

## A LITERARY REVIEW ON THE MEDICINAL IMPORTANCE OF VATA

Dr. Nishant Aggarwal\* and Dr. Ritu Rani

Assistant Professor, Department of Dravyaguna at Shri Bhanwar Lal Duggar Ayurved Vishwa Bharati, Sardarshaher, Churu, Rajasthan, India.

\*Corresponding Author: Dr. Nishant Aggarwal

Assistant Professor, Department of Dravyaguna at Shri Bhanwar Lal Duggar Ayurved Vishwa Bharati, Sardarshaher, Churu, Rajasthan, India.

Article Received on 30/12/2019

Article Revised on 20/01/2020

Article Accepted on 10/02/2020

## ABSTRACT

From medical history one can know about recognition of the continuity of medical thoughts. It tells us about the conception and misconceptions of the past from which one can draw inferences for the present and future times. Literary review of any drug gives insight into its morphology, properties and therapeutic or dietary utility as conceived by various authors at different stages of the history. Several drugs have been mentioned in *Ayurvedic* treatises, vata is one of them which is being utilized in day to day practice.

**KEYWORDS:** Vata, Ayurveda, Properties etc.

## INTRODUCTION

These are certain plants, which are commonly available with a specific indication and therapeutic effect, Vata is one of them. In the *Bhagavat Gita*<sup>1</sup> Krishna said "There is a banyan tree which has its roots upward and its branches down, and the Vedic hymns are its leaves. One who knows this tree is the knower of the Vedas." (BG 15.1) Almost all ancient Acharyas of Ayurveda have referred this drug for its multiple benefits in therapeutic. Vata is explained in almost all the important *Nighantus* like *Bhavprakash Nighantu*, *Kaidev Nighantu*, *Dhanwantri Nighantu*, *Sodhala Nighantu*, *Shaligram Nighantu* etc. We can get the detailed explanation about

its synonyms, qualities and different medicinal uses. Vata is explained in text books of modern periods such as *Dravyaguna Vijnana* by Dr P.V Sharma, *Priya Nighantu*, *Shaligrama Nighantu*, The *Ayurvedic material medica*, The *Ayurvedic pharmacopoeia of India*, *Wealth of India*, and other books written by recent Acharyas, which provide information about its habit, habitat, morphology, chemical composition etc.

## MATERIAL AND METHODS

- Literary review from different *Ayurvedic* texts.
- Literary review on the basis of modern parameters

## Gana and Varga of Vata according to different classical texts.

S. No.	Classical Texts	Gana & Varga
1.	<i>Charaka Samhita</i> . <sup>[2]</sup>	<i>Kasayaskandha, Mutrasangraniya</i>
2.	<i>Sushruta Samhita</i> . <sup>[3]</sup>	<i>Nygrodhadi Gana</i>
3.	<i>Astang Nighantu</i> . <sup>[4]</sup>	<i>Nygrodhadi Gana</i>
4.	<i>Dhanwantri Nighantu</i> . <sup>[5]</sup>	<i>Amradi Varga</i>
5.	<i>Bhavprakash Nighantu</i> . <sup>[6]</sup>	<i>Vatadi Varga</i>
6.	<i>Kaiyadeva Nighantu</i> . <sup>[7]</sup>	<i>Ausadhi Varga</i>
7.	<i>Raj Nighantu</i> . <sup>[8]</sup>	<i>Amradiphala Varga</i>
8.	<i>Madanpala Nighantu</i> . <sup>[9]</sup>	<i>Vatadi Varga</i>
9.	<i>Shodhal Nighantu</i> . <sup>[10]</sup>	<i>Amradi Varga</i>
10.	<i>Dravyaguna Vijnana</i> . <sup>[11]</sup>	<i>Nygrodhadi Gana</i>
11.	<i>Gunaratnamala</i> . <sup>[12]</sup>	<i>Vatadi Varga</i>
12.	<i>Shaligram Nighantu</i> . <sup>[13]</sup>	<i>Vatadi Varga</i>
13.	<i>Soushruta Nighantu</i> . <sup>[14]</sup>	<i>Nygrodhadi Gana</i>

**Prayaya of Vata according to different classical texts.**

S. No.	Synonyms	B.P.N. <sup>[15]</sup>	K.N. <sup>[16]</sup>	D.N. <sup>[17]</sup>	D.H. <sup>[18]</sup>	D.V. <sup>[19]</sup>	G.R.M. <sup>[20]</sup>	Sho.N. <sup>[21]</sup>	Sha.N. <sup>[22]</sup>
1.	<i>Vata</i>	+	+	+	+	+	+	+	+
2.	<i>Nyagrodha</i>	+	+	+	-	+	+	+	+
3.	<i>Ksiri</i>	+	+	+	+	+	-	+	+
4.	<i>Bahupado</i>	+	+	+	+	+	+	+	+
5.	<i>Raktaphala</i>	+	+	+	+	+	+	+	+
6.	<i>Skandhaja</i>	+	+	+	+	+	-	+	+
7.	<i>Vaisravana</i>	+	-	-	-	-	+	+	+
8.	<i>Vanaspati</i>	+	+	+	+	+	+	+	+
9.	<i>Tunga</i>	-	-	-	-	-	-	+	-
10.	<i>Jati</i>	-	-	-	+	-	-	+	+
11.	<i>Avasa</i>	-	-	-	-	-	-	+	-
12.	<i>Shringi</i>	+	+	+	-	+	+	-	+
13.	<i>Dhruv</i>	+	+	+	-	+	+	-	+
14.	<i>Vasa</i>	+	-	-	-	-	-	-	-
15.	<i>Dhruvksiri</i>	-	-	-	-	-	+	-	-

**Vernacular Names of Vata.<sup>[23]</sup>**

S. No.	Language	Vernacular Names
1.	English	<i>Banyan</i>
2.	Hindi	<i>Bat, Bargad, Bor, Ber</i>
3.	Bengali	<i>Bar, Bot, But</i>
4.	Gujarati	<i>Vad, Vdlo, Vor</i>
5.	Kannada	<i>Alada, Mara</i>
6.	Tamil	<i>Alamaran, Peral, Al, Alam</i>
7.	Malayalam	<i>Peral, Vatavrksam, Ala, Vatam</i>
8.	Marathi	<i>Vada, Wad, War</i>
9.	Punjabi	<i>Bor, Bera, Bohir, Bohar, Bargad</i>
10.	Urdu	<i>Bargad, Bad</i>

**Rasa Panchaka Doshakarma Rogaghanta of Vata according to different classical texts.**

S. No.	Classical Texts	Rasa	Guna	Virya	Vipaka	Doshakarma	Rogaghanta
1.	<i>Bhavprakash Nighantu<sup>[24]</sup></i>	<i>Kasaya</i>	<i>Guru</i>	<i>Seeta</i>	-	<i>Kapha-Pitta-Hara</i>	<i>Varnya, Stambhan, Mutrasangrahaniya, Sothahara, Grahi</i>
2.	<i>Shaligram Nighantu<sup>[25]</sup></i>	<i>Madhura Kasaya</i>	-	<i>Seeta</i>	-	<i>Kapha-Pitta-Hara</i>	<i>Varnya, Stambhan, Sothahara, Yonidoshara</i>
3.	<i>Kaidev Nighantu<sup>[26]</sup></i>	<i>Kasaya</i>	<i>Guru, Ruksha</i>	<i>Seeta</i>	-	<i>Kapha-Pitta-Hara</i>	<i>Varnya, Yonidoshara, Grahi</i>
4.	<i>Dravyaguna Vijnana<sup>[27]</sup></i>	<i>Kasaya</i>	<i>Guru, Ruksha</i>	<i>Seeta</i>	<i>Katu</i>	<i>Kapha-Pitta-Hara</i>	<i>Varnya, Stambhan, Mutrasangrahaniya, Sothahara, Grahi</i>
5.	<i>Dhanwantri Nighantu<sup>[28]</sup></i>	<i>Kasaya</i>	<i>Ruksha, Tikshna</i>	<i>Seeta</i>	-	<i>Rakta-Pitta-Hara</i>	<i>Stambhan</i>

**Therapeutic uses according to different classical texts.**

S. No.	Prayoga	D.V. <sup>[29]</sup>	B.P.N. <sup>[30]</sup>	Sh.N. <sup>[31]</sup>	D.N. <sup>[32]</sup>	K.N. <sup>[33]</sup>	G.R.M. <sup>[34]</sup>	So.N. <sup>[35]</sup>	D.H. <sup>[36]</sup>
1.	<i>Prameha</i>	+	+	-	-	-	-	-	-
2.	<i>Raktapitta</i>	+	-	-	+	-	-	-	+
3.	<i>Chardi</i>	+	+	+	+	-	-	-	-
4.	<i>Yonivyapat</i>	+	+	+	-	+	+	-	+
5.	<i>Vranavikar</i>	+	+	+	+	+	+	-	+
6.	<i>Dantasula</i>	+	+	-	-	-	-	-	-
7.	<i>Bhagandra</i>	+	+	-	-	-	-	-	-
8.	<i>Vipadica</i>	+	+	-	-	-	-	-	-
9.	<i>Visarpa</i>	+	+	+	-	+	+	-	+
10.	<i>Pravahika</i>	+	+	-	-	-	-	-	+

**Prayoga Anga according to different classical texts.**

S. No.	Prayoga Anga	D.V. <sup>[37]</sup>	D.H. <sup>[38]</sup>	B.P.N. <sup>[39]</sup>
1.	Bark	+	+	+
2.	Latex	+	+	+
3.	Leaves	+	+	-
4.	Fruits	+	+	-

**Matra according to different Authors.**

S. No.	Authors	Powder	Juice
1.	Gyanendra Pandey <sup>[40]</sup>	3-6 gm	50-100 ml
2.	Banwari Lal <sup>[41]</sup>	3-5 gm	40-70 ml

**Folk uses<sup>[42]</sup>**

A small quantity of its milky juice is dropped in "Batasha" and the Batasha is taken daily as aphrodisiac and the juice alone as a remedy for dysentery throughout the country. The milky juice, obtained from its branches is also applied on the cracked heels of the feet. According to Yunani,<sup>[43]</sup> the aerial root is styptic,

aphrodisiac, and useful in gonorrhoea, syphilis, biliousness, dysentery, inflammation, of the liver. Its wood is durable under water and may be used for wall curbs. The wood of aerial root is more stronger and elastic and may be used for tent poles, cart yolks and carrying shafts.<sup>[44]</sup>

**Vishista Yoga**

S. No.	Vishista Yoga	Indication	Reference
1.	Panchvalkal Kalka	Pattik Vidradhi	C.D. Chi 43/6
2.	Nyagrodhpatriadi Lepa	Vatapitolavan Visarpa	Ch. Chi 21/83
3.	Vataroha Prayoga	Aamatisar	C.D. Chi 3/51
4.	Vatadi Yoga	Updandh	Y.R. Updandh Chi. 3
5.	Nyagrodhadikmudhistam Lepa	Vrana Shophnashaka	Ch. Chi 25/63
6.	Vranyo Lepa	Vranya	Sarangdhar-U.K. 11/9
7.	Nyagrodhodumbrashawth	Raktatisaar	Ch. Chi 19/99
8.	Shothnirvapanlepa	Shofprashamanam	Ch. Chi. 25/46
9.	Vtankur Lepa	Vyang	B.P. Chi. 61/40
10.	Nyogradhi Ganna Sidha Taila	Bhagander	Su. S. chi. 8/48
11.	Nyagrodhadi Ghrita	Urah Kshat or Kshin Virya	Ch. Chi 11/31
12.	Nyogradhi Ganna Dravya	Pitaj Vrana	A.H. Uttar Tantra 25/65
13.	Nyagrodhshungkanam Kwatha	Raktarsha	Ch. Chi 14/203
14.	Dahashamak Lepa	Vrana Shoth	A.H. Uttar Tantra 25/29
15.	Nyagrodhodumbrashawtha Kwatha	Vrana Ropana	Ch. Chi 25/87

**Modern Review of Vata**

- **Latin name:** *Ficus bengalensis* linn.<sup>[45]</sup>
- **Family:** Urticaceae.<sup>[46]</sup>

**Taxonomical Classification<sup>[47]</sup>**

- **Kingdom** – Plantae.
- **Division** – Angiosperms.
- **Class** – Eudicots.
- **Order** – Rosales.
- **Family** – Urticaceae.
- **Genus** – Ficus.
- **Species** – Bengalensis.

**General Characteristic of Family Urticaceae**

- **Leaves:** Usually alternate, often oblique, Stipules: various,
- **Flowers:** Cymose or clustered, Perianth: simple, calycine, regular or irregular, equally or unequally toothed, lobed or partite; segments imbricate or valvate.

- **Stamens:** As many as and opposite to the perianth lobes, sometimes adnate to their base (rarely fewer or more); filaments free or rarely connate at the base.
- **Anthers:** 2-celled, Pistillode: in male flowers small or 0. Ovary: superior, 1-celled, Ovules: solitary,
- **Style:** often eccentric, simple or 2-fid with stigmatic arms. Stigma: sessile, plumose or penicillate.
- **Fruit:** Simple, indehiscent, a drupe or samara, or of free achenes, or compound in a confluent mass of perianths and pericarps.
- **Seeds:** Erect, lateral or pendulous; testa membranous; albumen copious, scanty or 0; Embryo: Straight or curved.

**General Characteristic Of Genus Ficus<sup>[51]</sup>**

- **Leaves:** Alternate (rarely opposite), entire, lobed, serrate or toothed; stipules clothing the bud, caduceus.
- **Flowers:** Minute, 1-sexual, monoecious.
- **Perianth:** In male flower 2-6 fid or partite and in neuter flower same as in male and in female flower

as in male or imperfect or obsolete. Galls flower same as in female.

- **Stamens:** 1 or 2 (rarely 3-6), erect in bud.
- **Ovary:** straight or oblique.
- **Stigma:** Entire or 2-armed, acute or obtuse.
- **Seed:** Pendulous; testa membranous; albumin scanty;
- **Embryo:** Curved; cotyledons are equal or unequal  
Radicla : Ascending

#### General Characteristic Of Species *Bengalensis*<sup>[50]</sup>

- **Leaves:** Coriaceous, 10-20 by 5-12.5 cm, ovate or orbicular-ovate to elliptic obtuse, entire. Receptacles: About 2cm in diameter, sessile in pairs axillary globose, puberulous, red when ripe with 3 broad rounded nearly glabrous coriaceous basal bracts.
- **Flowers:** Male flower rather numerous near the mouth of the receptacles.
- **Sepals:** 4, lanceolate.
- **Stamens:** 1.
- **Perianth:** In gall flower same as in male, in fertile flower shorter than in the male.
- **Style:** In gall flowers short in fertile flower elongate.

#### Distribution<sup>[51]</sup>

The tree occurs throughout the forest tracts of India, in Subhimalayan region, Rohilkhand, common in Sal forests of Dehradun wild or cultivated all through Bihar, Orissa, West Bengal, in deciduous forest of Deccan and in all districts from sea level to 1200m in deciduous and semi- evergreen forest of South Indian.

#### Macroscopic characters<sup>[52]</sup>

Drug occurs in cut pieces. 4-8cm long, 0.1-1.2cm thick, cylindrical or unbranched or branched, rough due to longitudinal and transverse cracks and transverse row of lenticels, external surface is grey, cut surface reddish brown, fracture, fibrous in bark portion and tough and short in wood portion.

#### Microscopic characters<sup>[53]</sup>

Transverse section of mature bark shows compressed cork tissue and dead element of secondary cortex consisting of mostly stone cell and thin walled compressed elements of cortex. Cork cells are rectangular, thick walled, and containing brownish content. Secondary cortex is white forming more than half of thickness of bark, composed of large groups of stone cells and parenchymatous cells. Stone cells vary in shape. Parenchymatous cells are somewhat cubical to oval, few in number and occur between groups of stone cells. Some of cells contain prismatic crystals of calcium oxalate, starch grains and tannin. Secondary phloem is composed of a few sieve elements, parenchyma, fibers, stone cells and latex tubes alternating with modularly rays. Sieve elements are compressed in outer region of bark while Drug Review intact in inner region. Few thick walled phloem parenchymas are present in between patches of phloem fibers and stone cells. Stone cells are

similar to those present in secondary cortex, some phloem cells contain prismatic calcium oxalate crystals, also present in fibers forming crystal fibers. Modularly rays are 2-5 seriate, composed of thick walled, circular to oval cells, few cells also converted into stone cells and some have pitted walls also containing plenty of starch grains, which are mostly round, rarely oval or semi lunar in shape, simple as well as compound type. Compound starch grains consist of 2-3 components. Cambium is composed of a few layers of small rectangular thin walled cells.

#### Powder microscopy<sup>[54]</sup>

Reddish brown; shows oval to elliptical, elongated, thick walled stone cells with wide lumen and clear pit canals; fibers, thick walled with blunt tips and wide lumen; xylem vessels shows pitted thickening.

#### Major chemical constituent<sup>[55]</sup>

Leucoanthocyanin, two flavonoid compounds, viz, 5,7-dimethyl ether of leucopelargonidin-3-O- alpha-L-rhamnoside and 5,3'-dimethyl ether of leucocyanidin-3-O-alpha-D-galactosyl cellobioside; three methyl ethers of leucoanthocyanins delphinidin-3-O-alpha-L-rhamnoside (I), pelargonidin-3-O-alpha-L-rhamnoside (II), leucocyanidin-3-O-beta-D-galactosyl cellobioside (III) 20-tetratriaconten-2-one, pentatriaconten-5-one, 6-heptatriaconten-10-one, beta-sitosterol-alpha-D-glucoside and meso-inositol (stem bark); tiglic acid ester of - taraxasterol (heartwood); quercetin-3-galactoside, rutin, friedelin, beta-sitosterol and surface hydrocarbons (leaves).

#### Identity, Purity and Strength<sup>[56]</sup>

Foreign Matter	Not more than 2 %
Total Ash	Not more than 7 %
Acid-insoluble Ash	Not more than 1 %
Alcohol-Soluble Extractive	Not more than 3 %
Water-Soluble Extractive	Not more than 4 %

#### Pharmacological Activities<sup>[57]</sup>

- Hypoglycemic, hypotensive, antifertility, antidiabetic, antioxidant, hypocholesterolemic.
- **Parts Used<sup>[58]</sup>**
- Fruit
- Stem bark
- Latex
- Leaf
- Aerial root.

#### Propagation and Cultivation<sup>[59]</sup>

It is grown in gardens and road side for shade. It develops from seeds. It can also be propagated from cuttings easily.

#### Trade and commerce<sup>[60]</sup>

Not traded.

**Substitutes and Adulterants<sup>[6]</sup>**

The powder prepared from fruits of ficus bengalensis is used to adulterate kampillaka i.e. *Mallotus philippinsis* Lamk.

**DISCUSSION**

*Acharya Charka* mentioned *Vata* in *Kshaya Skhanda* and *Acharya Sushruta* mentioned *Vata* in *Nyagrodhadi Gana*. *Vata* has got synonyms such as *Jati*, *Dhruva*, *Vanapati*, *Sringi* etc. apart from classical references it is also used in folk medicine. Most of the author opined that *Vata* possesses *Kasaya Rasa*, *Guru-Ruksha Guna*, *Seeta Virya*, *Katu Vipaka* and *Kapha-Pitta-Samaka Doshkarma*. It has been therapeutically indicated in Diabetes, Leucorrhoea, *Raktarsh*, *Bhagander*, *Vrana Ropana*, etc.

**CONCLSION**

*Vata* is drug having properties like *Kasaya Rasa*, *Guru-Ruksha Guna*, *Seeta Virya*, *Katu Vipaka* and *Kapha-Pitta-Samaka Doshkarma*, according to classics. Also, described by almost every ancient *Acharya* in his texts. It is useful in disorders related with *Kapha-Pitta Dosha*. Almost all the *Nighantu Dhanwantri Nighantu*, *Priya Nighantu*, *Nighantu Adarsha*, *Bhavprakash Nighantu*, *Kaidev Nighantu* etc. talks about *Vata* and its properties. The phytochemical study have revealed that the *Vata* is especially rich in *Flavonoids*, *Steroids*, *Alkaloids* and *Glycosides* etc. treatment of disorder like diabetes, leucorrhoea, diarrhea, *Raktarsh*, *Bhagander*, etc.

**REFERENCES**

- Swami snatan dev ji maharaj, Shrimad Bhagwad Gita, Chapter 15, Shloka 1, 2<sup>nd</sup> ed. Varanasi: Chaukhambha Sanskrita Samstana: Reprint, 1983; 588.
- Agnivesa, Charaka Samhita, Sutrashtana Chapter 4th, Shloka 66, Chakrapanidatta commentary, Vaidya Acharya Jadavaji Trikamji editor., 5<sup>th</sup> ed, Varanasi, Chaukhambha Sanskrit Sansthan: Reprint, 2004; 89.
- Sushruta, Sushruta samhita, Sutra sthana, chapter 38, shloka 8, vaidya Ambikadatt Shastri, edited with Ayurveda tatva sandipika, hindi commentary, Varanasi, Chaukhambha Sanskrit Sansthan: Reprint edition, 2005; 145.
- Vangbhatta, Astang Nighantu, Nyagrodhi Gana, shloka 170. Dr P.V. Sharma editor. 4<sup>th</sup> ed. Varanasi: Chaukhambha Bharati Academy, 2004; 23.
- Dhanvantari, Dhanvantari Nighantu, Aamradi varga, Shloka No. 69-70, P.V. Sharma editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Orientalia, 1982; 161.
- Bhavamishra, Bhavaprakasha Nighantu, Vatadi varga, Shloka 1-2. Dr.G.S.Pandey editor. 8<sup>th</sup> ed. Varanasi: Chaukhambha Bharati Academy, 2004; 513.
- Kaiyadeva, Kaiyadeva Nighantu, Aushadha varga, Shloka No. 422-423, P.V. Sharma editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Orientalia, 1979; 78.
- Pandith Narahari, Raja Nighantu, Aamradiphala varga, shloka No. 3, Indradeva Tripathi editor. 2<sup>nd</sup> ed. Varanasi: Krishnadas Academy, 1998; 340.
- Madanapala, Madanapala Nighantu, Vatadi varga, Shloka 1-2, Ramaprasad patiyala editor. Bombay: Khemaraj Shrikrishnadasa Prakashan, 1998; 109.
- Sodhala Nighantu, Aamradi varga, Shloka 586. Prof. R.R. Duvivedi editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha krishanadasa academy, 2009; 113.
- Dr Gyanendra pandey, Dravya guna vijnana, Part 3, Varanasi: Chaukhambha krishanadasa academy Reprint, 2004;816.
- P.V.Sharma, Gunaratanmala, vatadi Varga, 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit Sanasthana, 314.
- Shaligrama, Shaligrama Nighantu, Vatadi varga, 1<sup>st</sup> ed. Mumbai: Khemaraj Shrikrishnadasa Prakashana, 1997; 490-491.
- Saushruta Nighantu, Nyogradhi gana, Shloka 262. Dr kasheeraja Sharma Suvedi; Pune: Mahendra Sanskrita Vishwavidhyalaya, 96.
- Bhavamishra, Bhavaprakasha Nighantu, Vatadi varga. Dr.G.S.Pandey editor. 8<sup>th</sup> ed. Varanasi: Chaukhambha Bharati Academy, 2004; 513.
- Kaiyadeva, Kaiyadeva Nighantu, Aushadha varga, Shloka No. 422-423, P.V. Sharma editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Orientalia, 1979; 78.
- Dhanvantari, Dhanvantari Nighantu, Aamradi varga, Shloka No. 69-70, P.V. Sharma editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Orientalia, 1982; 161.
- Banwarilala mishra, Dravyaguna Hastamalaka. 3<sup>rd</sup> edition Varanasi: Chaukhambha Bharati Academy, 2004; 356.
- Dravya guna vijnana, Dr Gyanendra pandey Part 3, Varanasi: Chaukhambha krishanadasa academy Reprint, 2004;816.
- P.V.Sharma, Gunaratanmala, vatadi Varga, 1<sup>st</sup> ed. Varanasi: Chaukhambha Sanskrit Sanasthana, 314.
- Sodhala Nighantu, Aamradi varga, Shloka 586. Prof. R.R. Duvevedi editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha krishanadasa academy, 2009; 113.
- Shaligrama, Shaligrama Nighantu, Vatadi varga, 1<sup>st</sup> ed. Mumbai: Khemaraj Shrikrishnadasa Prakashana, 1997; 490-491.
- P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 548.
- Bhavamishra, Bhavaprakasha Nighantu, Vatadi varga. Dr.G.S.Pandey editor. 8<sup>th</sup> ed. Varanasi: Chaukhambha Bharati Academy, 2004; 513.
- Shaligrama, Shaligrama Nighantu, Vatadi varga, 1<sup>st</sup> ed. Mumbai: Khemaraj Shrikrishnadasa Prakashana, 1997; 490-491.
- Kaiyadeva, Kaiyadeva Nighantu, Aushadha varga, Shloka No. 422-423, P.V. Sharma editor. 1<sup>st</sup> ed. Varanasi: Chaukhambha Orientalia, 1979; 78.
- Dravya guna vijnana, Dr Gyanendra pandey Part 3, Varanasi: Chaukhambha krishanadasa academy Reprint, 2004;816.
- Dhanvantari, Dhanvantari Nighantu, Aamradi vargaa, Shloka No. 69-701, P.V. Sharma editor. 1<sup>st</sup>



- ed. Varanasi: Chaukhambha Orientalia, 1982; 161.
29. Dravya guna vijnana, Dr Gyanendra pandey Part 3, Varanasi: Chaukhambha krishanadasa academy Reprint, 2004; 816.
  30. Bhavamishra, Bhavaprakasha Nighantu, Vatadi varga, Shloka 41. Dr.G.S.Pandey editor. 8th ed. Varanasi: Chaukhambha Bharati Academy, 2004; 513.
  31. Shaligrama, Shaligrama Nighantu, Vatadi varga, 1st ed. Mumbai: Khemaraj Shrikrishnadasa Prakashana, 1997; 490-491.
  32. Dhanvantari, Dhanvantari Nighantu, Aamradi varga, Shloka No. 69-70, P.V. Sharma editor. 1st ed. Varanasi: Chaukhambha Orientalia, 1982; 161.
  33. Kaiyadeva, Kaiyadeva Nighantu, Aushadha varga, Shloka No. 422-423, P.V. Sharma editor. 1st ed. Varanasi: Chaukhambha Orientalia, 1979; 78.
  34. P.V.Sharma, Gunaratanmala, vatadi Varga, 1st ed. Varanasi: Chaukhambha Sanskrit Sanasthana, 314.
  35. Sodhala Nighantu, Aamradi varga, Shloka 586. Prof. R.R. Duvivedi editor. 1sted Varanasi: Chaukhambha krishanadasa academy, 2009; 113.
  36. Banwarilala mishra, Dravyaguna Hastamalaka. 3rd edition Varanasi: Chaukhambha Bharati Academy, 2004; 356.
  37. Dravya guna vijnana, Dr Gyanendra pandey Part 3, Varanasi: Chaukhambha krishanadasa academy Reprint, 2004;816.
  38. Banwarilala mishra, Dravyaguna Hastamalaka. 3rd edition Varanasi: Chaukhambha Bharati Academy, 2004; 356.
  39. Bhavamishra, Bhavaprakasha Nighantu, Vatadi varga. Dr.G.S.Pandey editor. 8th ed. Varanasi: Chaukhambha Bharati Academy, 2004; 513.
  40. Dravya guna vijnana, Dr Gyanendra pandey Part 3, Varanasi: Chaukhambha krishanadasa academy Reprint, 2004;816.
  41. Banwarilala mishra, Dravyaguna Hastamalaka. 3rd edition Varanasi: Chaukhambha Bharati Academy, 2004; 356.
  42. Anil kumar Dhiman, Ayurvedic drug plants. Delhi: Daya publishing house, 2006; 71-72.
  43. Kirtikara. K.R., Basu. B.D, Indian medicinal plants, vol 3. E. Blatter and J.F. Caius editor. 2nd ed. Dehradun: International book distributors, 1999; 2312.
  44. Chaddha Y.R., The Wealth of India, Raw materials, Vol 4. New Delhi: NISCAIR press, 2003; 26.
  45. Kirtikara. K.R., Basu. B.D, Indian medicinal plants, vol 3. E. Blatter and J.F. Caius editor. 2nd ed. Dehradun: International book distributors, 1999; 2312.
  46. Kirtikara. K.R., Basu. B.D, Indian medicinal plants, vol 3. E. Blatter and J.F. Caius editor. 2nd ed. Dehradun: International book distributors, 1999; 2312.
  47. www.google.com.
  48. Kirtikara. K.R., Basu. B.D, Indian medicinal plants, vol 3. E. Blatter and J.F. Caius editor. 2nd ed. Dehradun: International book distributors, 1999; 2290- 2291.
  49. K.R., Basu. B.D, Indian medicinal plants, vol 3. E. Blatter and J.F. Caius editor. 2nd ed. Dehradun: International book distributors, 1999; 2309- 2310.
  50. Kirtikara. K.R.,Basu. B.D, Indian medicinal plants, vol 3. E. Blatter and J.F. Caius editor. 2nd ed. Dehradun: International book distributors, 1999; 2312.
  51. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 549.
  52. The Ayurvedic pharmacopoeia of India, vol 4. 1st ed. New Delhi: Ministry of health and family welfare; Govt of India, 1999; 73.
  53. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 549.
  54. The Ayurvedic pharmacopoeia of India, vol 4. 1st ed. New Delhi: Ministry of health and family welfare; Govt of India, 1999; 73.
  55. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 550.
  56. The Ayurvedic pharmacopoeia of India, vol 4. 1st ed. New Delhi: Ministry of health and family welfare; Govt of India, 2004; 73.
  57. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 550.
  58. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 548.
  59. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 552.
  60. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 551.
  61. P. C. Sharma, M. B. Yelne, T. J. Dennis, Data base on medicinal plants used in Ayurveda, Vol 3. New Delhi: Ministry of health and family welfare; Govt of India; Reprint, 2005; 551.