



## Review Article

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### REVIEW ON KATAKA (*STRYCHNOS POTATORUM* LINN)

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#### ABSTRACT

Kataka (*Strychnos potatorum* Linn.) is a medicinal plant explained in Ayurvedic literature. Seeds of Kataka are used for water purification (Jala nirmalakarana) which is one of the unique concepts of ancient literature. The review article provides the details of the medicinal plant about its uses, synonyms etc as per the Ayurvedic literature.

**Keywords:** Kataka, *Strychnos potatorum*, Water purification

#### INTRODUCTION

Medicinal plants play an important role in Indian culture since Rig Veda (5600 BC) wherein 67 medicinal plants were recorded. Out of 250,000 higher plants, more than 80,000 plants have medicinal value and India occupies a unique position among world's 12 biodiversity centers. *Strychnos potatorum* Linn. is an important medicinal plant, used in Ayurveda, Unani, Siddha, and in folk medicine for treating several ailments including microbial infections, diarrhea and diabetes; *Strychnos potatorum* Linn. (Family: Loganiaceae), commonly referred to as "clearing nut tree" or Nirmali is a medium sized glabrous deciduous tree having a height of 6-18 meters. It is a native of India and found distributed in the deciduous forests of West Bengal, Central and South India up to 1,200 meters.

#### Historical Review Ancient Literature

In Brihat-Samhita, Kataka (mentioned as Nirmali) is one among the drugs mentioned for the purification of ground water in the dug wells. It is to be added in measured quantities to the water in the wells for the purification.

#### Samhita kala

In Charaka Samhita<sup>1</sup> it is mentioned in Vishaghna gana and Madhura skandha and as an ingredient in Sukhavati Varti. In Sushruta Samhita<sup>2</sup> it is mentioned in Parushkadi Gana having Hrudya Karma and it is one among the Sapta Kalushasya Prasadani and is found to be used in Ashmari and Netraroga chikitsa. In Astanga Sangraha<sup>3</sup> and in Astanga Hrudaya<sup>4</sup> it is mentioned in Parushkadi Gana, is used in Ashmari and Netraroga Chikitsa and is an ingredient in Anjana Yogas.

#### Nighantu kala

It is mentioned in almost all the nighantus. Among the Nighantus, Kaiyyadeva Nighantu<sup>5</sup> has mentioned the individual qualities of Bala, Madhyama and Pakva Kataka phala and also of its moola. Nighantu Ratnakara<sup>6</sup> has also mentioned separately the qualities of Kataka, Katakaphala and moola. Siddhamantra has placed it under the Kaphapittaghna Varga<sup>7</sup>.

#### Adhunik kala

Nighantu Adarsha has placed it under Vishatindukadi Varga and Priya Nighantu<sup>8</sup> has placed it under Haritakyadi Varga. In Modern botanical texts and in the Wealth of India it is being identified as *Strychnos potatorum* Linn.

#### Synonyms which implies characters of the plant Based on Swarupa

Bhadravrksha, Dantaphala, Dantapushpa, Hemavalko, Mahavalko<sup>10</sup>

#### Based on Guna

Gudaphala, Shlakshana, Tiktamaricha, Tiktaphala<sup>11</sup>

#### Based on Karma

Ambuprasadana, Ambuprasadana phala, Ambhusamshodhi, Chakshushya, Chakshushyaphala, Chandrayanaphala, Chedaniya, Daranam, Ghariprasadana, Jalakriya, Jalaprasdanaphala, Kaccham, Kantaha, Kataka, Katam, Kataphalam, Katphala, Kirtitaha, Krsnam, Lekhanatmaka, Netravikarajit, Nikocha, Payahaprasadi, Prasadanaaphala, Ruchya, Toyaprasadanaaphala and Variprasadanam.<sup>12</sup>

### Chemical constituents of Kataka Seeds

Alkaloids, Sucrose, Loganin, Monogalactan, Diaboline, Acetyl diaboline, Angustine, Strychnine, Brucine, Icajine, Novacine, Minifiensine, Galactomannan, Galacton<sup>14</sup>.

### Identity, Purity and Strength- Physical Standards *Strychnos potatorum* seeds

Foreign matter	Not more than 2 %
Total ash	Not more than 2 %
Acid-insoluble ash	Not more than 0.5 %
Alcohol-soluble extractive	Not less than 1 %
Water soluble extractive	Not less than 5 % <sup>15</sup>

### Rasapanchaka of Kataka according to different authors

#### According to Dhanvantari Nighantu

Rasa – Tikta, Guna – Mrudu, Sheeta, Veerya – Sheeta

#### According to Raja Nighantu

Rasa - Katu tikta, Veerya – Ushna

#### According to Bhavaprakasha Nighantu

Rasa – Madhura kashaya, Doshagnata – Kaphavata shamaka

#### According to Madanapala Nighantu

Rasa – Madhura kashaya, Guna – Sheeta Guru, Doshagnata – Vatakapha shamaka

#### According to Priya Nighantu

Rasa – Madhura kashaya, Guna – Guru

#### According to Madhava Nighantu

Rasa – Tikta Kashaya, Guna – Chedana, vishada, laghu, Doshagnata – Kaphapitta hara

#### According to Kayyadeva Nighantu

Rasa – Tikta madhura kashaya, Guna – Sheeta, Chedana, vishada, vikasi, Doshagnata – Vatakapha shamaka

#### According to Nighatu Ratnakara

Rasa – Tikta katu madhura kashaya, Guna – Chedana, Vishada, Laghu, Vikasi, Lekhana  
Doshagnata – Kapha vata vatakrutt

#### According of Kashyapa Samhitha

Rasa – Madhura Kashaya, Guna – Snigdha Ashu,

### According to Nighantu Adarsha

Rasa – Tikta katu, Veerya – Ushna, Doshagnata – Vatakaphahara

### Kataka Beeja Rasa Panchaka

**Rasa:** Kashaya

**Vipaka:** Madhura

**Guna:** Guru

**Veerya:** Sheeta

**Doshagnata:** Vatakaphahara

**Karma:** Chakshushya, Jalaprasadana.

**Rogagnata:** Ashmari, Mutrakrachhra, Trushna, Netraroga, Visha, Prameha, Sheersharoga.<sup>6</sup>

### Guna Karma as per different stages of Katakaphala

**Balam:** Sheeta Veerya, Raktapittaharam Param, Trushna, Moha, Vishahara; Vatakaram, Chakshushyauttamam

**Madhyama:** Shleshmapittagnam, Ruchikrud, Durjaramparam.

**Pakvam:** Vatakrut, Picchilam, Chardikaram, Shleshmapittaprasedakrut, Shopha Pandu Pratisyaya, Kamala, Gara, Meha- Nshanam.

**Karma:** Bhedana, Chakshushya, Chedana, Drstiprasadana, Hladana, Jananirmalatakaram, Netrya, Sadhyonetrnirmalatakaram, Shodhana, Swedajanaka, Variprasadana

**Rogagnata:** Aruchi, Ashmari, Chardi, Daha, Gulma, Kaacha, Kamala, Krimi, Moha, Netraroga, Pandu, Pratisyaya, Raktapitta, Sharkara, Shoola, Shopha, Trshna, Visha<sup>16</sup>

### Parts Used

Katakaphala (Seeds)<sup>18</sup>

### Dosage/ Posology

Churna- 1-6 g<sup>19</sup>

### CONCLUSION

Kataka seems to be more relevant medicinal herb, as pure water is the need of hour today. Most of the water purifying methods which are used today is not reaching the most of the people which makes pure water like a dream to them. Kataka is easily available herb which can be used to purify the water in domestic level in houses, synonyms like Nirmali supports this claim. Hence extensive research has to be conducted to screen and establish this property of herb on scientific grounds so that newer economical, feasible methods can be adopted for purification of water.

**Table 1: Synonyms and their Meanings**

Kataka	It purifies water
Kasyajala	By which water gets purified
Ambuprasadanaphala	That which clarifies water
Chakshuhya	It is good for eyes, helps to overcome eye diseases
Gucchaphala	Fruits are in clusters
Lekhanatmaka	It is said to have scraping action <sup>9</sup>

**Table 2: Vernacular Names**

Kannada	Nimali beeja
Bengali	Nirmali
Bombay	Gajrah, Nirmali
English	Clearing nut tree
Hindi	Neimal, Nelmal, Nirmali
Malayalam	Katakam, Tetta, Tettamparal, Tettamparalkaniram
Marathi	Chilbhing, Chilara, Gajara, Nirwali
Punjab	Nirmali
Santal	Kuchala
Tamil	Akkolam, Ilalam, Kadali, Sillam, Tetta, Tettankottai, Teru
Telugu	Andugu, Indugu, Indupu, Katakamu, Shilla
Urdu	Nirmali <sup>13</sup>

**Table 3: Gana/Varga: Classification of Kataka according to classics**

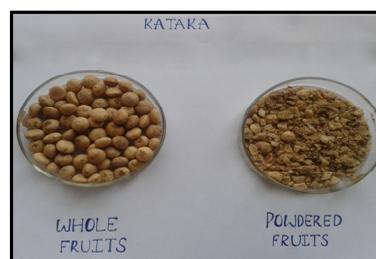
Classical Text	Gana/Varga
Charaka Samhita	Vishaghna Gana, Madhura Skandha
Sushruta Samhita	Parushakadi Gana, Madhura Varga
Astanga Sangraha	Parushkadi Gana
Astanga Hrudaya	Parushkadi Gana
Dhanwantari Nighantu	Chandanadi Varga
Kaiyadeva Nighantu	Oshadhi Varga
Madanapala Nighantu	Phaladi Varga
Raja Nighantu	Amradi Varga
Bhavaprakasha Nighantu	Amradiphala Varga
Nighantu Adarsha	Vishatindukadi Varga
Priya Nighantu	Haritakyadi Varga
Shodhala Nighantu	Chandanadi Varga
Saraswata Nighantu	Mahavrksa Varga
Madanadi Nighantu	Ekadasho Gana
Astanga Nighantu	Parushakadi Gana
Soushrutha Nighantu	Parushakadi Gana
Hridaya Deepika Nighantu	Dvinama Varga
Siddhamantra	Kaphapittaghna Varga
Abhidhanaratnamala	Chaturskandha

**Table 4: Important Yogas of Kataka**

Yoga	Indication	Reference
Bhadrikadighrta	Marmasata Ruja	S.Y.
Choornamruta Yoga	Kshaya, Sarvaruja.	S.Y.
Matala Rasayana	Hrudruja	S.Y.
Niruryadi Gutika	Balya, Ojaskara	S.Y.
Marma Gutikas	Marmavikaras	S.Y.
Nishakatakadi Kashaya	Madhumeha	S. Y <sup>17</sup>



**Kataka Inflorescence and Fruits**



**Macroscopic Features of Kataka (*Strychnos potatorum*)**

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