WORLD JOURNAL OF PHARMACEUTICAL RESEARCH
Coden USA: WJPRAP Impact Factor 8.453
Volume 14, Issue 20, 293-304. Review Article ISSN 2277–7105

BHALLATAKA THROUGH AYURVEDIC NIGHANTU: A CRITICAL REVIEW

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Article Received on 24 Sept. 2025,
Article Revised on 13 October 2025,
Article Published on 16 Oct. 2025,
https://doi.org/10.5281/zenodo.17366366

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How to cite this Article: Dr. Neha Arya, Prof. (Dr.) Vidushi Tyagi. (2025). Bhallataka through ayurvedic nighantu: A critical review. World Journal of Pharmaceutical Research, 14(20), XXX–XXX.

ABSTRACT

Bhallataka (*Semecarpus anacardium* Linn. f.) is a well-known medicinal plant of the family *Anacardiaceae*, extensively described in Ayurvedic classics. Despite being listed as a Schedule E (1) poisonous drug under the Drugs and Cosmetics Act (1940), it becomes therapeutically valuable after proper purification (*Shodhana*).

This review aims to explore *Bhallataka* through various *Nighantu* (Ayurvedic lexicons) to understand its Pharmacognostic, therapeutic, and pharmacological attributes, and to correlate classical concepts with modern evidence. A critical review of classical Ayurvedic *Nighantu* and relevant scientific literature was conducted. Descriptions from *Dhanvantari*, *Sodhala*, *Madanapala*, *Raja*, *Kaiyadeva*, *Bhavaprakasha*, *Shaligrama*, and *Priya Nighantu* were analyzed and compared. Data on *Rasapanchaka*, *Doshaghnata*, *Varga/Gana* classification, and part-wise properties were compiled and interpreted in light of current pharmacological findings. *Bhallataka* is described under several *Vargas* and *Ganas*, including *Deepaniya*, *Kushthaghna*, *Kaphavataghna*, and *Rasayana*, reflecting its broad therapeutic scope. Its *Rasapanchaka* indicates *Madhura-Kashaya Rasa*, *Ushna Virya*, and *Katu Vipaka*, suggesting its action on *Vata-Kapha* disorders. Different parts of the plant like fruit; seed, kernel, and stem, possess distinct pharmacological activities such as *Deepana*,

Pachana, *Vrishya*, *Krimighna*, and *Kushthaghna*. The review of *Nighantu* descriptions reveals that Ayurvedic scholars had a deep understanding of drug classification, formulation, and safety principles that remain relevant in modern pharmacology.

KEYWORDS: *Bhallataka*, *Semecarpus anacardium Linn. f.*, *Ayurveda Nighantu*, *Rasapanchaka*, Pharmacognosy.

INTRODUCTION

Bhallataka (*Semecarpus anacardium* Linn. f.) is one of the most widely described medicinal plants in Ayurvedic literature, with frequent references across various *Samhita* and *Nighantu*. It belongs to the family Anacardiaceae and is commonly known as the **"**marking nut tree."

In Ayurveda, *Bhallataka* is classified as a Schedule E(1) drug under the Drugs and Cosmetics Act (1940), which means it is a poisonous substance that must undergo *Shodhana* (purification) before therapeutic use. After proper purification, it becomes safe and exhibits multiple beneficial effects.

Traditionally, *Bhallataka* is described as *Deepana* (improves digestion), *Pachana* (enhances metabolism), *Kushthaghna* (useful in skin disorders), *Rasayana* (rejuvenative), and *Krimighna* (anthelmintic). It is indicated in diseases such as *Kushtha* (skin disorders), *Arsha* (piles), *Grahani* (digestive ailments), *Prameha* (metabolic disorders), and *Shotha* (inflammatory conditions).

Modern pharmacological studies have validated many of these classical claims, showing that *Semecarpus anacardium* possesses antibacterial, anticancer, anti-inflammatory, antioxidant, anti-atherogenic, and immunomodulatory activities. These diverse effects are mainly attributed to its bioactive compounds such as Anacardic acids and biflavonoid**.**

The *Nighantu* (Ayurvedic lexicons) hold great importance in understanding the evolution of Ayurvedic pharmacology. They systematically compile information on the nomenclature, identification, properties (*Guna*), actions (*Karma*), and therapeutic uses of medicinal substances described in earlier *Samhita*. Studying *Bhallataka* through the lens of *Nighantu* not only helps in tracing its textual development but also provides clarity on its clinical applications and safety aspects.

Given its long-standing use and extensive mention in classical sources, it is important to explore the therapeutic potential of *Bhallataka* (*Semecarpus anacardium* Linn. f.) in detail and examine its evidence-based relevance. This review aims to present a comprehensive overview of the information available in various *Nighantu* and related texts, systematically compiling data on its Pharmacognostic features, traditional uses, therapeutic properties, and pharmacological validation, to understand its significance in both traditional and contemporary healthcare.

AIM AND OBJECTIVES

AIM

To critically review *Bhallataka (Semecarpus anacardium Linn. f.)* with special reference to Ayurvedic *Nighantu*, emphasizing its Pharmacognostic, therapeutic, and pharmacological aspects.

OBJECTIVES

1. To present the taxonomical classification and Pharmacognostic characteristics of *Bhallataka*.
2. To compile its references from classical *Nighantu* and summarize its *Rasapanchaka* and *Doshaghnata*.
3. To outline its pharmacological actions.
4. To discuss its safety considerations, *Shodhana (purification)* process, and therapeutic potential.

TAXONOMICAL CLASSIFICATION

The etymology of Semecarpus anacardium: - "Semecarpus" comes from Greek words: "Semeion" (marking/tracing) and "Carpus" (nut) and “Anacardium" refers to the heart-shaped marking on the nut. (Table 1).

Table 1: Taxonomical classification of *Bhallataka.*

Kingdom	Plantae –Plants
Sub-kingdom	Tracheobionta - Vascular plants
Super-division	Spermatophyta - Seed plants
Division	Magnoliophyta - Flowering plants
Class	Magnoliopsida – Dicotyledons
Sub-class	Rosidae
Order	Sapindales
Family	Anacardiaceae -Sumac family

Genus	Semecarpus L. f. – Semecarpus
Species	Anacardium
Scientific name	Semecarpus anacardium L. f. – marking nut tree

Figure 1: *Semecarpus anacardium* Tree.

Figure 2: Dried fruits of *Semecarpus anacardium* (marking nuts).

SYNONYMS

Bhallataka different parts are possesses distinct pharmacological properties and actions, contributing to its diverse therapeutic uses in Ayurveda.

Bhallataka synonyms and properties highlight its: Morphological features- Oil-containing seed (*Taila Beeja, Sneha Beeja*), Fruit shape (*Dhanurbeeja*), Color (*Raktaphala*).; Pharmacological actions- *Krimighna* (anthelmintic), *Arsohita* (treats hemorrhoids), Bhedana (useful in tumors), *Vranahrita* (wound healing); Irritant properties: *Bhallataka* (pricking pain/scrapes kapha), *Bhallataka Bhalli* (Tree with irritant sap), *Arushkara* (causes

blisters/ulcers), *Dahana*, *Tapana*, *Shophabeejaka* (burning/rashes), *Agnika*, *Jwalamukhi* (corrosive like fire), *Veeravriksha veerataru* (Difficult to touch.); Other properties- *Vatari* (Vatahara), *Ranjaka* (marking/staining).

BOTANICAL DESCRIPTION[1]

Macroscopic Features

Fruit laterally flattened drupaceous, dark brown; nut 2.5–3 cm long, obliquely ovoid, smooth and shining with a residual receptacle.

Microscopic Features

Pericarp is differentiated into epicarp, mesocarp, and endocarp. The outer epicarp has a single layer of elongated, lignified epidermal cells with oil glands exuding acrid yellowish secretion. The mesocarp is 30–40 cell layers thick, containing parenchymatous cells with lysigenous cavities and rosette crystals of calcium oxalate. The endocarp has two distinct cell layers, with thickened prismatic walls.

Powder – Dark brown, containing rosette crystals and oil globules.

DISTRIBUTION[2]

Semecarpus anacardium is a medium-sized deciduous tree found in the sub-Himalayan regions and warmer parts of India up to 3500 ft altitude. It is abundant in Assam, Bihar, Bengal, Orissa, Chittagong, Central India, and the Western Peninsula**,** extending to the East Archipelago and Northern Australia.

Prayojyanga: KDN: *Phalatwaka, Mansa, Nibandhana, Twaka,* and *Pushpa.*

DESCRIPTION OF BHALLATAKA IN DIFFERENT NIGHANTUS

***Dhanvantari Nighantu*:** Bhallataka is mentioned in *Chandanadi Varga*, the third of the seven *Varga* of the *Dhanvantari Nighantu*. The drugs in this *Varga* are described as having *Krimihara* (anthelmintic), *Kandughna* (anti-pruritic), *Kushthaghna* (anti-leprosy), and other beneficial properties.[3]

***Sodhala Nighantu*:** Describes synonyms and actions.[4]

***Madanapala Nighantu*:** Synonyms and properties are mentioned under *Abhayadi Varga*.[5]

***Raj Nighantu*:** The synonyms, properties of *phala* (fruits), *majja* (false fruit), *Prayojyanga* are mentioned under *Aamradi Varga*.[6]

***Kaiyadeva Nighantu*:** Synonyms of *Nadi Bhallataka* and its properties are mentioned.[7]

***Dhanvantari Nighantu*:** Synonyms and properties are mentioned

***Bhavaprakasha Nighantu*:** Synonyms, properties of Phala, *Majja*, *Vrinta* are mentioned under *Haritakyadi Varga*.[8]

***Shaligrama Nighantu*:** Synonyms, properties of *Phala*, *Majja*, *Twaka*, *Vrinta* and purification method of the drug are mentioned and also about the *Nadi Bhallataka*.[9]

***Priyanighantu*:** The drug is mentioned under *Haritakyadi Varga*.[10]

***Vanaushadhinidarshika*:** Different names, family, usable parts, dose, chemistry, shelf life, properties, purification method and effects by the usage of unpurified seed of the *Bhallataka*.[11]

VARGA / GANAS

Bhallataka is mentioned in several Ayurvedic *Nighantu* and *Samhita* under different Ganas (groups) and Vargas (categories). This reflects its wide therapeutic importance and the detailed understanding of ancient scholars regarding its medicinal value. Each classification highlights its Rasa (taste), Guna (qualities), Virya (potency), Vipaka (post-digestive effect), and Karma (therapeutic actions), showing that Bhallataka possesses multiple pharmacological properties and is useful in various diseases.

Acharya have described *Bhallataka* under different categories such as Deepaniya (digestive stimulants), Kushthaghna (useful in skin disorders), Kaphavataghna (pacifying Kapha and Vata), and Rasayana (rejuvenative drugs). These classifications indicate that Bhallataka improves digestion, supports metabolism, enhances immunity, and promotes tissue strength and regeneration. Because of these properties, it is recommended in conditions like Kushtha (skin diseases), Arsha (piles), Grahani (digestive disorders), and Prameha (metabolic disorders).

Understanding its classification in different *Vargas* and *Ganas* helps explain the classical reasoning behind its use in Ayurveda. The views of Acharya such as Dhanvantari, Kaiyadeva, Madanapala, Bhavaprakasha, Raja, and Priya Nighantu provide valuable insights into its therapeutic applications. These traditional descriptions also relate well with the pharmacological activities identified through modern scientific studies.
The classification of *Bhallataka* according to different Acharya is summarized in Table 2.

Table 2: Classical categorization.

S.No	Classical texts	Gana/Varga
1.	*Abhayadi Varga*	*Madanapala Nighantu*[6]
2.	*Aamradi Varga*	*Raj Nighantu*[9]
3.	*Aushadhi Varga*	*Kaiyadeva Nighantu* [7]
4.	*Bhallatakadi Varga*	*Nighantu Adarsha*[11]
5.	*Chandanadi Varga*	*Dhanvantari Nighantu*[3], *Sodhala Nighantu*[4]
6.	*Haritakyadi Varga*	*Bhavaprakasha Nighantu*[8], *Priya Nighantu*[10], *Gunaratnamala*[12]
7.	*Kaphavataghna Varga*	*Hridayadeepak Nighantu*[13]
8.	*Katu Skandha*	*Shadarasa Nighantu*[14]
9.	*Taila Varga*	*Kaiyadeva Nighantu*[7]

RASAPANCHAKA

भल्लातक कषायोष्णः शुक्रलो मधुरो लघुः ।

वातश्लेश्मोदरानाहकुष्ठार्शोग्रहणीगदान् ॥

हन्ति गुल्मज्वरश्वित्रवह्निमान्द्यकृमिव्रणान् ॥

(भा.प्र.नि. हरीत्क्यादि वर्ग १। २३२)

Table 3: *Rasapanchaka* and *Doshaghnata* of *Bhallataka.*

Rasapanchaka /Doshaghnata	**Parameters**	**B.P. Ni.**	**Ad. Ni.**	**Dhanvantari Nighantu**	**Mp. Ni.**	**Kd. Ni.**	**R. Ni.**
Rasa	*Madhura*	+	+	+	+	+	-
	Kashaya	+	+	-	+	+	+
	Katu	-	-	+	-	-	+
	Tikta	-	-	+	-	+	+
Guna	*Laghu*	+	-	-	+	+	-
	Ruksha	-	-	-	-	+	-
	Sheeta	-	-	-	-	+	-
Virya	*Ushna*	+	+	+	+	-	+
Vipaka	*Katu*	-	+	-	-	+	+
	Madhura	-	-	-	+	-	-
Doshaghnata	*Vatavardhaka*	-	-	-	-	+	-
	V-K Hara	+	+	+	+	-	+
	V-R Hara	-	-	-	-	+	-
	P-K-R Hara	-	-	-	-	+	-

Different parts of *Bhallataka* have been attributed with different properties **and actions** in **different** Nighantu (Lexicons). There are some difference in opinion regarding the properties of *Bhallataka* and its parts.

Table 4: Rasapanchaka and Doshaghnata of *Bhallataka Phala.*

Rasapanchaka /Doshaghnata	**Parameters**	**B.P. Ni**	**Shaligram Nighantu**	**Kd. Ni.**	**R. Ni.**
Rasa	*Madhura*	+	+	+	+
	Kashaya	+	+		+
Guna	*Laghu*	+			
	Guru			+	
	Ruksha			+	
	Brimhana			+	
	Snigdha	+	+		
	Teekshna	+			
	Sheeta			+	
Virya	*Ushna*	+			
	Koshna				+
Vipaka	*Katu*			+	
	Madhura	+		+	
Doshaghnata	*V-K Krita*			+	
	K Hara				+
	P Hara			+	

Table 5: *Rasapanchaka* and *Doshaghnata* of *Bhallataka Majja.*

Rasapanchaka /Doshaghnata	**Parameters**	**B.P.Ni.**	**Kd. Ni.**	**R. Ni.**
Rasa	*Madhura*	+	+	-
Guna	*Brimhana*	+	+	-
Virya	*Ushna*	-	-	-
Vipaka	*Katu*	-	-	-
	Madhura	-	-	-
Doshaghnata	*VP Shamaka*	+	+	+

Table 6: *Rasapanchaka* and *Doshaghnata* of *Bhallataka Asthi* and *Bhallataka Vrinta.*

Rasapanchaka /Doshaghnata	**Parameters**	***Kaiyadeva Nighantu***	
		Bhallataka Asthi	***Bhallataka Vrinta***
Rasa	*Madhura*	+	+
	Kashaya	+	-
	Tikta	+	-
Guna	*Laghu*	+	-
	Snigdha	+	-
	Teekshna	+	-
Virya	*Ushna*	+	-
Vipaka	*Katu*	+	-
Doshaghnata	*VK Hara*	+	-
	P Hara	-	+

PROPERTIES AND ACTIONS OF DIFFERENT PARTS OF BHALLATAKA

Different parts of Bhallataka (fruit, seed, kernel, etc.) have distinct properties and actions, making them suitable for various therapeutic applications and disease conditions.

Table 7: Part-wise Properties and Actions of *Bhallataka* in *Nighantu.*

Part Used	***Karma***
Bhallataka	*Grahi (Kaiyadev Nighantu)*
	Shukrala(Bhavprakash Nighantu)
	Shukrala, Udara, Anaha, Kushtha, Arsha, Grahani, Gulma, Jwara, Shwitra, Vahnimandya, Krimi and *Vrana (Madanapala Nighantu)*
	Krimighna, Gulma, Arsha, Grahani, Kushtha (Dhanvantari Nighantu)
	Krimi, Udara, Anaha, Meha, Arsha (Raja Nighantu- Amradivarga)
Bhallataka Pakaphala	*Brimhana, Shukrala, Durjara, Balya, Dhatuwardhaka,Vishtambhi, (Kaiyadev Nighantu)*
	Pachana,Chedana, Bhedana, Medhya, Vahnikara, Vrana, Udara, Kushtha, Arsha, Grahani, Gulma, Shopha, Anaha, Jwara, Krumi (Bhavprakash Nighantu)
	Krimi, Durnama, Dantasthairya, Graahi (Shaligrama Nighantu)
	Shrama, Shwasa, Anaha, Vibandha, Shula, Jathara, Adhmana, Krimi (Raj Nighantu)
Bhallataka Asthi	*Pachana, Chedana, Bhedana, Medhya, Deepana, Vrana, Udara Kushtha, Arsha Grahani, Gulma , Jwara, Krumi , Shotha Anaha (Kaiyadev Nighantu)*
Bhallataka Majja	*Vrishya (Kaiyadev Nighantu)*
	Vrishya (Bhavprakash Nighantu)
	Shosha, Daha, Triptikaraka, Aruchi, Deepana, Pittaja Vikara (Raj Nighantu)
Bhallataka Vrinta	*Keshya, Agnikrut (Bhavprakash Nighantu)*

THERAPEUTIC APPLICATIONS

Kushtha, Shwitra, Indralupta, Mastikya Daurbalya, Nadi daurbalya, Apasmara, Gridhrasi, Urustambha, Aamavata, Vatavyadhi, Pakshaghata, Agnimandya, Vibandha, Aanaha, Gulma, Udara, Pleehodara, Grahani, Arsha, Krimi, Hridaya Daurbalyata, Granthishotha, Kasa, Shwasa, Prameha, Shukra Daurbalya, Dhwaja Bhanga, Kashtaartava, Vatarakta, Vrana, Jwara, Daurbalya, Pleehavriddhi, Atisara, Ajirna, and Upadansha.

Table 6: *Rogaghnata* of *Bhallataka*.

Rogaghnata	**Ad.Ni**	**Mp.Ni**	**Kd.Ni**	**R.Ni**
Kriminashana	+	+	-	+
Gulma	+	+	-	-
Arshas	+	+	-	-
Grahani	+	+	-	-
Kushta	+	+	-	-

Vatakapha roga	+	+	+	-
Udara	+	+	-	-
Anaha	+	+	-	+
Meha	+	-	-	+
Shwasa	+	-	-	+
Vibhanda	+	-	-	+
Shoola	+	-	-	+
Jataragnivardhana	+	-	-	+
Admana	+	-	-	+
Agnisadana	-	+	-	-
Jwara	-	+	-	-
Shwitra	-	+	-	-
Vrana	-	+	-	-
Shukrajanana	-	+	+	-
Raktapittahara	-	-	+	-

DISCUSSION

Bhallataka has occupied a significant position in Ayurvedic pharmacology since ancient times. Its various references across several *Nighantu,* including *Dhanvantari*, *Sodhala*, *Madanapala*, *Raja*, *Kaiyadeva*, and *Bhavaprakasha*, indicates both its popularity and clinical importance. These texts systematically describe its synonyms, morphology, properties, and therapeutic actions, demonstrating an evolving understanding of its medicinal potential.

The classification of *Bhallataka* into different *Vargas* and *Ganas* such as *Deepaniya*, *Kushthaghna*, *Kaphavataghna*, and *Rasayana* reflects its diverse pharmacological spectrum. Its *Rasapanchaka* (predominantly *Madhura-Kashaya Rasa*, *Ushna Virya*, *Katu Vipaka*) justifies its indication in *Vata-Kapha* disorders such as *Arsha*, *Grahani, Prameha,* and *Kushtha*.

Different parts of *Bhallataka* exhibit distinct actions. The *Phala* (fruit) acts as *Deepana, Pachana, and Krimighna*; the *Majja* (kernel) is *Vrishya* and *Brimhana*; the *Asthi* (shell) and *Vrinta* (stalk) are *Teekshna* and *Ushna*, supporting metabolic and detoxifying functions. These diverse actions underline the need for part-specific therapeutic applications.

However, being a toxic drug, improper use of *Bhallataka* can cause severe adverse reactions such as dermatitis and mucosal irritation. The *Shodhana* (purification) process described in *Rasatarangini* with Ishtika Churna (Brick Powder)[15] or Coconut water[16] plays a crucial role in detoxifying the drug and enhancing its therapeutic safety.

CONCLUSION

The review of *Nighantu* descriptions reveals that Ayurvedic scholars had a deep understanding of drug classification, formulation, and safety—principles that remain relevant in modern pharmacology. With proper *Shodhana* and guided clinical application, *Bhallataka* continues to hold great promise as a bridge between traditional Ayurvedic wisdom and modern pharmacotherapy. Integrating these traditional insights with modern scientific validation may open new possibilities for developing safe and effective formulations of *Semecarpus anacardium*.

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