



PHARMACEUTICAL PREPARATION OF AMALAKYAVALEHA: A CLASSICAL AYURVEDIC FORMULATION FOR THE MANAGEMENT OF PANDU ROGA

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ABSTRACT

Ayurveda emphasizes the preparation of medicines through scientifically designed pharmaceutical procedures to enhance their therapeutic efficacy, palatability, stability, and shelf life. Among the various dosage forms, Avaleha Kalpana is one of the most widely accepted semisolid formulations due to its ease of administration and prolonged preservation. Amalakyavaleha, a classical formulation described in Yogaratnakara under Panduroga Adhikara, is traditionally indicated for the management of Pandu, Kamala, and Halimaka. The present pharmaceutical study was conducted to prepare Amalakyavaleha according to classical Ayurvedic principles while documenting each stage of pharmaceutical processing. The preparation involved the extraction of Amalaki Swarasa, preparation of Prakshepa Churna, preparation of Kalka Dravya, and formulation of Avaleha following standard Avaleha Paka procedures. Organoleptic observations, processing characteristics, quantitative yield, and pharmaceutical precautions were recorded throughout the preparation. The final formulation exhibited characteristic colour, aroma, semisolid consistency, and classical Siddhi Lakshanas of Avaleha, confirming the successful preparation of the formulation. The study demonstrates the importance of standardized pharmaceutical techniques in ensuring the quality, safety, and therapeutic potential of classical Ayurvedic formulations.

KEYWORDS: Ayurveda, Amalakyavaleha, Avaleha Kalpana, Bhaisajya Kalpana, Pandu Roga, Pharmaceutical Study.

INTRODUCTION

Ayurveda, the traditional system of Indian medicine, primarily aims at preserving health and treating diseases through natural therapeutic measures. Among the fundamental components of Ayurvedic treatment, **Aushadha (medicine)** occupies a central position. The preparation of medicines in Ayurveda is not limited to the simple use of medicinal plants but involves specialized pharmaceutical processes collectively known as **Bhaisajya Kalpana**. These procedures transform raw herbal materials into stable, effective, palatable, and therapeutically potent dosage forms.

Ancient Ayurvedic scholars recognized that crude drugs often possess limitations such as poor palatability, reduced stability, shorter shelf life, and difficulty in administration. To overcome these drawbacks, numerous dosage forms were developed, including Swarasa, Kalka, Kwatha, Hima, Phanta, Churna, Vati, Ghrita, Taila, and Avaleha. Among these, **Avaleha Kalpana** is regarded as one of the most acceptable formulations because it combines medicinal herbs with sweetening agents, making the preparation suitable for children, adults, and elderly individuals while simultaneously improving shelf life and patient compliance.

Amalakyavaleha is a classical Avaleha formulation described in *Yogaratanakara* for the treatment of **Pandu (anaemia)**, **Kamala (jaundice)**, and **Halimaka**. The formulation mainly contains Amalaki as the principal ingredient along with Pippali, Madhuka, Draksha, Gostanika,

Sunthi, Vansalochana, Sarkara, and Madhu. Amalaki is renowned in Ayurveda for its Rasayana, antioxidant, haematinic, digestive, and rejuvenating properties, making it an ideal drug for disorders associated with depletion of blood and impaired metabolism.

The present pharmaceutical study was undertaken to prepare Amalakyavaleha according to classical references and document every pharmaceutical step to ensure reproducibility and standardization.

AIM AND OBJECTIVES

The study was conducted with the following objectives:

- To prepare fresh Amalaki Swarasa according to classical Ayurvedic methods.
- To prepare fine Prakshepa Churna of Pippali, Madhuka, Sunthi, and Vansalochana.
- To prepare Kalka of Gostanika and Draksha.
- To formulate Amalakyavaleha following classical Avaleha Kalpana procedures.
- To observe pharmaceutical characteristics and record processing parameters during preparation.

MATERIALS AND METHODS

All herbal raw materials were procured from the local Ayurvedic market and authenticated by experts from the Departments of Dravyaguna and Rasashastra. Pharmaceutical processing was carried out in the Mini Pharmacy Unit attached



to the Postgraduate Department of Rasashastra and Bhaishajya Kalpana, Gopabandhu Ayurveda Mahavidyalaya, Puri, Odisha. The pharmaceutical preparation consisted of four major stages:

1. Preparation of Amalaki Swarasa
2. Preparation of Prakshepa Churna
3. Preparation of Kalka Dravya
4. Preparation of Amalakyavaleha

Each stage was performed following classical Ayurvedic pharmaceutical principles under hygienic laboratory conditions.

Preparation of Amalaki Swarasa

Fresh mature fruits of Amalaki were selected after careful examination to ensure freedom from insect infestation, fungal growth, bruises, and physical damage. The fruits were thoroughly washed to remove adhering dirt and contaminants. Seeds were removed manually, and the edible pulp was ground into a homogeneous paste using a wet grinder.

The prepared Kalka was transferred into a clean muslin cloth and pressed mechanically to obtain fresh Swarasa. The expressed juice was filtered to remove fibrous particles and was used immediately for pharmaceutical processing to preserve its medicinal potency.

Fourteen kilograms of fresh Amalaki fruits yielded approximately **12.288 litres of Swarasa**. The juice was green in colour, possessed characteristic herbal aroma, exhibited predominantly sour taste, and remained clear with slight sedimentation.

Special precautions were taken throughout the preparation, including proper cleaning of equipment, complete removal of seeds, hygienic handling, and filtration through sterile muslin cloth to minimize contamination and maintain pharmaceutical quality.

Preparation of Prakshepa Churna

Prakshepa Dravyas included **Pippali, Madhuka, Sunthi, and Vansalochana**. Each ingredient was carefully cleaned to remove foreign matter and dried completely to eliminate moisture.

The dried drugs were initially coarsely powdered using a mortar and pestle and then finely pulverized in a mechanical grinder. The powders were sieved through a fine mesh to obtain uniform particle size and mixed thoroughly to produce a homogeneous Churna.

A total of **1100 g** of raw materials yielded approximately **1020 g** of fine Prakshepa Churna. The prepared powder exhibited uniform texture with pleasant aromatic odour.

Strict hygienic measures such as wearing gloves and masks, using completely dried ingredients, and storing the final product in airtight containers were adopted to preserve quality and prevent microbial contamination.

Preparation of Kalka Dravya

Kalka was prepared using **Gostanika and Draksha**.

The raw materials were cleaned thoroughly with potable water to remove dust and impurities before grinding. Each ingredient was separately triturated using a grinder until a smooth, homogeneous semisolid paste was obtained. Where required, small quantities of water were added to facilitate grinding and achieve the desired consistency.

The final Kalka weighed approximately **1.5 kg** from **1.6 kg** of raw material. It exhibited smooth consistency and characteristic aroma.

Fresh preparation of Kalka ensured preservation of active phytoconstituents and improved incorporation into the Avaleha formulation.

Preparation of Amalakyavaleha

The pharmaceutical preparation of Amalakyavaleha was performed according to the classical Avaleha Paka method.

Initially, the prescribed quantity of Sarkara was dissolved completely in freshly prepared Amalaki Swarasa under mild heating. The syrup was filtered to remove impurities.

The prepared Kalka was gradually incorporated into the syrup with continuous stirring over mild heat. The mixture was cooked until characteristic **Paka Siddhi Lakshanas** appeared, including thread formation (Tantumtva), adherence to the ladle (Darvi Pralepatvam), sinking in water (Apsumajjanam), and development of stable semisolid consistency.

After removal from heat, the finely powdered Prakshepa Churna was added gradually with continuous stirring. Honey was incorporated only after cooling to room temperature to preserve its therapeutic properties.

The finished Avaleha was packed in sterile airtight glass containers and labelled appropriately.

Approximately **17.88 kg** of total raw materials yielded **9.2 kg** of Amalakyavaleha. The final product possessed characteristic aroma, thick semisolid consistency, smooth texture, and all classical pharmaceutical characteristics of properly prepared Avaleha.

Pharmaceutical Observations

The pharmaceutical study demonstrated that every processing stage significantly influenced the quality of the final formulation. Freshly extracted Swarasa retained the natural colour and taste of Amalaki, indicating successful extraction of active constituents. The preparation of uniform Prakshepa Churna ensured homogeneous mixing and enhanced bioavailability of powdered ingredients.

Similarly, freshly prepared Kalka contributed to proper consistency and effective integration of herbal drugs into the formulation.

Continuous stirring during Avaleha Paka prevented charring and ensured uniform heating. Mild flame helped preserve thermolabile constituents while facilitating gradual concentration of the formulation.

Observation of classical Paka Lakshanas confirmed proper completion of the pharmaceutical process. Addition of honey after cooling prevented degradation of its nutritional and medicinal properties.

The final formulation demonstrated desirable organoleptic characters including pleasant aroma, semisolid consistency, smooth texture, and uniform appearance, indicating successful pharmaceutical preparation.

DISCUSSION

Standardization of Ayurvedic pharmaceutical procedures is essential for ensuring reproducibility, safety,



efficacy, and quality of herbal formulations. The present study illustrates the practical application of classical Bhaishajya Kalpana principles in preparing Amalakyavaleha.

Amalaki serves as the principal ingredient because of its Rasayana, Deepana, Pachana, antioxidant, and haematinic properties. Fresh Swarasa extraction ensures maximum retention of Vitamin C and other bioactive phytochemicals.

Pippali, Sunthi, and Madhuka function as Prakshepa Dravyas that improve digestion, enhance bioavailability, and increase therapeutic efficacy. Vansalochana contributes additional rejuvenating properties, whereas Draksha and Gostanika improve palatability while supporting nutritional supplementation.

The pharmaceutical processing of Avaleha enhances stability by reducing moisture content and increasing sugar concentration, thereby improving shelf life. Classical Paka Lakshanas serve as reliable indicators for determining the optimum stage of cooking.

Maintenance of hygiene throughout processing minimizes microbial contamination and improves product safety. Proper packaging in airtight glass containers protects the preparation from environmental moisture and oxidation, thereby preserving its therapeutic potency.

The recorded yield and pharmaceutical observations indicate that the adopted procedures are suitable for preparing high-quality Amalakyavaleha under controlled conditions. The study also provides a reproducible protocol that can be utilized for pharmaceutical standardization and future quality control studies.

CONCLUSION

The present pharmaceutical study successfully standardized the preparation of Amalakyavaleha according to classical Ayurvedic principles. Sequential preparation of Amalaki Swarasa, Prakshepa Churna, Kalka Dravya, and Avaleha Paka produced a high-quality semisolid formulation possessing all classical Siddhi Lakshanas.

The study highlights the significance of proper raw material selection, hygienic handling, controlled heating, continuous stirring, and adherence to classical pharmaceutical guidelines in obtaining a stable and therapeutically effective formulation.

The final product demonstrated satisfactory organoleptic characteristics, desirable pharmaceutical quality, and acceptable yield. These findings support the importance of standard operating procedures in Ayurvedic pharmaceuticals and provide a scientific foundation for future analytical, pharmacological, and clinical evaluation of Amalakyavaleha in the management of Pandu Roga and related disorders.

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