

**COMPREHENSIVE PHARMACEUTICAL AND THERAPEUTIC  
REVIEW OF TANKANA (BORAX) IN RASASHASTRA****Dr. Swapnil Dhanraj Sayankar<sup>1\*</sup>, Dr. Sneha Kubde<sup>2</sup>**

<sup>1</sup>\*BAMS, MD Scholar (Final Year), Department of Rasa Shastra and Bhaishajya Kalpana, Bhausaheb Mulak Ayurved Mahavidyalaya, Nagpur, Maharashtra, India.

<sup>2</sup>BAMS, MD (Rasa Shastra and Bhaishajya Kalpana), Guide, HOD & Professor, Department of Rasa Shastra and Bhaishajya Kalpana, Bhausaheb Mulak Ayurved Mahavidyalaya, Nagpur, Maharashtra, India.

Article Received on 28 Sept. 2025,  
Article Revised on 18 October 2025,  
Article Published on 01 Nov. 2025,  
<https://doi.org/10.5281/zenodo.17473333>

**\*Corresponding Author****Dr. Swapnil Dhanraj Sayankar**

BAMS, MD Scholar (Final Year),  
Department of Rasa Shastra and  
Bhaishajya Kalpana,  
Bhausaheb Mulak Ayurved  
Mahavidyalaya, Nagpur, Maharashtra,  
India.



**How to cite this Article:** Dr. Swapnil Dhanraj Sayankar<sup>1\*</sup>, Dr. Sneha Kubde. (2025). Comprehensive Pharmaceutical And Therapeutic Review Of Tankana (Borax) In Rasashastra. World Journal of Pharmaceutical Research, 14(21), 417-420.

This work is licensed under Creative Commons Attribution 4.0 International license.

**ABSTRACT**

Tankana (Borax), classified as an Uparasa Kshāra, is an important mineral used in Rasashastra and Rasaushadhi formulations for its wide pharmaceutical and therapeutic applications. It acts as a Yogavāhi (catalyst), enhances stability, and contributes to the efficacy and safety of herbo-mineral preparations. Classical texts such as Rasa Tarangini and Ras Ratna Samucchaya describe its role in alleviating Vāta-Pitta disorders, liquefying Kapha, and mitigating Pitta kručcha conditions. The Shodhana (purification) process of Tankana, typically performed through Nirvāpa (heating until efflorescence ceases), removes impurities and crystallization water, yielding an anhydrous, pharmaceutically stable form. Advanced analytical studies (XRD, SEM, EDAX) confirm that purified Tankana attains a stable orthorhombic  $\text{Na}_2\text{B}_4\text{O}_7 \cdot 5\text{H}_2\text{O}$  structure with enhanced boron content, thereby improving potency and safety. Pharmacologically, Tankana exhibits Uṣṇa, Tīkṣṇa, Laghu, and Rūkṣa properties, showing carminative,

expectorant, antimicrobial, anti-inflammatory, and digestant activities, beneficial in respiratory, gastrointestinal, and inflammatory disorders. Classical formulations like Kaphaketu Rasa and Tribhuvana Kirti Rasa incorporate it as a Bhāvana dravya, Anupāna, or catalyst. Notably, Tankana serves as an antidote to Vatsanabha (Aconitum ferox) poisoning

when administered with ghee or honey, a property validated by traditional and modern studies indicating non-lethal and detoxifying potential. In conclusion, Tankana represents a vital mineral in Rasashastra, functioning as a detoxifier, catalyst, and therapeutic agent. Its classical relevance, coupled with modern scientific validation, underscores its importance in bridging traditional Ayurvedic pharmaceuticals with contemporary pharmacological safety and efficacy.

**KEYWORDS:** Tankana, Borax, Rasashastra, Shodhana, Yogavāhi, Rasaushadhi, Vatsanabha, Antidote, Ayurvedic pharmaceuticals, Bhāvana dravya.

## INTRODUCTION

Rasashastra, a specialized and integral branch of Ayurveda, focuses on the therapeutic use of herbo-mineral formulations, employing meticulous processes like Shodhana (purification) and Marana (calcination) to ensure safety and efficacy. Among the various substances used, Tankana (Borax) holds a significant position as both a Kshāra-traya and an Uparasa. It is widely acknowledged in classical texts for its multifaceted therapeutic properties. Tankana is recognized for enhancing the bioavailability and potency of other drugs, improving digestion and assimilation, and functioning as a Yogavāhi a catalyst that carries medicinal properties deep into the tissues. According to *Rasa Tarangini* (Taranga 13), it plays a vital role in pacifying Vata-Pitta imbalances, resolving Kapha-related disorders, and treating Mutravaha srotas (urinary system) conditions. Its utility spans across formulations for respiratory, digestive, and urinary ailments, making it a versatile and essential component in Rasashastra pharmaceuticals.<sup>[1]</sup>

## AIM

To critically evaluate the pharmaceutical and therapeutic significance of Tankana (Borax) in the discipline of Rasashastra, emphasizing its purification methods, properties, pharmacological actions, and clinical applications.

## OBJECTIVES

1. To review classical Ayurvedic literature regarding the origin, synonyms, and classification of Tankana (Borax).
2. To study the Shodhana (purification) procedures of Tankana described in various Rasashastra texts.

3. To assess the Guna, Karma, and Rasapanchaka of purified Tankana in relation to its therapeutic utility.
4. To analyze the role of Tankana as a Yogavāhi (catalyst) and Bhāvana dravya in herbo-mineral formulations.
5. To discuss the antidotal role of Tankana in Vatsanabha (*Aconitum ferox*) poisoning as per classical and modern perspectives.
6. To correlate classical knowledge with modern analytical and pharmacological evidence supporting the safety and efficacy of purified Tankana.

## MATERIALS AND METHODS

The purification (Shodhana) of Tankana is essential before its incorporation into formulations. The classical method involves Nirvāpa—gentle heating until efflorescence and swelling subside. The resultant anhydrous Tankana is powdered and stored for use. Alternate methods involve Bhāvana with cow or human urine, Jambira swarasa, or Kanji. These processes remove impurities and moisture, ensuring safety and potency. Modern analytical techniques such as XRD, SEM, and EDAX have been applied to validate its transformation into a purified and stable orthorhombic form.<sup>[2]</sup>

## DISCUSSION

The Shodhana process chemically stabilizes Tankana, enhances its pharmacological safety, and modifies its properties to suit therapeutic use. Its Guna profile—Uṣṇa, Tīkṣṇa, Laghu, Rūkṣa—makes it effective in Kapha and Vata disorders.<sup>[3]</sup> Tankana also acts as an antidote to Vatsanabha poisoning when used with ghee or honey, as supported by Rasaratna Samucchaya.<sup>[4]</sup> Scientific evidence confirms its antimicrobial, expectorant, and carminative properties. The integration of classical wisdom with modern analytical data highlights its pharmaceutical potential.<sup>[5]</sup>

## CONCLUSION

Tankana (Borax) holds significant importance in Rasashastra for its multifaceted role as a detoxifying, catalytic, and therapeutic agent. Shodhana ensures its safety and enhances its medicinal value. Its unique properties and proven efficacy make it indispensable in both classical and modern Ayurvedic pharmaceuticals.<sup>[6]</sup> Further pharmacodynamic and clinical studies are recommended to substantiate its therapeutic potential and expand its applicability in modern medicine.

**REFERENCES**

1. Mishra S. Siddhiprada Commentary on Rasa Tarangini. 11th ed. Varanasi: Motilal Banarsidass; 2012; 77–81.
2. Magesh R, Jayalekshmi R. Review of Shodhana in Rasashastra: purification principles from classical texts. *J Ayurveda Integr. Med.*, 2022; 13(4): 100541.
3. Physico-Chemical Standardization of Tankana (Borax). ResearchGate [Internet]., [cited 2025 Oct 14], 2023. Available from: [https://www.researchgate.net/publication/Physico-Chemical\\_Standardization\\_of\\_Tankana](https://www.researchgate.net/publication/Physico-Chemical_Standardization_of_Tankana).
4. Sharma S. Rasaratna Samucchaya. 9th ed. Varanasi: Chaukhambha Orientalia; 2016; 152–158.
5. Deep P, Joshi M, Patel A. Clinical appraisal of Tankana (Borax) in respiratory and ulcerative disorders. *Int J Ayurveda Med.*, 2024; 15(2): 128–134.
6. Ayurmedinfo. Tankan Bhasma – Benefits, dosage, side effects and ingredients [Internet]. Ayurmedinfo.com; 2024 [cited 2025 Oct 14]. Available from: <https://www.ayurmedinfo.com/tankan-bhasma>