LAVAN BHASKAR CHURNA: PROPERTIES, COMPOSITION, AND PHARMACOLOGICAL ACTION OF ITS INGREDIENTS

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Abstract

Lavan Bhaskar Churna is a classical Ayurvedic polyherbal formulation with a long history of use in gastrointestinal tract disorders, especially in cases related to low digestion, flatulence, loss of appetite and mild constipation. This therapy occupies a significant space in the routine traditional therapy, which is based on unique Ayurvedic principles of Agni deepana (appetite stimulation), Ama pachana (detoxification), and Vata-Kapha shamana. This review-based project is purposive to investigate the therapeutic attributes and pharmacological actions of the most important components of the Lavan Bhaskar Churna (LBC). More than 20 ingredients constitute the formulation, including Saindhava Lavana (rock salt), Pippali (Piper longum), Maricha (Piper nigrum), Shunthi (Zingiber officinale), Haritaki (Terminalia chebula), Chitraka (Plumbago zeylanica), Ajwain (Trachyspermum ammi), etc. These ingredients are already widely used in harmony with our deepana-pachana roles and carminatives to regulate our digestive fire (Agni). Pharmacological (Rasa, Guna, Virya, Vipaka) and modern scientific (like pharmacological activities viz., anti-inflammatory, antioxidant, hepatoprotective, antispasmodic, etc.) evidence of each ingredient was scrutinised and discussed. The natural elements of Lavan Bhaskar Churna work harmoniously with each other to maintain the vigour in balancing and regulating digestion, liver function and the absorption of nutrients in the body. Materials and methods: Review of published literature Critically analysing classical Ayurvedic literature in the light of modern data, including pharmacological research, government pharmacopoeias and ethnopharmacological studies. The information evaluated contained strong emphasis on rationale for ingredient choice,

dosing significance and established use in clinical practice. This paper highlights the scientific rationale and importance of Lavan Bhaskar Churna, which will further warrant studies on standardisation, the clinical usefulness and scope of this formulation for Indian therapeutics. The growing interest of people towards natural products and gut health reflects the pressing necessity for pharmacognostic and pharmacological validation of such traditional preparations.

Introduction

The conventional Indian system of medication, Ayurveda, gives hundreds of years of experience in customary plant, mineral, and polyherbal treatments as a natural way to deal with wellbeing. Among these, fine powders such as Churna occupy a prominent position because of the ease of administration, rapid absorption and multi-disease coverage [1]. These consist of a combination of herbs, salts, and minerals that has been ground into a very fine powder, usually to create a synergistic effect or to ensure compatibility. One such classical and proven formulation among them is Lavan Bhaskar Churn, effective in amavata/digestive disorders and helpful in tridoshic balance but especially for Vata and Kapha [2]. Classical Ayurvedic texts are replete with Lavan Bhaskar Churna references such as Bhaishajya Ratnavali, Yoga Ratnakara, and Charaka Samhita [3]. It is a famous medicine for anorexia (aruchi), indigestion (agnimandya), flatulence (adhmana) and heaviness in the abdomen (gaurava). It is also used as a complementary remedy in chronic constipation, hepatic disorders, and even some respiratory diseases of gastrointestinal origin [4].

Overview of Lavan Bhaskar Churna

The term *Lavan* refers to salt, and *Bhaskar* symbolically refers to the sun, implying that this churna "kindles digestion" just as the sun ignites life [5]. Lavan Bhaskar Churna is a salt-based polyherbal formulation consisting of five types of salts (Panch Lavan) blended with digestive and detoxifying herbs. Its primary therapeutic role is to stimulate gastric secretions, address metabolic sluggishness, and promote healthy bowel movements without irritating the gastrointestinal tract.

Key constituents include:

- Rock Salt (Saindhava Lavana) – Improves appetite, facilitates mineral absorption.

Fig. No. 1

- Pippali (*Piper longum*) – A potent bioenhancer, carminative, and expectorant.

Fig. No. 2

- Shunthi (*Zingiber officinale*) – Reduces bloating, improves gastric motility.

Fig. No. 3

- Ajwain (*Trachyspermum ammi*) – High in thymol, acts as a digestive and antispasmodic.

Fig. No . 4

- Chitraka (*Plumbago zeylanica*) – A digestive stimulant and liver tonic.

Fig. No. 5

- Haritaki (*Terminalia chebula*) – Works as a mild laxative, rejuvenator, and ama-pachaka. [6]

These ingredients are not selected merely for their individual benefits but for their collective efficacy in regulating Agni, eliminating Ama (toxins), and facilitating Samyak Pachana (proper digestion) [7].

Need for Scientific Review

Lavan Bhaskar Churna has a long-standing clinical reputation within Ayurvedic practice for treating digestive and metabolic disturbances. However, much of the current knowledge about this formulation remains within the realm of Sanskrit literature and clinical tradition, lacking scientific validation through modern pharmacological studies [8]. While this historical usage is well documented, the absence of experimental evidence and pharmacodynamic profiling limits its acceptability in the global herbal medicine community [9].

Most pharmacological studies on Ayurvedic herbs are conducted individually — for example, *Pippali*, *Shunthi*, or *Haritaki* have been evaluated separately for anti-inflammatory, antioxidant, and gastroprotective activities [10–12]. However, Ayurvedic pharmaceutics emphasises synergy in polyherbal formulations, a concept not adequately studied under the reductionist biomedical model [13].

Additionally, lack of standardisation is another concern. The composition, proportions of ingredients, and even the types of salts used in Lavan Bhaskar Churna can vary significantly across manufacturers [14]. There is no universally adopted pharmacognostic standard, quality control framework, or consistently defined clinical dosage, leading to variation in therapeutic outcomes [15].

Background of the study

The ancient science of life, Ayurveda, considers digestive health (Agni) as the "gatekeeper" of overall physical, mental, and spiritual health. This system states that most diseases are due to a disturbed Agni and the presence of Ama (metabolic toxins, products of incomplete digestion) [17]. It gives huge importance to preparations which kindle the agni, detoxify the gut and balance the tridosha. This is one of the formulations of Lavan Bhaskar Churna, a frequently used classical polyherbal-mineral formulation for the management of Agnimandya (indigestion), Aruchi (loss of appetite), Adhmana (flatulence), and Gaurava (abdominal heaviness) [18].

This powder formulation is categorised under Deepana-Pachana Yoga (formulations which increase the digestive strength of the person and assist in the digestion of carried-over metabolic waste). Panch Lavan (five salts) are used but often in combination with Pippali, Shunthi, Ajwain, Chitraka, etc., to provide a synergistic effect in gastrointestinal function. These components work synergistically to stimulate secretions from the digestive system, modulate gut motility, and improve liver function [19].

Classical relevance of Lavan Bhaskar Churna

There are few classical Ayurvedic texts which possess a mention of Lavan Bhaskar Churna.

- Bhaishajya Ratnavali — Vata Prakopaka Chikitsa
- Yoga Ratnakara –Grahanı Roga Adhyaya
- Chikitsa section and Siddhisthana of Charaka Samhita [20]

They are described in these texts as Tridosha-shamaka, especially effective for Vata and Kapha balancing. The salts help soften stools and improve absorption, and the hot herbs stimulate digestive and liver enzymes. This churna also incorporates minerals and botanicals as part of a time-tested, holistic design in traditional pharmaceutics.

The deepan is conventionally given with warm water or buttermilk prior to meals to help begin digestion [indicating a prebiotic/precursor/appetiser role]. In addition, it is also utilised by practitioners as an adjunct therapy for chronic metabolic diseases like irritable bowel syndrome, lazy bowel, and anorexia, as well as fatty liver disease [21].

Preparation of Lavan Bhaskar Churna

Lavan bhaskar churna is a commonly used polyherbal-mineral Ayurvedic formulation made by a combination of salts and herbs which aid in digestion. It is primarily indicated in the treatment of disorders of the gastrointestinal system, like agnimandya, anorexia (flatulence), shoola (abdominal pain) and their correlated systemic disorders. The following chapter lists down the preparation process, components used in it and details regarding review methods for therapeutic action.

Plan of Work

In the present day, a systematic review of literature has been done on the Ayurvedic formulation Lavan Bhaskar Churna by critical assessment of the preparation process, profile of ingredients, and evaluation parameters. This study was planned to be carried out in the following successive phases to be more systematic and scientific.

- Phase 1: Selection of the Formulation

We specifically selected the formulation Lavan Bhaskar Churna because of its extensive use in

Ayurvedic clinical practice for gastrointestinal disorders and its detailed exposition in classical Ayurvedic texts. Standardised composition of V. vivens has been recognised by the Ayurvedic Formulary of India, making it open access for academic and pharmacological research.

- Phase 2: Collection of Classical and Contemporary Data

Information related to ingredients in the formation, classical reference, method of preparation, and therapeutic indication was obtained from authentic Ayurvedic literature like

- Bhaishajya Ratnavali
- Yoga Ratnakara
- Charaka Samhita
- Rasa Tarangini
- Dravyaguna Vigyan

Data supplemented with contemporary research papers, pharmacopoeial guidelines, and ethnopharmacological investigations.

- Phase 3: Documentation of Ingredients

We compiled a comprehensive list of ingredients (both herbal and mineral). Each of these constituents was identified with:

- Sanskrit name
- Botanical name
- Plant part used
- Traditional indications

- Phase 4: Ayurvedic Pharmacological Profiling

Each of the ingredients was then assessed from an Ayurvedic perspective using:

- Rasa (taste)
- Guna (quality)
- Virya (potency)
- Vipaka (transformation that takes place after digestion)
- Karma (therapeutic action)

This means all these parameters were compiled from various Dravyaguna textbooks to understand the internal equilibrium and doshic effects on each of these constituents.

- Phase 5: Modern Pharmacological Analysis

These were collected from various scientific databases like PubMed, Scopus, Google Scholar and journals based on traditional pharmacognosy, such as the Indian Journal of Traditional Knowledge and Pharmacognosy Reviews.

- Phytochemical composition
- Reported biological activities (carminative, antioxidant, hepatoprotective, etc.)
- Clinical or Toxicological Evidence
- Efficacy or safety in experimental models (in vitro/in vivo)
- Phase 6: Review of Preparation Method

The method of preparation as per classical sources and modern adaptations (standard operating procedures) was compiled. Steps such as ingredient processing, powdering, sieving, blending, packaging, and storage were detailed, ensuring alignment with traditional methods and current good manufacturing practices (GMP).

- Phase 7: Evaluation Parameters and Quality Assessment

All essential evaluation parameters required for powder formulations were reviewed, including:

- Organoleptic properties
- Physicochemical tests
- Microbial safety
- Heavy metal content
- Flow property assessments
- Chromatographic fingerprinting

This was important to support the formulation’s standardisation and safety assessment according to pharmacopoeial and WHO guidelines.

- Phase 8: Conclusion and Research Gap Analysis

Based on the data collected, a **critical comparison** was drawn between traditional Ayurvedic concepts and modern pharmacological validation. Gaps in literature, inconsistency in commercial formulations, and lack of clinical trials were identified to propose **future research directions**.

Method of Preparation

Based on the classical method of preparation with reference to Bhaishajya Ratnavali and AFI, the classical method of preparation involved the following steps:

Ingredient Collection

- The herbal drugs are collected in a pure, dry state.
- The mineral salts used are sourced and purified by classical methods (Shodhana).

Cleaning and Drying

- All raw materials are washed thoroughly.
- Shade drying of moisture-orientated materials to conserve phytoconstituents

Powdering and Sieving

- All ingredients are powdered individually using a Serra pulveriser.
- All the powders were sieved through mesh no. 80 for finer powder.

Blending

- Weighing each ingredient with utmost precision
- Blended using the geometric dilution technique to guarantee uniformity

Packaging and Storage

- The final mix is tightly packed in moisture-proof containers.
- Stability: Keep in a cool, dry place protected from light.

Composition and Therapeutic Indications of Ingredients

The following table lists the ingredients of Lavan Bhaskar Churna along with their therapeutic indications as per classical Ayurvedic texts:

Table No. 1:

S. No.	Ingredient	Indications (as per Ayurveda)
1	Sauvarchala Lavana	Gulma, Shoola, Vibandha,

		Udavarta, Hridyaroga
2	Vida Lavana	Shirshoola, Murcha, Apasmar, Aptantraka, Galashotha, Agnimandya, Yakritvikara, Mutraghata, Jwara
3	Saindhava Lavana	Aruchi, Ajeerna, Shoola, Vibandha, Vishvachi
4	Amlavetasa	Aruchi, Agnimandya, Gulma, Pliha, Hikka, Mutrakricha, Ashmari
5	Jeeraka	Shotha, Tvak Vikara, Arsha, Netraroga, Krimi, Grahani, Mutraghata, Udarashoola
6	Shotha, Tvak Vikara, Arsha, Netraroga, Krimi, Grahani, Mutraghata, Udarashoola	Vaman, Nadidourbalya, Udarashoola, Arsha, Shwasa, Mutrakricha, Aamdosha
7	Samudra Lavana	Ajirna, Shosha, Galaganda, Pandu, Pratisyaya
8	Dhanyaka	Atisara, Chardi, Daha, Jwara, Trishna, Ajeerna
9	Pippali	Aruchi, Gulma, Plihavriddhi, Kasa, Shwasa, Raktavikara, Vatarakta, Mootravikara
10	Pippalimoola	Udararoga, Anaha, Gulma, Krimiroga, Vataroga
11	Nagakesara	Vatarakta, Shopha Roga, Vastiroga, Raktapitta
12	Krishna Jeeraka	Agnimandya, Adhmana, Krimiroga, Jirna Jwara, Grahani
13	Talisa	Swasa, Kasa, Agnimandya, Krimi, Hikka, Aruchi, Mukharoga
14	Ela	Ajeerna, Shwasa, Atisara, Adhyamana, Udarashoola, Mutrakricha

15	Maricha	Agnimandya, Ajeerna, Yakritvikara, Shoola, Grahani, Hrid Daurbalya, Kasa, Kushtha
16	Shunthi	Aruchi, Chardi, Ajeerna, Gulma, Grahani, Vibandha, Hridroga, Shotha
17	Dadima	Aruchi, Agnimandya, Trishna, Atisara, Krimiroga, Kasa, Amlapitta

Evaluation of Lavan Bhaskar Churna

Various pharmacopoeial evaluation parameters are recommended to ensure the quality, safety, efficacy and standardisation of classical formulations like Lavan Bhaskar Churna. These tests are generally undertaken during the various phases of formulation development, product standardisation, and quality control.

Organoleptic Evaluation

- **Colour:** Homogeneous pale brown to reddish-brown, variable according to herbal content
- **Smell**: Unique, pungent and mildly salty odour
- **Flavour**: Salty and pungent with hints of light sourness and bitterness
- **Texture**: Powder of fine, homogeneous and non-sandy powder

Physicochemical Evaluation

Table no. 2

Parameter	**Purpose**
Purpose	Determines moisture content and shelf stability
Total Ash	Measures total mineral content

Acid-insoluble ash	Indicates presence of siliceous matter
Water-soluble extractive	Evaluates solubility and water-extractable actives
Alcohol-soluble extractive	Indicates ethanol-extractable phytoconstituents
pH (1% aqueous solution)	pH (1% aqueous solution)
Ensures product compatibility and gut safety	Confirms uniformity for dose accuracy

Microbial Limit Test

- Total aerobic bacterial count
- Total fungal count
- Specific pathogen tests (e.g., E. coli, Salmonella, etc.)

These guarantee that WHO and AYUSH recommended standards for safety for microbiological purposes are being met by the formulation.

Heavy Metal Testing

- The detection and quantification of lead (Pb) using AAS/ICP-MS, arsenic (As) using AAS/ ICP-MS, cadmium (Cd) using AAS/ICP-MS, and mercury (Hg) using AAS/ICP-MS
- Verifies toxic metal limits are below threshold

TLC/HPTLC fingerprinting

- Implemented for some marker compounds (e.g., piperine from Pippali, gingerol from Shunthi)
- Assists in diagnostic profiling of the phytochemicals and in standardisation from batch to batch.

Flow Property Tests (for Powder Form)

Table No. 3

Test	**Purpose**
Angle of Repose	Indicates powder flowability
Bulk density	Mass per unit volume in loose form
Tapped density	Mass per unit volume after tapping
Carr's Index	Measures compressibility and packing ability
Hausner's Ratio	Indicator of powder cohesiveness and flow properties

Results and Discussion

In this chapter, Lavan Bhaskar Churna was described in detail from ancient Ayurvedic classics along with modern pharmacological data. The formulation is analysed ingredient-wise to showcase the therapeutic significance, pharmacological properties, and possible combinatorial pathways of action. The action of each individual component is explained in conjunction with Ayurvedic and modern biomedical perspectives.

Conclusion

In summary, this formulation embodies the timeless wisdom of classical Ayurveda balanced with modern scientific applicability to gut health as practised today. It is highly promising in Indian systems of medicine but also a key component of integrative and complementary therapy for gut health, liver health and overall metabolic balancing.

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