ajwain and black salt support digestion, while svarjiksara acts as a mild antacid and carminative.
The absence of microbial contamination ensures its safety for human consumption. Thus, the formulation was found effective and within quality standards.

II. CONCLUSION OF FORMULATION OF KAYAM CHURNA

The formulation of Kayam Churna represents a well-balanced Ayurvedic blend of purgative, carminative, and digestive herbs. Each ingredient—such as Senna, Haritaki, Ajwain, and Saunf— contributes synergistically to relieve constipation, improve digestion, and detoxify the gastrointestinal tract. The inclusion of Yashtimadhu helps soothe the intestinal lining and balance the overall formulation, reducing the risk of harsh purgative effects.
The preparation adheres to traditional Ayurvedic principles while also fulfilling modern quality control parameters, such as organoleptic, physicochemical, and phytochemical standards. Hence, Kayam Churna stands as a reliable, effective, and time-tested remedy for promoting bowel regularity and digestive wellness— provided it is used judiciously and under proper guidance.

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