

PHARMACEUTICO - ANALYTICAL STUDY OF KANJI-SHATPALA GHRITA - A  
BENEDICTION FOR AMAVATADr. Vinu V. J.<sup>1\*</sup>, Dr. Prashanth Bimashankar Vijapure<sup>2</sup>, Dr. Chaitra L. V.<sup>3</sup>, Dr. Malavika V. S.<sup>4</sup><sup>1</sup>PG Scholar, Department of PG Studies in Rasa Shastra and Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College and Research Centre, Bengaluru, Karnataka.<sup>2</sup>Associate Professor, Department of PG Studies in Rasa Shastra and Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College and Research Centre, Bengaluru, Karnataka.<sup>3</sup>Professor, HOD, Department of PG Studies in Rasa Shastra and Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College and Research Centre, Bengaluru, Karnataka.<sup>4</sup>PG Scholar, Department of PG Studies in Rasa Shastra and Bhaishajya Kalpana, Sri Sri College of Ayurvedic Science and Research, Bengaluru, Karnataka.**\*Corresponding Author: Dr. Vinu V. J.**PG Scholar, Department of PG Studies in Rasa Shastra and Bhaishajya Kalpana, Ramakrishna Ayurvedic Medical College and Research Centre, Bengaluru, Karnataka. DOI: <https://doi.org/10.5281/zenodo.18429262>**How to cite this Article:** Dr. Vinu V. J.<sup>1\*</sup>, Dr. Prashanth Bimashankar Vijapure<sup>2</sup>, Dr. Chaitra L. V.<sup>3</sup>, Dr. Malavika V. S.<sup>4</sup> (2026). Pharmaceutico - Analytical Study Of Kanji-Shatpala Ghrita - A Benediction For Amavata. World Journal of Pharmaceutical and Medical Research, 12(2), 151-156.

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**ABSTRACT**

*Amavata* is a disease caused due to vitiation or aggravation of *Vata* associated with *Ama*. Vitiating *Vayu* circulates the *Ama* all over the body and takes *Sthanasamshraya* in joints producing symptoms such as stiffness, swelling and tenderness in multiple joints. The symptoms of *Amavata* are identical to Rheumatoid arthritis which is a chronic inflammatory and systemic auto-immune disease affecting people predominantly between the ages of 30 to 50 years with predictable cause, about 1% of the world population is affected by rheumatoid arthritis and 2 to 3 times more common in women than men. *Kanji Shatpala Ghrita* is a classical preparation mentioned in classical texts for *Amavata*. The present study was undertaken to evaluate *Kanji-Shatpala Ghrita* with respect to its Pharmaceutical preparation and Analytical study.

**KEYWORDS:** *Amavata*; *Kanji-Shatpala Ghrita*; Rheumatoid Arthritis.**INTRODUCTION**

In *Ayurveda*, the greatest emphasis is given to the complete knowledge of drugs including identification, procurement, processing, preparation and application under a separate branch of learning called *Bhaishajya Kalpana*. No branch of *Ayurveda* can exist independently without the aid of *Bheshajas*.<sup>[1]</sup> The substance which helps to bring back the vitiated *doshas* to their normal level or that which counteracts the diseased condition and brings back the body to a healthy state is known as *Bheshaja*.<sup>[1]</sup>

Among the numerous chronic and debilitating disorders confronting modern society, Rheumatoid Arthritis holds a significant place due to its progressive nature and impact on the quality of life. Rheumatoid Arthritis is a chronic, systemic, inflammatory autoimmune disorder

primarily affecting the synovial joints, leading to pain, swelling, stiffness, and progressive deformity.

In its typical form, Rheumatoid Arthritis is a symmetrical, destructive, and deforming polyarthritis affecting small and large synovial joints with associated systemic disturbance, a variety of extra-articular features and the presence of circulating anti-globulin (Rheumatoid factor). The prevalence of rheumatoid arthritis increases with age in both sexes with nearly 5% women and 2% men over 55 years of age.<sup>[2]</sup>

*Amavata*<sup>[3]</sup> is a disease in which vitiated *Ama* circulates all over the body by *Vata dosha* and accumulation takes place in *Sandhi*, characterized by *Shotha*, *Gatrastabdata*, *Shula* in and around the *Sandhi*. *Nidana* according to classical texts are *Viruddhaahara*, *Viruddhachesta*, *Mandagni*, *Nischestata* and *Vyayama* just after *Bhojana*.

Acharya Chakrapani was the first Acharya who described the basic principles for the line of treatment of Amavata. Samana Sneha is considered to be excellent for stimulating the digestive faculty of the body, which is primary requirement in the management of Amavata.

One such Sneha formulation mentioned by Acharya Chakrapani Dhatta for the management of Amavata is Kanji-Shatpala Ghrita<sup>[4]</sup> which consists of Ghrita processed with Kanji, Trikatu, Hingu, Chavya and Saindhava Lavana. Kanji-Shatpala Ghrita is a traditional ayurvedic formulation used as a remedy for Jatarata, Shula, Vibandha, Anaha, Amavata, Katigraha, Grahani dosha and Mandagni. This study was carried out to find the efficacy of Kanji-Shatpala Ghrita in the Chikitsa of Amavata.

**MATERIALS AND METHODS**

❖ **Review of Literature**

**I. Disease Review**

Due to hypo functioning of Jataragni, the undigested abnormal initial Dhatu i.e Rasa which is present in Amashaya is considered as Ama.

Obstruction in the Srotas, loss of strength, feeling of heaviness, impaired movement of Vata, stuporous, indigestion, excessive salivation, constipation, aversion towards the food, lethargy are the general symptoms produced by Ama.<sup>[5]</sup>

Rheumatoid arthritis is an inflammatory, systemic connective tissue and joint disorder which affects principally the synovial joints and hence the term Rheumatoid disease. It is considered to be an extra vascular immune complex disease and cell-mediated immune complex disorder in which the sequence of events leads to inflammatory, granulomatous formation and joint destruction.<sup>[6]</sup>

**II. Formulation Review**

Formulation - Kanji Shatpala Ghrita<sup>[4]</sup>

Reference - Chakradatta

**II. Drug Review**

The ingredients of Kanji Shatpala Ghrita are

**Table no. 01: Ingredients of Kanji Shatpala Ghrita.**

Sl.No	Ingredient	Botanical Name/ Chemical Name	Family	Guna-Karma
1.	Hingu	Ferula narthex Boiss.	Umbelliferae	Anulomana, Deepana, Hridya, Krimighna, Pachana, Ruchya and Vatakaphaprashamana
2.	Pippali	Piper longum Linn	Piperaceae	Vatahara, Kaphahara, Deepana, Ruchya, Rasayana, Hrdya, Vrsya, Tridosahara, Rechana
3.	Maricha	- Piper nigrum Linn.	Piperaceae	Sleshmahara, Deepana, Medohara, Pittakara, Ruchya, Kaphavatajit, Vatahara, Chedana, Jantunashana, Chedi, Hridroga, Vataroga
4.	Shunti	Zingiber officinale Roxb.	Zingiberaceae	Anulomana, Deepana, Hridya, Pachana, Vatakaphapaha, Asmadoshahara
5.	Chavya	Piper chaba Vahl.	Piperaceae	Bhedana, Deepana, Kaphahara, Pachana, Rechana, Vatahara
6.	Saindhava Lavana	Chloride of Sodium	-	Tridosahara, Deepana, Rochana, Hrudyta, Chakshusya, Vrishya, Avidahi
7.	Go Ghrita	Cow's Ghee	-	Agnideepana, Anabhishtyandi, Ayushya, Balya, Chakshusya, Deepana, Hridya, Kantipradha, Medhya, Ojovardhaka, Rasayana, Ruchya, Slesmavardhana, Snehana, Sukravardhaka, Tejobalakara, Twachya, Vatapittaprashamana, Vayahsthapaana, Vishahara, Vrushya.
8.	Shastika Shali	Oryza sativa Linn.	Poaceae	Shukrala, Balya, Brihmana, Chakshusya, Hridya, Kaphahara, Mutrala, Pittahara, Ruchya, Svarya, Vatahara, Varnakrut, Sthanyajanana
9.	Masha	Vigna mungo Linn.	Fabaceae	Vatahara, Kaphakara, Arshohara, Shoolahara, Shukrala, Balya

❖ **PHARMACEUTICAL STUDY**

i. **KANJI PREPARATION<sup>[7]</sup>**

- The pharmaceutical study started with Kanji Preparation. Its reference was taken from Sharangadhara Samhita.
- Shastika Shali was boiled in 14 parts of water till it was cooked and filtered.

- Similarly Masha was also boiled in 14 parts of water till it was half-cooked and filtered.
- These filtrates after cooling was transferred into a pot (after Patra Samskaras), sealed.
- The pot was kept undisturbed in warm and clean place for fermentation for 7 days.

- After 7 days the pot was opened and the *Kanji* was collected
- ii. **GHRITA MURCCHANA**<sup>[8]</sup>
  - *Go-ghrita* was taken in a vessel and heated over *Mandagni* till the evaporation of water content, disappearance of foam and sound coming from *Ghrita*.
  - *Kalka* was made from *Triphala*, *Musta* and *Haridra* by mixing with *Matulunga Nimbu Swarasa* and added to *Ghrita*.
  - Four times of water to that of *Ghrita* was added along with *Kalka*.
  - The mixture was boiled until all *Sneha Siddhi Lakshanas* appeared and filtered.
- iii. **HINGU SHODHANA**<sup>[9]</sup>
  - *Hingu* was placed in *Khalva Yantra* and pounded.
- *Hingu* was taken in a steel pan and roasted over *Mandagni* with required quantity of *Ghrita* till it turns crunchy.
- When cooled it is collected and stored.
- iv. **KANJI SHATPALA GHRITA PREPARATION**<sup>[4]</sup>
  - A clean stainless steel vessel was taken and placed over mild fire and *Murchitta Ghrita* was added.
  - Then *Kanji* and *Kalka* dravyas was added to it and started to heat.
  - Once the *Kanji* was reducing, then 3 litres of *Jala* was added and boiling was continued.
  - The boiling was continued for 5 days till it obtained *Sneha Siddhi Lakshanas*.
  - It was then filtered, measured and stored in an air tight container.



Fig 01 - *Kanji* Kept for *Sandhana*



Fig 02 - *Ghrita Murcchana*



Fig 03 - *Hingu Bharjana*



Fig 04 - *Kanji Shatpala Ghrita* preparation



Fig 05 - *Vartivat Sneha Kalka*



Fig 06 - *Shabdaheno Agni Nikshiptam*

❖ **ANALYTICAL STUDY OF KANJI SHATPALA GHRITA**

**1. ORGANOLEPTIC PARAMETERS**

- a) Colour - Dark yellowish colour
- b) Odour - *Ghrita* odour appreciated
- c) Taste - *Katu-Amla* taste appreciated
- d) Appearance /Touch - *Drava* (*Ghrita* form).

**2. PHYSICO-CHEMICAL PARAMETERS**

Table no 02:- Analytical Study Values of *Kanji Shatpala Ghrita*.

SL NO.	PARAMETERS	RESULTS
1.	pH Value	6.79
2.	Viscosity	43.55
3.	Acid value	1.01
4.	Saponification value	357.94
5.	Refractive ndex	1.465
6.	Specicifc Gravity	0.953
7.	Total fatty matter	97.05
8.	Free fatty matter	7.21
9.	Rancidity	Not rancid
10.	Iodine value	36.55
11.	Peroxide value	1.27

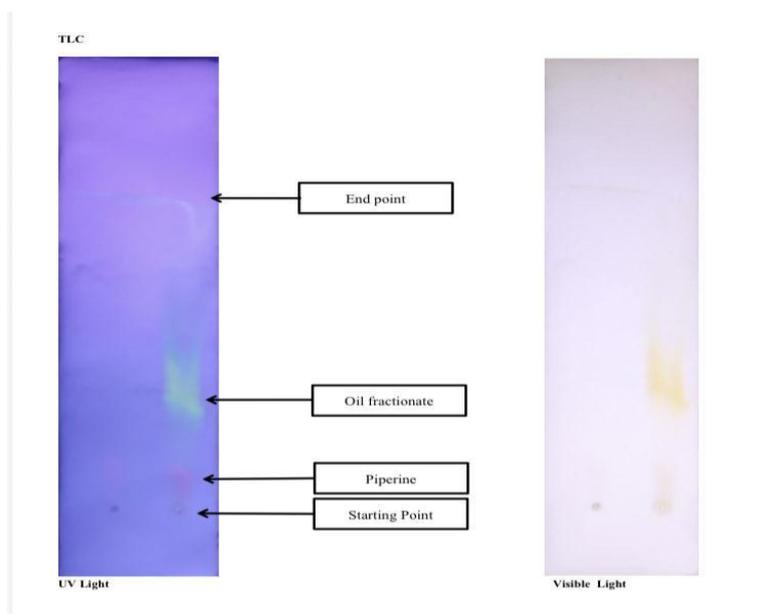
**3. INSTRUMENTAL PARAMETERS**

➤ Starting point – Where the sample was spotted.

– Piperine spot – Indicating presence of piperine (A known alkaloid).

– Oil Fractionate Spot – Shows oil fraction has moved further up due to its polarity difference.

– End Point – Farthest distance the solvent has travelled



**Fig 07: TLC report of Kanji Shatpala Ghrita.**

**DISCUSSION**

The raw drugs needed for the study was procured from Amrit Kesari Depot, Bengaluru and authenticated from *Rasashastra and Bhaishajya Kalpana* Department of Ramakrishna Ayurvedic Medical College and Research Centre (RAMC), Bengaluru.

The Pharmaceutical Study was carried out in the Teaching Pharmacy of Department of *Rasashastra and Bhaishajya Kalpana*, RAMC. Analyticals tests were conducted in Amrith Labs, Shimoga.

**Discussion on Pharmaceutical Study**

As per *Bhaishajya Kalpana*, *Ghrita* said to have *Ama Dosh*, especially if it is exposed to moisture. This means the *Ghrita* can cause indigestion on higher doses. The author explains that if *Ghrita Murcchana* is done, then this *Ama Dosh* will be removed from the *Ghrita*. It

also removes toxins and impurities thereby preventing rancidity. It also reduces heaviness and enhances digestability.

*Bharjana* of *Hingu* reduced its pungency and harshness making it gentle on digestive system. It enhances *Agni* thereby helpful in *Amavata*. Increase efficacy in *Dosha* Pacification.

During the preparation of *Kanji Shatpala Ghrita*, a doubt arised as when to add *Saindhava Lavana* to the formulation. Here the reference of *Bhaishajya Ratnavali* was considered and it was added along with the *Kalka Dravya*.

The next doubt arised was the quantity of water and the time to which it has to be added. Here too the reference

of *Bhaishajya Ratnavali*, *Gulmarogadhikara* was considered as 4 *Prastha* was mentioned.

According to *Vaidika Paribhasha Pradipa*, it is mentioned that 5 days of *Paka* has to be done if *Kanji* is the *Drava-Dravya*. Hence 5 days of *Paka* was done during the preparation.

Discussion on *Sneha Siddhi Lakshanas*

➤ **Varthivat Snehakalka** - Signifies proper oleation. It indicated that the Kalka Dravyas have incorporated its active constituents into the Ghrita. It helps to avoid under or over processing.

– **Sabdavyaparama** - Indicated complete evaporation of water confirming the proper preparation of the Ghrita.

– **Phenashanti** - Indicated proper Snehapaka. During preparation, water from the Drava-Dravya evaporates causing Phena. When the Phena disappears, it shows that all the water is evaporated and the herbs have been properly infused into Ghrita.

➤ **Gandha-Varna-Rasotpatti** - Peethabha Varna, Ghrita Gandha and Katu-Amla Rasa was appreciated.

Discussion on Analytical Study

**Table no. 03: Interpretation of Analytical Study of Kanji Shatpala Ghrita.**

Sl.No	Analytical Study	Result	Interpretaion
1.	pH Value	6.79	a mildly acidic to near-neutral nature
2.	Viscosity	43.55	indicating optimal consistency, physical stability
3.	Acid Value	1.01	indicating minimal free fatty acids, reflecting good quality, stability
4.	Saponification Value	357.94	indicating the presence of predominantly short-chain fatty acids, suggesting good digestibility, enhanced absorption and therapeutic suitability.
5.	Refractive Index	1.465	indicating purity, uniformity and proper lipid composition, suggesting absence of adulteration and good physicochemical stability.
6.	Specific Gravity	0.953	indicating appropriate lipid density and purity, confirming proper Ghrita processing, uniform formulation and absence of contamination or adulteration
7.	Total fatty Matter	97.05	indicating high lipid content and minimal impurities
8.	Free Fatty Matter	7.21	indicating controlled hydrolysis with acceptable levels of free fatty acids
9.	Rancidity	Not rancid	indicating absence of oxidative degradation,
10.	Iodine Value	36.55	indicating low to moderate unsaturation,
11.	Peroxide Value	1.27	indicating minimal lipid peroxidation

**Thin Layer Chromatography (TLC)**

The TLC report showed 4 points majorly.

- i. Starting Point - Where the sample was spotted.
- ii. Piperine Spot - Indicating presence of piperine (a known alkaloid).
- iii. Oil Fractionate Spot - Shows oil Fraction has moved further up due to its polarity difference.
- iv. End Point - Farthest distance the solvent has travelled.

)} The Thin Layer Chromatography (TLC) profile under UV and visible light demonstrates the separation pattern of the test sample (oil fractionate) in comparison with the standard compound, piperine.

)} Under UV light, clear and distinct fluorescent spots were observed at different retardation factor values. The starting point corresponds to the application site of the sample, while the end point represents the solvent front, indicating the maximum migration of the mobile phase. The piperine band was identified at a specific Rf value,

showing a characteristic bright fluorescent spot under UV light, confirming its presence in the test fraction. The oil fractionate displayed a corresponding spot at a similar Rf position, suggesting the presence of piperine or a related compound within the fraction.

)} Under visible light, the separation was less distinct, indicating that the compounds are more clearly visualized under UV radiation due to their chromophoric nature. This observation aligns with the typical behavior of alkaloids such as piperine, which exhibit strong fluorescence under UV light but appear faint or invisible in visible light.

)} The similarity in the Rf value between the standard piperine and the corresponding spot in the oil fractionate indicates a positive identification. This confirms that the fractionation process successfully isolated or retained the active constituent piperine. The presence of additional faint spots may represent minor phytoconstituents or impurities separated during the process.

)} The TLC result supports the successful fractionation and identification of bioactive components from the test sample. The distinct UV-active spots validate the presence of characteristic secondary metabolites, while the clear migration pattern confirms the efficiency of the chosen solvent system.

)} The observed TLC pattern confirms the identity, consistency and purity of the formulation.

### CONCLUSION

*Amavata* is a *Roga* produced due to vitiation of *Ama* associated with *Vata Dosha* circulates all over the body and takes *Sthana Samshraya* in *Sandhis*. *Kanji-Shatpala Ghrita* was specifically selected considering its *Guna, Karma*, indications, phyto chemical constituents and properties which are beneficial in subsiding *Amavata*. It was prepared according to the classical method of preparation following proper *Purvakarma* like *Shodhana of Hingu* etc.

Analytical evaluations including physio-chemical tests and TLC was performed and it confirmed the presence of desired characters thereby supporting the authenticity and quality of the prepared formulation.

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