



Review Article

EVALUATION OF GUNJA TAILA W.S.R TO PHYTOCHEMICAL COMPOSITION AND RAS PANCHAKA

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ABSTRACT

Ayurveda is a holistic science of life and *Aushadha* (drug) is an integral part of this *Trisutriya Ayurveda*. Similarly, according to Ayurvedic classics the treatment's quadruped (*Chikitsa Chatushpada*) also gives importance to *Aushadha* and positioned it next to the physician (*Bhishaka*). Various drug preparations are mentioned in our classics, and *Gunja Taila* is one of them described by different *Acharyas*. It is a *Sneha Kalpana* made of mainly four ingredients (*Gunja, Bhrigraja, Tila Taila* and *Kanji*) and is preferably indicated in *Shiroroga*. Ayurvedic drugs have the distinct nature of a complex blend of several secondary metabolites. An actual understanding of its ingredients is essential for avoiding adulteration. These medications have their own potential to be utilised both internally and externally, but describing their chemical ingredients and other associated elements is a significant step forward. Rapidly rising efforts in the field of studies of Ayurvedic drugs, in future will result in evidence based Ayurvedic medicine as well as new leads to drug development. In this article an effort is made to review proper identification of raw drugs used for *Gunja Taila* including understanding of its active ingredients and mode of action.

INTRODUCTION

The word drug is derived from the French word "Droge, which means dry herb. Drug as defined by W.H.O. "is a substance or product that is used or intended to be used to modify or explore the physiological systems or pathological states for the benefits of the recipient." According to Ayurveda, *Aushadha* (drug) is an integral part of the treatment's quadruped (*Chikitsa Chatushpada*).^[1] A physician needs to possess a thorough understanding of the drug because without it, the patient is unable to get the appropriate treatment and care.

Ayurvedic drugs have a unique nature of a complex mixture of different secondary metabolites. For avoiding adulteration, an authentic knowledge of raw material is important. These drugs have their own potential of being used internally and externally for so

many years, but understanding and documenting their chemical constituents and other related aspects is a significant step forward.

According to *Acharya Charaka* any drug which makes the patient healthy by relieving him from the disease is considered as an ideal drug.^[2] The ideal medication, in accordance with Ayurveda, breaks or reverses the *Samprapti*. Therapeutics often gives a greater emphasis on the combined effects of all the components in a formulation than on the actions of the individual medications.

Among *Panchavidha Kashaya Kalpana, Sneha Kalpana* (oil and Ghee based formulations) is a unique and widely used Ayurvedic dosage form having increased potency, and shelf life. *Gunja Taila* is a form of *Sneha Kalpana* mentioned in various classical texts including *Chakradatta, Bhaishajya Ratnavali, Bhavprakash* etc. and is mainly indicated in *Shiroroga*. In the coming years, rapidly rising efforts in the field of studies of Ayurvedic drugs will soon result in evidence based Ayurvedic medicine and additionally gives a new lead to drug development. In this article an effort is made to review proper identification of raw drugs

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used for *Gunja Taila* including understanding of its active ingredients and mode of action.

Detail description of contents of *Gunja Taila*

Table 1: Contents of the *Gunja Taila* [3]

S.N.	Name of Drugs	Part used
1.	<i>Gunja</i>	<i>Bija</i> (seed)
2.	<i>Bhringraj swaras</i>	<i>Panchanga</i> (whole plant)
3.	<i>Tila taila</i>	-
4.	<i>Kanji</i>	-

1. *Gunja*

Gunja is also referred to as “Indian Liquorice root” the small shining seeds of the plant known as *Ratti* or *Gunja* have been used as weight by Indian goldsmith since ancient times.

Taxonomical Classification

- Kingdom - Plantae
- Subkingdom-Tracheobionta
- Superdivision- Spermatophyta
- Division-Magnoliophyta
- Class- Magnoliopsida
- Subclass -Rosidae
- Order- Fabales
- Family- Fabaceae
- Genus - Abrus
- Species - Precatorius

Sanskrit Name – *Gunja*

Synonyms – *Raj Nighatu (Ra. Ni.)- Krishnala, Kambhoji, Ucchatta,*

Dhanvantari Nighatu (Dh. Ni.)- Shikhandi

Bhavprakash Nighantu (Bh.Ni)- Raktika, Kaknanti

Part used – *Bija* (Seed)

Types of *Gunja*

The various Ayurveda Nighantus describe three varieties of the *Gunja* as following-

Table 2: Types of *Gunja* in Nighantus [4,5-7]

S.N.	Types	Ra.Ni.	Da.Ni.	Bh.Ni.	A.Ni.	Sh.Ni
1.	<i>Rakta Gunja</i>	+	+	+	+	+
2.	<i>Sweta Gunja</i>	+	+	+	+	+
3.	<i>Krishna Gunja</i>	-	-	-	+	+

Classification According to *Samhita*

Classical texts classified herbs into *Ganas*, *Vargas*, and *Skandhas* based on the origin, morphology, properties, pharmacodynamics, therapeutic benefits.

Table 3: Classification of *Gunja* according to *Samhitas*

S.N.	Name of Samhita	Classification
1.	Charaka Samhita [8]	<i>Vaman Dravya</i>
2.	Sushruta Samhita [9,10]	<i>Moolavisha</i> <i>Aaragvadadhi gana</i>
3.	Ashtanga sangraha [11]	<i>Sukrajanan mahakashaya</i>
4.	Ashtanga Hridaya [12]	<i>Pittanashak Dravya</i>
5.	Yogaratanakar [13]	<i>Upavisha Dravya</i>

Rasa Panchaka

The action of a drug is completely based on the *Rasapanchaka* of that drug. The different opinion of authors regarding the *Rasapanchaka* of *Gunja* has been mentioned in the table no. 4.

Table 4: Dravya Rasa Panchak of Gunja mentioned in various Classics

S.N.	Nighantu	Rasa	Guna	Vipaka	Virya	Dosha Shamakta
1.	<i>Dhanwantari Nighantu</i> ^[14]	Tikta Madhur	Ruksha	-	Usna	-
2.	<i>Sodhala</i> ^[15]	Tikta Kasaya	-	-	Anushna	-
3.	<i>Raja Nighantu</i> ^[16]	Katu Tikta	-	-	Usna	-
4.	<i>Kaiyadeva Nighantu</i> ^[17]	Tikta Kasaya	Ruksha	-	Anushna	-
5.	<i>Bhavaprakash Nighantu</i> ^[18]	-	-	-	-	Vata, Pitta Samaka
6.	<i>Nighantu Adarsh</i> ^[19]	Tikta, Kasaya	Ruksha	-	-	-
7.	<i>Ras Tarangini</i> ^[20]	Katu Madhur	-	-	Ushna	-
8.	<i>Gunja (Seed) API</i> ^[21]	Tikta Kasaya	Laghu Ruksha Tikshna	Katu	Ushna	Vata, Pitta Samaka

Panchbhautika Sanghatana

The *Rasapanchaka* of *Gunja* shows the following *Panchbhautika sanghatana* of the plant.

Table 5: Panchbhautika Sanghatana of Gunja

Rasa	Madhur	Jala + Prithvi
	Katu	Agni + Vayu
	Tikta	Akash + Vayu
	Kashaya	Prithvi + Vayu
Virya	Ushna	Agni
Vipaka	Katu	Agni + Vayu
Guna	Ruksha	Agni + Vayu
	Ushna	Agni
	Laghu	Vayu + Agni + Akash
	Tikshna	Agni

The description above shows that *Gunja* is composed of all five *Mahabhutas* with the predominance of *Agni* followed by *Vayu*, and *Akash Mahabhutas*.

Fatal Dose ^[22] and Purification ^[23]

- **Injection** - Abrin 90-120 mg/IM or S C or IV
- **Gunja Seeds**- 1-2 seed orally.
- **Fatal Period** – 3-4 days (minimum - 24 Hour).
- **Shodhana (Purification)** - According to *Ras Tarangini*, *Gunja* seeds are purified by boiling them in *Kanji* for 1 *Prahar* (3 hours) in *Dolayantra*.
- **Therapeutic dose of Purified Gunja seeds** ^[24]- 60-180 mg of the drug in powder form.

Chemical Constituents**Active Principles ^[25]**

- **Abrin (Thermolabile toxalbumin)** – It is a tasteless, amorphous solid, having a pale grey color. Abrin loses its activity when boiled, and therefore, the seeds, when cooked may be used without any harmful effects. The powdered seeds, boiled with milk, are used as a nervine tonic in 60-200 mg doses.

- **Seeds**- Contain some poisonous proteins and fat-splitting enzymes (Hemagglutinin). The shell of the seeds contains a red coloring matter.
- **The root and the stem** also contain an active principal glycyrrhizin.

Leaves [26] - The leaves are employed to sweeten traditional medicines because of presence of highly sweet triterpene glycosides, abrusosides A, B, C and D in the leaves (Fullas et al, *Planta Med*, 1990, 56, 332). The leaves are sweeter than the roots and they have been described as equivalent in sweetness potency to sucrose. The leaves steeped with mustard, as a liniment, are used for rheumatism. The leaves and roots are also useful in various conditions like Fever, Headache, Asthma, Thirst and Tuberculous glands.

Seeds - The boiled seeds are eaten in famine by the tribals of Andaman Islands as after boiling deleterious effects of antinutritional substances i.e., free phenols and tannins can be eliminated. The seed protein is rich in most of the essential amino acids but deficient only in cystine and threonine. Analysis of the seeds gave: moisture, 7.2; crude protein, 21.8; ash, 2.8; pentosan, 15.4; and water-soluble gum, 2.0%. The seeds may be utilized for human consumption after necessary processing.

Thus, Ayurveda as well as modern text review suggests the therapeutical benefits of *Gunja* can be achieved after the purification of the plant.

2. *Bhringraj*

Bhringraj (*Eclipta alba*) also known as “False Daisy” has been extensively used traditional medicine for a wide range of ailments of the treatment of whitening of hair, Disorder of eyes, head and diabetes, gastric problems, inflammatory disorders, skin disorders and most popularly to treat the hair growth.

Taxonomical Classification

- Kingdom - Plantae
- Sulingdom - Viridiaeplanatae
- Division - Tracheophyta
- Subdivision - Spermatophyta
- Class - Magnoliopsida
- Order - Asterales
- Family - Asteraceae
- Genus - *Eclipta* L.
- Species - *Eclipta alba* (L.) Hassk

Sanskrit Name - *Bhringraj*

Synonyms - *Markav, Kesharanjana, Keshraj*

Part used - *Panchanga* (Whole Plant)

Types of *Bhringraj*

The various Ayurveda Nighantus describes three varieties of the *Bhringraj*

Table 6: Types of *Bhringraj* in *Nighantus* [27-31]

S.N.	Types	Ra.Ni.	Ka.Ni.	Bh.Ni.	A.Ni.	Sh.Ni
1.	<i>Sweta Bhringraj</i>	+	+	+	+	+
2.	<i>Pita Bhringraj</i>	+	+	+	+	-
3.	<i>Neela Bhringraj</i>	+	+	-	-	+
4.	<i>Krishna Bhringraj</i>	+	-	-	+	-

Classification According to *Samhitas*

Bhringraj is not mentioned in the *Samhita* classification of herbs (*Ganas, Vargas, and Skandhas*). It is mentioned as an ingredient in various formulations of *Samhitas*; out of which some are as follow

Charak Samhita: Mentioned as an ingredient in following *Yogas*

Kasmardadi Yoga [32] - *Kaphaj Kasa Chikitsa*

Raktapittanashaka Yoga [33] - *Raktapitta Chikitsa*

Krimihar Dravya [34] - *Krimi Chikitsa*

Khalitya and Palitya [35] - *Trimarmiya Chikitsa*

Sushruta Samhita: Mentioned in following *Yogas*

Palitya [36] - *Mishrak Chikitsa*

Vishahar [37] - *Kitakalpa*

Ashmarihar [38] - *Ashmari Chikitsa*

Ashtanga Hridaya: Mentioned in following *Yogas*

Rasayana Karma [39] - *Rasayana Kalpa*

Kaphaj Kasa [40] - *Kasa Chikitsa*

Kusthadi Taila [41] - *Kaphaja Kasa*

Rasa Panchaka**Table 7: Rasa Panchaka of Bhringraj**

S.N.	Nighantu	Rasa	Guna	Vipaka	Virya	Dosha Shamakta
1.	Dhanwantari Nighantu [42]	Tikta	Ruksha Ushna	-	Ushna	Vata-Kapha Shamak
2.	Raj Nighantu [43]	Tikta	Ushna	-	Ushna	Vata-Kapha shamak Pittavirechana
3.	Kaiyadeva Nighantu [44]	Katu Tikta	Ruksha Ushna	-	Ushna	Vata-Kapha shamak Pittavirechana
4.	Bhavaprakash Nighantu [45]	Katu Tikta	Ruksha Ushna	Katu	Ushna	Vata-Kapha shamak Pittavirechana
5.	Nighantu Adarsh	Tikta,	Ruksha Ushna	-	Ushna	-
6.	API [46]	Katu, Tikta	Ruksha Tikshna	Katu	Ushna	Vata, Kapha Shamak

Therapeutic use and Doses [47]

- **Therapeutic uses** – Sirahshula, Sotha, Krimiroga, Hridaroga, Yakrodar, Pandu.
- **Dose** - 3 - 6 ml of the drug in juice form. 12 - 36 g. of the drug in powder form for decoction.

Chemical Constituents**Active Principles [48]**

- Wedelolactone
- Demethyl wedelolactone
- Ecliptine alkaloid
- Ecliptal
- Thiophene acetylenes – roots are rich source
- The herb is a rich source of ascorbic acid; the content reported in various plant parts are: root, 109.6; stem, 83.7; leaf, 86.5; and fruit, 83.7 mg/100g fresh wt.

3. Tila Taila (Sesame Oil)

Tila (*Sesamum indicum*) is commonly known as “Sesame” has been used as a popular food and medicine of internal and external use traditionally.

Taxonomical Classification

- Kingdom- Plantae
- Subkingdom- Viridiplantae
- Infrakingdom- Streptophyta
- Superdivision- Embryophyta
- Division- Tracheophyta
- Subdivision- Spermatophytina
- Class- Magnoliopsida
- Superorder- Asteranae
- Order- Lamiales
- Family- Pedaliaceae
- Genus- *Sesamum* L
- Species- *Sesamum indicum* L.

Sanskrit Name – Tila

Part used – Seed oil

Classification and Rasa Panchaka**Table 8: Classification and Rasa Panchaka of Tila**

S.N.	Reference book	Classification	Rasa	Guna	Vipaka	Virya	Dosha Shamakta
1.	Charak Samhita [49,50]	Shami-dhanya Sthavar sneha	Madhur Tikta Kashaya Katu	Snigdha Ushna	-	Ushna	Vata Shamaka Kapha-Pitta krita
2.	Sushruta	Taila-varga	Madhur	Ushna	Madhur	-	Vata

	Samhita [51]			<i>Tikshna</i>			<i>Kapha shamak</i>
3.	Ashtanga Hridaya [52]	<i>Shimbi-dhanya</i>	-	<i>Ruksha Ushna</i>	<i>Katu</i>	<i>Ushna</i>	<i>Kapha-Pitta kar</i>
4.	API [53] (<i>Tila taila</i>)	-	<i>Madhur</i>	<i>Snigdha, Sukshma Vyavayi, Vikasi Vishad, Sara, Guru</i>	<i>Madhur</i>	<i>Ushna</i>	<i>Vatahara</i>

Therapeutic Use and Doses of *Tila Taila* [54]

- **Therapeutic uses** - *Sirah-shula* (Headache), *Shula* (Pain), *Vata-vikara*, *Ardita*, *Agnidagdha* (Accidental burns), *Karnashula*, *Kriminashak*, *Kandu*.
- **Dose** - 5 - 20 ml

Chemical Constituents [55,56]

- ❖ Sesamin & Sesamolin - Bioactive lignan (a large class of secondary metabolites in plants) compounds showing neuroprotective activity against hypoxia-induced reactive oxygen species (ROS) and oxidative stress in neuron cells
- ❖ Sesaminol & Sesamol - Powerful endogenous anti-oxidants.
- ❖ Glycerides of higher fatty acids (oleic, palmitic, stearic, rachitic)

4. Kanji

Kanji is a formulation described under *Shukta Kalpana* and is prepared by ancient fermentation method with main ingredient cereals (Rice) and Pulses (*Kulthi*) [57,58] There are three methods of *Kanji* preparation described in Ayurvedic texts [59] -

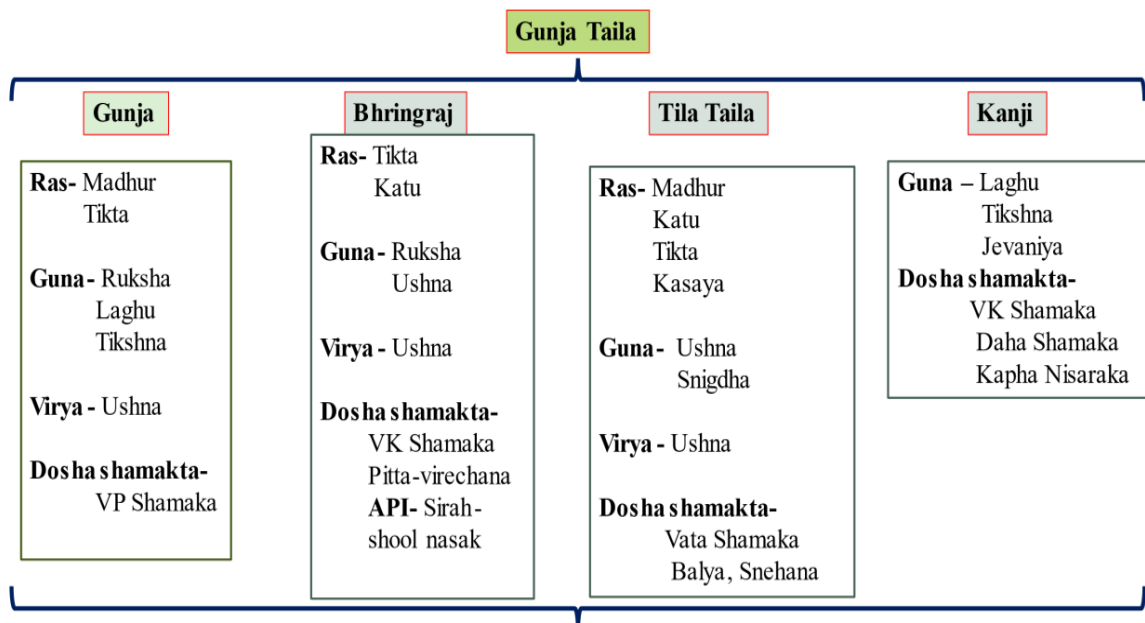
- API
- Sharangdhar Samhita
- Rasratna-samucchaya

In present study the *Kanji* preparation was done with the method of Rasratna-samucchaya with ingredients - *Sasthika Sali*, *Rajika*, *Kulatha*, *Saindhava lavana*, *Haridra*, *Bamboo*, *Jiraka*, *Masa*, *Sarshapa*, *Sunthi*, *Hingu* and water.

Therapeutic uses of *Kanji* [60] - *Vata Kapha Shamaka*, *Laghu*, *Kapha-nisaraka*, *Daha nashaka*, *Jevaniya*, *Depaniya*.

DISCUSSION

PROBABLE MODE OF ACTION OF GUNJA TAILA



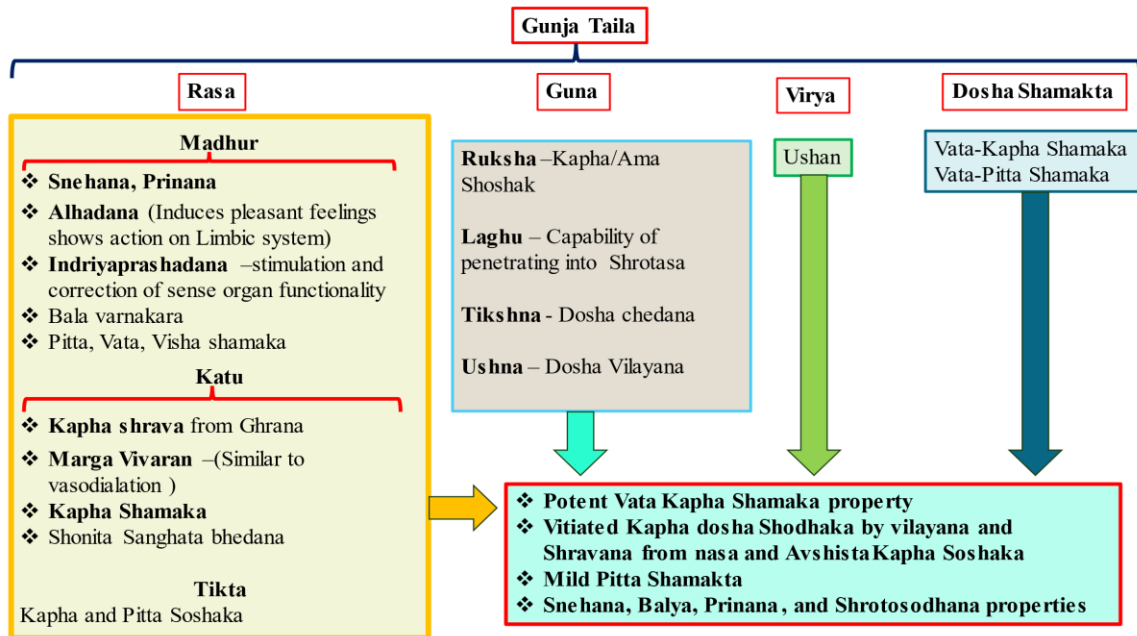


Fig No. 1 Probable mode of action of Gunja Taila

CONCLUSION

From above description it is concluded that *Gunja Taila* is having *Vata-Kapha Shamaka* along with mild *Pitta Shamak* properties. Thus, it can be advised as a successful conservative treatment modality in *Vata-Kaphaja* and *Tridosha Vyadhis*. It can also be used both as internal and external medicine after proper *Shodhana* of *Gunja*.

REFERENCES

1. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Sutra sthana Chapter 9 Ver.7, Part -I, Reprint edition 2009, Varanasi Chaukhambha bharati Academy, page no.63.
2. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Sutrasthana Chapter 1 ver. 137, Part - I, Reprint edition 2013, Varanasi Chaukhambha Surbharati Academy, page no. 49-50.
3. Bhaishjaya Ratnawali- Kaviraj Govind Das Sen- "Siddhiprada" Hindi commentary by Prof.Siddhi Nandan Mishra, Shiroroga Chikitsa Prakaran 65/153-156, Varanasi, Chaukhambha Surbharati Prakashana, Reprint edition 2021, Pg No. 1027
4. Raj nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/eNighantu/rajanighantu/?mod=read> Da. Ni.
5. Bhavprakash Nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/bhavaprakashanighantu/?mod=read>
6. Ashtanga Nighantu, available at: <https://niimh.nic.in/ebooks/eNighantu/ashtanganighantu/?mod=read>
7. Shodal Nighantu, Karveeradi Varga, available at: <https://niimh.nic.in/ebooks/eNighantu/shodhalanighantu/?mod=read>
8. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Vimana sthana Chapter 8 Ver.135, Part-I, Reprint edition 2009, Varanasi Chaukhambha bharati Academy, page no. 786.
9. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri- Kalpasthana Chapter 2 Ver.5, Part -I, Reprint edition 2013, Varanasi Chaukhambha Sanskrita Sansthan, page no. 21.
10. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri- Sutrasthana Chapter 38 Ver.6, Part -I, Reprint edition 2013, Varanasi Chaukhambha Sanskrita Sansthan, page no. 183.
11. Acharya Vagbhata, Ashtanga sangraha- Hindi commentary by Kaviraj Atridev Gupt- Uttara-sthan Chapter 15 Ver.24 Reprint edition 2011, Varanasi Chaukhambha Krishnadas academy.
12. Acharya Vagbhata, Ashtanghridyam- "Vidhyotini" Hindi commentary by Kaviraj Atridev Gupt- Sutrasthan Chapter 15 Ver.6, Reprint edition 2016, Varanasi Chaukhambha Prakashan, Page no. 140.

13. Yogratakara -"Vidhyotini" Hindi commentary by Vaidhya Laksmipati Sastri edited by Bhisagratna Brahma Sankara Sastri Purvardh Ksanidana, Reprint edition 2015 Varanasi, Chaukhambha Prakashan.
14. Dhanvantari Nighantu, Karveeradi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/dhanvantarinighantu/?mod=read>
15. Shodal Nighatu, Karveeradi Varga, available at: <https://niimh.nic.in/ebooks/eNighantu/shodhalanighantu/?mod=read>
16. Raj nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/eNighantu/rajanighantu/?mod=read>Da. Ni.
17. Kaidev Nighantu, Aaushadi Varga, available at, <https://niimh.nic.in/ebooks/e-Nighantu/kaiyadevanighantu/?mod=read>
18. Bhavprakash Nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/bhavaprakashanighantu/?mod=read>
19. Ashtanga Nighantu, available at: <https://niimh.nic.in/ebooks/eNighantu/ashtanganighantu/?mod=read>
20. Pranacharya Shri Sadanand Sharma, Ras Tarangini, "Ras Vigyan" Hindi commentary by Pandit Kashinath Shastri, Tarang 24 Ver. 448, Eleventh edition 1979, Delhi, Motilal Banarasidas Prakashan Ltd., Page no. 729.
21. The Ayurvedic Pharmacopoeia of India, Part -1 Volume -1 Reprinted Edition 2001, Printed by National Institute of Science Communication, New Delhi, Page no. 58.
22. Medica Jurisprudence by BV Subrahmanyam page 567
23. Pranacharya Shri Sadanand Sharma, Ras Tarangini, "Ras Vigyan" Hindi commentary by Pandit Kashinath Shastri, Tarang 24 Ver. 444, Eleventh edition 1979, Delhi, Motilal Banarasidas Prakashan Ltd., Page no. 729.
24. The Ayurvedic Pharmacopoeia of India, Part -1 Volume -1 Reprinted Edition 2001, Printed by National Institute of Science Communication, New Delhi, Page no. 59.
25. Modi A textbook of Medical Jurisprudence Sectio 2 Chapter 10 page 151
26. Wealth of India Vol. 1 page 6-7.
27. Raj nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/eNighantu/rajanighantu/?mod=read>Da. Ni.
28. Kaidev Nighantu, Aaushadi Varga, available at, <https://niimh.nic.in/ebooks/e-Nighantu/kaiyadevanighantu/?mod=read>
29. Bhavprakash Nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/bhavaprakashanighantu/?mod=read>
30. Ashtanga Nighantu, available at: <https://niimh.nic.in/ebooks/eNighantu/ashtanganighantu/?mod=read>
31. Shodal Nighatu, Karveeradi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/shodhalanighantu/?mod=read>
32. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Chikitsa sthana Chapter 18 ver. 117, Part -II, Reprint edition 2012, Varanasi Chaukhambha bharti Academy, page no.546.
33. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Chikitsa sthana Chapter 4 ver.68, Part -II, Reprint edition 2012, Varanasi Chaukhambha bharti Academy, page no.189.
34. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Vimana sthana Chapter 7 Ver.21, Part -I, Reprint edition 2009, Varanasi Chaukhambha bharti Academy, page no.731.
35. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Chikitsa sthana Chapter 26 ver.264, Part -II, Reprint edition 2012, Varanasi Chaukhambha bharti Academy, page no.761.
36. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri-Chikitsa sthana Chapter 25 Ver.28-32, Part -I, Reprint edition 2014, Varanasi Chaukhambha Sanskrita Sansthan, page no. 145.
37. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri- Kalpa sthana Chapter 8 Ver.54, Part -I, Reprint edition 2014, Varanasi Chaukhambha Sanskrita Sansthan, page no. 81.
38. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri-Chikitsa sthana Chapter 7 Ver.24, Part -I, Reprint edition 2014, Varanasi Chaukhambha Sanskrita Sansthan, page no. 53.
39. Acharya Vagbhata, Ashtanghridyam- "Vidhyotini" Hindi commentary by Kaviraj Atridev Gupt-Uttaratantra Chapter 39 Ver.162, Reprint edition

- 2016, Varanasi Chaukhambha Prakashan, Page no. 826
40. Acharya Vagbhata, Ashtanghridayam- "Vidhyotini" Hindi commentary by Kaviraj Atridev Gupta-Chikitsa sthan Chapter 3 Ver.48, Reprint edition 2016, Varanasi Chaukhambha Prakashan, Page no. 419.
41. Acharya Vagbhata, Ashtanghridayam- "Vidhyotini" Hindi commentary by Kaviraj Atridev Gupta-Chikitsa sthan Chapter 19 Ver.83, Reprint edition 2016, Varanasi Chaukhambha Prakashan, Page no. 560.
42. Dhanvantari Nighantu, Karveeradi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/dhanvantarinighantu/?mod=read>
43. Raj nighantu, Satavyadi Varga Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/rajanighantu/?mod=read>
44. Kaidev Nighantu, Aaushadi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/kaiyadevanighantu/?mod=read>
45. Bhavprakash Nighantu, Guduchayadi Varga, available at: <https://niimh.nic.in/ebooks/e-Nighantu/kaiyadevanighantu/?mod=read>
46. API Vol. 2 Part 1 Page No. 24
47. API Vol. 2 Part 1 Page No. 24
48. Wealth of India Vol. 3 page 47-48.
49. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Sutrasthana Chapter 27 ver 30, Part - I, Reprint edition 2009, Varanasi Chaukhambha Bharati Academy, page no. 530
50. Agnivesha, Charaka samhita of Acharya Charaka, Dridhabala krit - "Vidhyotini" Hindi commentary by Pandit Kashinath Shastri & Dr. Gorakha Nath Chaturvedi - Sutrasthana Chapter 13 ver 12, Part - I, Reprint edition 2009, Varanasi Chaukhambha Bharati Academy, page no. 256.
51. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatvatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri-Sutrasthana Chapter 45 Ver. 112, Part -II, Reprint edition 2013, Varanasi Chaukhambha Sanskrita Sansthan, page no. 230.
52. Acharya Vagbhata, Ashtanghridayam- "Vidhyotini" Hindi commentary by Kaviraj Atridev Gupta- Sutra sthan Chapter 6 Ver.23, Reprint edition 2016, Varanasi Chaukhambha Prakashan, Page no.67.
53. API Vol. 1-6 Page 250
54. WOI - Vol. 5 Page 76-77
55. Rosalina R, Weerapreeyakul N. An Insight into Sesamolin: Physicochemical Properties, Pharmacological Activities, and Future Research Prospects. *Molecules*. 2021 Sep 27;26(19):5849. doi: 10.3390/molecules26195849. PMID: 34641392; PMCID: PMC8510241.
56. Acharya Sushruta, Sushruta samhita of Acharya Sushruta "Ayurvedatvatvasandepika" Hindi commentary by Kaviraj Ambikadatt Shastri-Sutrasthana Chapter 45 Ver.214, Part -II, Reprint edition 2013, Varanasi Chaukhambha Sanskrita Sansthan, page no. 240.
57. Sharangdhar Samhita- Jeevan prada Hindi commentary by Dr. Shrimati Shelja Srivastav-Madhyam khanda Ch. 10/12 Chaukhambha Orientalia. Varanasi. Reprint edition 2016/ Pg. No. 246
58. Chandra Shekhar, C. B. Jha. Analytical study of kanji: an acidic fermentative preparation of sandhan kalpana and its effect on agni. *Int. J. Res. Ayurveda Pharm.* 2015;6(6):711-713 <http://dx.doi.org/10.7897/2277-4343.066132>
59. Ibid
60. Bhokardankar, P. S., & Wadodkar, D. S. (2019). Standardisation of Ayurvedic fermented product Kanji. *Ayurlog: National Journal of Research in Ayurved Science*, 7(4). Retrieved from <https://www.ayurlog.com/index.php/ayurlog/article/view/392>

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