



## Various Dosage Forms Needed in Ayurveda: A Classical Review

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**ABSTRACT:** Ayurveda, the ancient Indian medical system, is founded on the triad of **Hetu, Linga and Aushadha**, with *Aushadha* playing a central therapeutic role. The science of **Aushadha Kalpana** refers to the preparation and processing of raw drugs into suitable dosage forms, enhancing their efficacy, palatability, and shelf life.

Classical texts such as *Charaka Samhita* and *Sharangadhara Samhita* describe a wide range of **dosage forms**—liquid, semi-solid and solid—each suited for specific diseases, patient types, and therapeutic needs. These are classified based on **physical form, route of administration, origin (plant, animal, or mineral), and processing techniques**.

The inclusion of **Rasa Shastra** formulations—herbo-mineral and metallic preparations—further expands therapeutic options. The selection of dosage form depends on factors like **patient variability, disease type, season, and drug properties**, as emphasized in classical references. This article presents a structured overview of Ayurvedic dosage forms, their classifications, examples, and rational application, reaffirming the scientific and holistic approach of Ayurveda in delivering effective treatment through appropriate pharmaceutical design.

**KEYWORDS:** Aushadha Kalpana, Panchavidha Kashaya Kalpana , Kalpana Bheda , Bhaishajya Kalpana , Drug Delivery, Ayurveda Dosage Forms.

### INTRODUCTION

Aushadha [1], the therapeutic component, is not merely the administration of raw drugs but the refined application of well-prepared formulations. The efficacy of a drug is significantly enhanced or modified by the form in which it is delivered. Thus, Aushadha Kalpana [3]—the science of pharmaceutical preparations—emerges as a vital branch of Ayurveda.

Ayurveda classifies various Kalpanas based on their physical state, source, purpose of administration, and method of processing (Samskara) [3]. Classical texts have documented a wide array of dosage forms, each suited for specific disorders, seasons, and patient types. The innovations of Rasa Shastra—especially the introduction of metals, minerals, and herbo-mineral combinations—have further expanded the report of Ayurvedic formulations.

### IMPORTANCE OF DOSAGE FORMS

The ancient scholars understood the importance of modifying a formulation to enhance therapeutic effectiveness.

“सङ्योगविशेषेण द्रव्याणां गुणान्तरं भावति ।” (Cha. S. Su. 1/45)

This significant assertion suggests that the medicinal benefits of a drug change based on how it is combined and processed. Hence, Kalpana [3] can be considered a transformative science.

### CLASSIFICATION OF DOSAGE FORMS (KALPANA BHEDA)

LIQUID DOSAGE FORMS / KALPANA	SEMISOLID DOSAGE FORMS / KALPANA	SOLID DOSAGE FORMS / KALPANA
Swarasa	Kalka	Curna
Kasaya(kwatha)	Avaleha	Rasakriya/ganavati
Hima	Lepa	Khanda
Phantha	Siktha taila	Gudapaka
Pramathya	Malahara	Guggulu
Paniya	Upanaha	Sattwa
Usnodaka		Lavana
Ksirapaka		Ayaskrti
Laksarasa		Masi
Masmsa rasa		Ksara
Mantha		Vati
Udaka		Varti
Panaka		
Arka		
Sarkara		
Sneha		
Sandhana		

#### 1. Based on Physical State:

- **Liquid:** This dosage forms are commonly used in Ayurveda due to their rapid absorption and ease of administration. Swarasa [2], or expressed juice, is made by grinding fresh herbs and extracting their juice, offering a potent and fast-acting remedy. Kwatha, or decoction, is prepared by boiling coarsely powdered herbs in water to extract their medicinal properties. Hima, or cold infusion, and Phanta, or hot infusion, are gentler extraction methods where herbs are steeped in either cold or hot water, respectively, to obtain their active compounds.

*Swarasa [2], Kashaya, Hima, Phanta, Asava, Arishta, Arka, kwatha*

- **Semi-solid:** These formulations are designed to improve the stability and retention of medications. Kalka [2], or paste, is a coarse mixture created by grinding herbs with a liquid medium. It is used for both internal and external applications. Avaleha, or confection, is a dense, sweet preparation made by combining herbal extracts with jaggery or honey. This not only enhances the flavor but also extends the shelf life of the product. Lepa, or topical paste, is applied directly to the skin to target specific skin issues and reduce inflammation.

*Kalka [2], Avaleha, Lepa, Rasakriya*

- **Solid:** Solid preparations are the preferred choice because they offer longer shelf life and precise dosage control. Churna, or powder, consists of finely ground herbs that can be taken on their own or mixed with

water, honey, or ghee for added benefits. Vati or Gutika, in the form of tablets or pills, are created by compressing herbal powders with binding agents, ensuring they are convenient for storage and use. Choosing these formats guarantees optimal effectiveness and ease of use.

*Churna, Vati, Varti, Guggulu [21], Lavana, Kshara, Masi*

## 2. Based on Usage:

- *Abhyantara* (Internal)
- *Bahya* (External)

## 3. Based on Source:

- **Plant origin:** *Triphala Churna, Dashamoola Kwatha [2]*
- **Animal origin:** *Madhu, Goghrita [3]*
- **Mineral origin:** *Tamra Bhasma [8], Abhraka Bhasma [8]*

## 4. Primary vs. Secondary Kalpanas:

- **Primary:** *Swarasa [2], Kalka [2], Kwatha [2], Hima [2], Phanta [2]*
- **Secondary:** *Vati [3], Avaleha [2], Sneha [3], Asava-Arishta[5]*

## DETAILED DISCUSSION ON DOSAGE FORMS

### 1. LIQUID DOSAGE FORMS:

**a) Swarasa :** It is the fresh juice extracted from medicinal herbs, is a potent Ayurvedic preparation classified under Panchavidha Kashaya Kalpana [2]. Tulasi Swarasa is a common example. It serves as both a bhavana and shodhana dravya in mineral preparations, typically administered in a dose of ½ to 1 pala.

Juice extraction varies by drug type: soft drugs are pounded; hard drugs are decocted with eight times water and reduced to one-fourth, while fibrous drugs require the *putapaka* method.

**यन्तनिष्पीडिताद् द्रव्याद्रसः स्वरस उच्यते !!** (Ch.su.4/7)

Extraction methods vary: pounding (soft), boiling (hard), Putapaka (fibrous). Eg: *Tulasi Swarasa [2]*.

**b) Kwatha:** It is a decoction prepared by boiling coarse drug powder in water and reducing it to one-eighth of its original volume. It is widely used internally and acts as a base for secondary formulations.

The water-to-drug ratio varies by drug hardness: 1:4 for soft, 1:8 for medium and hard, and 1:16 for very hard substances. The mixture is boiled on mandagni in an earthen pot. For instance, Rasnadi Kwatha [2] is administered at a dose of 2 palas (approx. 96 ml). Kwatha [2] is also serve in preparing medicated ghee/oil and as anupana, niruha basti, and bhavana dravya. Example: *Pramathya Kalpana, Paniya Kalpana, Usnodaka, Ksirapaka, Laksarasa, and Mamsa Rasa.*

**वहनौ तु कथितं द्रव्यं श्रुतमाहश्चिकित्सकाः||** (Ch.su.4/7)

**c) Phantha :**The drug is steeped in hot water, making it the least potent of the Panchavidha Kalpana preparations. This method is the final step among the Panchavidha Kashaya Kalpana [2]. In this process, the coarse powder of the drug is immersed in hot water, then rubbed and filtered through a cloth. This helps soften the drug and facilitates the extraction of volatile components into the water. As a result, it is considered to have the lowest potency among the Panchavidha Kashaya Kalpana [2]. An example of this preparation is *Jeeraka Phanta.*

**क्षिप्योष्णतोये मुदितं तत् फाण्टं परिकीर्तितम् ||** (ch.su. 4/7)

**d) Hima:** It is prepared by soaking one part of the drug in six parts of cold water overnight in an earthen pot. The next morning, it is macerated and filtered. Known for its Pittashamaka and Hridaya properties, it also offers quick energy—*Dhanyaka Hima* [2] being a common example.

**द्रव्यादापोथितात्तोये तत्पुनर्निशिसंस्थितात् ॥ कपायो योऽभिनिर्याति स शीतः समुदाहृतः!!** (ch.su.4/7)

The usual dose is 2 *palas* (approx. 96 ml). Related forms include *Mantha*, *Udaka*, and *Panaka Kalpana*.

**e) Arka:** Prepared using Arka-yantra, this secondary preparation is obtained by distilling certain liquids or drugs that have been soaked in water and extracted through an arkayantra. It is used in cases of agnimandya, amajeerna, and amatisara. An example is *Pudina Arka*.

**f) Asava -Arishta:** Fermented preparations for long-term use include Asava and Arishta, which are unique medicinal formulations. These preparations are created by soaking either powdered or concentrated herbal medicines in a solution of sugar or jaggery for a specific period of fermentation. This fermentation process generates alcohol, which serves as a natural preservative and helps extract the active compounds present in the herbs. As a result, these formulations can be preserved for many years. Examples include *Drakshasava* and *Dashamoolarishta*.

**g) Sneha:** Ratio 1 (Kalka):4 (Drava):16 (Sneha).

Taila and Grutha are preparations made by boiling oil with a prescribed kashaya and kalka according to a specific formula. This preparation typically follows the ratio of 1:4:16. These medicinal forms can be used both internally and externally. Examples include *Triphalagrutha* and *Dhanwantara Taila*, particularly *Dhanwantaram Taila*.

**h) Sarkara :** Medicines in syrup form are referred to as "sarkara." In this preparation, two parts of sugar are combined with one part of kwatha, swarasa, or hima. The mixture is heated over a mandagni until it reaches the desired consistency (paka). After cooling, it is filtered. Sarkara is primarily used for children due to its sweetness, and the sugar concentration in this preparation is 66.7%, which also helps preserve the mixture. An example of this is *parushaka sarkara*.

## 2. SEMI-SOLID DOSAGE FORMS:

**a) Kalka:** Used both internally and externally, this is a soft paste made by grinding both wet and dry herbs, such as *Nimba Kalka* [2].

**यः पिण्डो रसपिष्टानां स कल्कः परिकीर्तितः!!** (Ch.su.4/7)

**b) Avaleha:** Avaleha is a type of semi-solid preparation made by adding jaggery and/or sugar, which is then boiled with a specific medicinal drug, a decoction of the drug, or its juice. This process results in a semi-solid preparation. Examples of Avaleha include *Kushmanda Avaleha* and *Chyawanprash*.

**“द्रव्याणां पाकसंयोगात् लेहः स्याच्छीतवीर्यकः।”** (Sha. S. 2/8)

**c) Rasakriya:** A thick extract, known as Rasakriya, is derived from Swarasa [2] or Kashaya. This preparation involves extracting the juice, boiling it down to achieve a thick consistency, resulting in a semi-solid form. Rasakriya is primarily used for bitter medications, making them easier to consume and allowing for a minimized dosage. An example of this is *Daruharidra Rasakriya*.

## 3. SOLID DOSAGE FORMS:

**a) Churna:** Churna refers to a fine powder that can consist of either a single drug or a mixture of two or more drugs. In this process, the drugs are finely ground and then filtered through cloth to ensure a very fine texture. This powder can be used for both internal and external applications. It is commonly used in preparations such as *Vati* and *Avalehya*.

**b) Vati\Gutika:** Churna is mixed with guggulu or honey and then rolled into pill form. This solid preparation can be made by either cooking the powdered drug with jaggery, sugar, or guggulu, or by preparing it without cooking. The powder is then macerated with a liquid such as honey or guggulu before being shaped into pills. This method is considered one of the most convenient forms of medicine for patients. These pills can be used

both internally and externally, and they have a long shelf life. Examples include *Bilvadi Gulika and Triphala Guggulu* [21].

**c) Varti:** Tapered medicine for local administration resembles vati but is modified into a yavakriti form, featuring tapering ends. For example: *Gudavarti*.

**d) Guggulu:** Guggulu processed with Kashayas. Guggulu Kalpana [21] refers to the medicinal preparations where Guggulu (a resin) is used either as a base or as a binding agent, often combined with powdered herbs, minerals, or other bioactives to make Vatis (pills) or Gutika. Eg: *Yogaraja Guggulu*.

**e) Kshara:** Putapaka refers to processed salt or alkaline ash. Ksharas are alkaline substances derived from the ash of various plants. These substances can be used both internally and externally. The kshara intended for internal use is called paniyakshara, while the kshara used externally is known as pratisaraneeyakshara. Ksharas are further classified into three types: mrudu, madhyama, and teekshna. They are regarded as one of the anusastras and have an indefinite shelf life. Examples of ksharas include *Yavakshara and Apamargakshara, as well as Saindhava Lavana*.

**f) Lavana:** The substance is a solid form created by grinding saindhavalavana and mixing it with arka and narikela. This mixture is then covered and subjected to a cooking process using puta, resulting in a black-colored lavana. When stored in airtight containers, it can be preserved for many years. An example of this is *narikelalavana*.

**g) Masi:** The carbon form of a drug is prepared using a process called Puta. The conversion of a drug into its carbon form through burning is referred to as masikalpana. To prepare masi, the drug must be powdered and placed in a sarava. A second sarava is then placed over the first one to create a sealed unit, known as samputa. The preparation process involves applying either laghuputa or mahaputa, depending on the characteristics of the drugs involved. After the samputa cools, the resulting masi is ground again to achieve a homogeneous and fine powder. An example of this process is *the preparation of Triphala masi*.

#### DOSAGE FORMS OF AYURVEDIC FORMULATION:

S.NO	DOSAGE FORM	NUMBER OF INGREDIENTS	DOSE
1.	Swarasa (Expressed Juice)	1-3	5-10 ml
2.	Churna (Powder of Combinations)	3-20	3-5gm
3.	Kwath Churna (Coarse Powder for Making Decoction)	3-15	10-30gm
4.	Pravahi Kwath (Preserved Decoction - Ready for Use)	3-20	10-20ml
5.	Asava and Arishta (Fermented Liquids - Multiple Ingredients)	5-20	20-30ml
6.	Arka (Distilled medicated water)	1-3	10-20ml
7.	Avaleha (Jam-like formulation)	10-50	5-10 gm
8.	Paka Khand (Confectionary-like formulation)	10-25	5-10gm
9.	Guggulu (Guggulu-based formulation in tablet/pill form)	5-20	1-3gm
10.	Ghrita (Butter-based)	5-20	5-10gm
11.	Taila (Medicated oil-based)	10-20	External
12.	Lepa (For external use)	5-15	External

13.	Malhara (Ointment)	3-5	External
14.	Satva/Ghansatva (total water extract)	1-3	½-1gm
15.	Vati/Gutika (tablet/pill)	5-20	½-1gm
16.	Panaka (syrups)	5-15	10-20ml
17.	Capsules	5-10	2
18.	Aaschayotana (Eye drops)	3-5	Local use
19.	Karn bindu (Ear drops)	5-10	Local use
20.	Nasaya (Nasal drops/insulation)	5-10	Local use
21.	Bhasma (Calcinated Ash) (i) Mineral-based ash (Compounds of Minerals) (ii) Metal-based ash (Compounds of Metals)	1-3	50-100mg
22.	Lauh & Mandora (Iron ash-based formulations)	5-20	1gm
23.	Ras Yoga (Herbo-mineral formulations) (i) Kupipakva (Metallic compounds) (ii) Rasayoga (Herbo-mineral metallic formulations)	5-20	125-250mg

#### NEED FOR DIFFERENT DOSAGE FORMS:

Ayurveda, the ancient Indian system of medicine, emphasizes individualized treatment based on the patient's constitution (Prakriti), disease condition (Vikriti), age, strength, and seasonal variations. The concept of **Aushadha Kalpana** (pharmaceutical processing) plays a vital role in delivering therapeutic efficacy, and it includes a variety of dosage forms to suit diverse clinical situations.

PURPOSE	EXPLANATION
1. Rogi Bheda (Patient variability)	Children, elderly, pregnant women, and weak individuals need gentle or palatable forms (e.g., Avaleha for children). ( <i>Sha.S. 1/6</i> )
2. Roga Bheda (Disease variation)	Acute diseases need fast-acting forms (e.g., Kwatha), while chronic disorders benefit from Rasayana like Ghrita. ( <i>Ch. S.Su. 1/126-127</i> )
3. Desha & Kala	Climatic and regional variations affect choice of form — e.g., Taila in dry regions, Kwatha in cold conditions. ( <i>A.H.Su.1/7-10</i> )
4. Dravya Swabhava (Nature of the drug)	Some drugs are better extracted in ghee (lipophilic) or water (hydrophilic).
5. Stability & shelf life	Asava-Arishta (fermented forms) have longer shelf life. ( <i>Sha.S. 10/1-3</i> )

**MAJOR DOSAGE FORMS:**

DOSAGE FORM	EXAMPLE	USE
<b>Kwatha</b>	Dashamoola Kwatha	Acute fevers, inflammation (Sha.S. 2/6)
<b>Churna</b>	Triphala Churna	Constipation, detox (Sha.S. 4/1-3)
<b>Asava/Arishta</b>	Drakshasava, Ashwagandharishta	Digestive, chronic disease (Sha.S.10/1-15)
<b>Ghrita</b>	Brahmi Ghrita	Memory, (R.Ch.S.Ka. 3/4)
<b>Taila</b>	Mahanarayana Taila	Neuromuscular diseases (A.H.Su. 15/16)
<b>Avaleha</b>	Chyawanprash	Immunity, rejuvenation (Sha.S.6/1-7)
<b>Vati/Gutika</b>	Chandraprabha Vati	Urinary disorders (Sha.S. 8/1-3)
<b>Bhasma</b>	Swarna Bhasma	Rasayana, chronic disease (R.T. 3)
<b>Rasayoga</b>	Anandabhairava Rasa	Fever, diarrhea (R.R.S. 4/3)
<b>Lepa</b>	Sandalwood paste	Pitta disorders, inflammation (A.H.Su. 23/5)
<b>Anjana</b>	Elaneer Kuzhambu	Eye diseases (Ch. S. 25/25)
<b>Nasya/Karna Prakshalana</b>	Anu Taila	Head, nose, ear disorders (A.H.Su. 20/1-5)
<b>Dhoopana</b>	Aparajitha Dhoopa	Disinfection, wounds (Ch. Su. 5/16)
<b>Basti</b>	Niruha, Anuvasana Basti	Vata disorders, detox ( Ch. S. 1/39-40)

**CONCLUSION**

The wide range of dosage forms in Ayurveda highlights its holistic and individualized approach to treatment. Each *Aushadha Kalpana* is designed to suit specific patient needs, disease types, seasons, and drug properties, ensuring maximum therapeutic effect.

**न होकं औषधं सर्वेषां द्रव्याणां समानं स्यात्।** (Ch.S.Su.26/12)

Classical texts like *Charaka Samhita* and *Sharangadhara Samhita* emphasize that the success of treatment lies not just in the drug, but in its proper formulation and administration. Forms like *Swarasa*, *Avaleha*, *Vati*, and *Bhasma* illustrate Ayurveda's adaptability and depth.

In today's context, revisiting and standardizing these formulations can bridge traditional wisdom with modern healthcare needs. Thus, Ayurvedic dosage forms remain a vital part of ensuring safe, effective, and personalized treatment.

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