



## Critical Appraisal of Gandhaka Rasayana

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### ABSTRACT

Among the various Gandhakakalpa, Gandhaka Rasayana stands apart as a remedy par excellence which is extensively used in skin diseases. Other than its role as a rasayana drug, it is widely used in broad spectrum of clinical conditions such as skin diseases, in respiratory disorders, arthritis, allergies, diabetes etc. In the present study an attempt was made to compile and critically analyse all the available references of Gandhaka Rasayana in terms of their composition, method of preparation, dose and indications from various texts. Fifteen formulations are available across various texts in the name of Gandhaka Rasayana in various dosage forms like churna, leha and druti; churna being the commonest among them. Bhavana with various herbal drug is a common method utilized in the preparation of Gandhaka Rasayana. All the formulations irrespective of their variations in the ingredients are well acclaimed for rejuvenation property and skin diseases.

**Key words:** Bhavana, Churna, Gandhaka Rasayana

### INTRODUCTION

In Rasashastra, Gandhaka (Sulphur) stands next to Parada (Mercury) in importance. It is considered as an essential substance whose presence makes Parada extremely therapeutic and free from toxicity.<sup>[i]</sup> Shuddha Gandhaka as a single drug or in combination is used both externally and internally in variety of diseases.<sup>[ii]</sup> Among the various Gandhakakalpa mentioned in the classical texts Gandhaka Rasayana stands apart as a remedy par excellence which is extensively used in skin diseases. Other than its role as a rasayana (Rejuvenating) drug, it is widely used in broad spectrum of clinical conditions such as skin diseases, as an appetizer, in respiratory disorders, arthritis, allergies, pain symptoms, bladder

disorder, diabetes etc.<sup>[iii]</sup> The commonest formulation of Gandhaka Rasayana consists of Shudha Gandhaka (Processed/purified sulphur) which is levigated with Godugdha (Cow's milk), Chaturjata, Triphala, Guduchi, Shunti, Bringaraja and Ardraka respectively for 8 times each.<sup>[iv]</sup> The Bhavana (levigation) process which is a samskara augments the properties of Gandhaka and the phytoconstituents and trace elements incorporated from the bhavana dravyas widens the therapeutic index of Gandhaka Rasayana. However, the name Gandhaka Rasayana is not pertaining to any one formulation. Different formulations of Gandhaka in various texts are mentioned under the same nomenclature. In the present study an attempt was made to compile and critically analyse all the available references of Gandhaka Rasayana, in

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terms of their composition, method of preparation, dose and indications from various texts.

## MATERIALS AND METHODS

Classical texts of Rasashastralike Rasa Ratna Samucchaya, Rasendra Sara Samgraha, Ayurveda Prakasha, Chakradutta, Rasa Tarangini, Yog Ratnakara and A.F.I. part 2, and the thesis Evaluation of Rasayana Effect Of Gandhaka Rasayana have been the sources for Gandhaka Rasayana. Rasa Yoga Sagara being a compilatory text was the main source and the other important formulations are selected from other classics and enumerated according to the ingredients and method of preparation.

## RESULTS

A survey of the classical Rasa Shastra texts shows different versions of Gandhaka Rasayana available with slight modification in constituents, quantity and in process. Earliest citation of Gandhaka Rasayana is observed in Chakradutta<sup>[v]</sup> a book of 13th century. Rasa Yoga Sagara for first time has compiled 7 formulations in the name of Gandhaka Rasayana.

## Gandhaka Rasayana 1<sup>[vi]</sup>

This formula of Gandhaka Rasayana is routinely prescribed by most of the Ayurvedic Physicians and it is also readily available in market. In this formulation Shuddha Gandhaka is triturated 8 times each with Godugdha and rasa of Chaturjata (Cinnamomum zeylanicum, Elettaria cardamomum, Cinnamomum tamala, Mesua ferrea) Guduchi (Tinospora cordifolia), Haritaki (Terminalia chebula), Bhibhitaki (Terminalia bellirica), Amalaki (Embellica officinalis), Shunthi (Zingiber officinale), Bringaraja (Eclipta alba) and Ardraka (Zingiber officinale). After complete drying of mixture Sita (Sugar) has been added to the final product in equal quantity.

It is indicated in Krishata (Weakness), Kandu (Itching), Pama, Vishadosha, Pandu (Anaemia), Mushkavridhi, Jeernajwara, Prameha (Diabetes), Vataroga and the dose mentioned is Masha dwaya (2g). ShaliShashtika, Goghrita, Kadali, Saindhav Lavana, Amra (Mangifera indica), Madhu (Honey), Mamsa, Tambual (Betel leaf), Puga (Areca catechu), and Khadira (Acacia catechu) are indicated as pathya, while Vyayama and Maithuna are contraindicated during the administration of Gandhaka Rasayana. Same formula is adopted by other scholars with some modification in Gandhaka Rasayana 1, as specified in table 1.

**Table No.1 Showing modifications made by authors and commentators of mentioned books regarding Gandhaka Rasayana 1**

Name of Text	Ingredients with their quantity	Method of preparation	Dose	Indication
Rasayana Samgraha <sup>[vii]</sup>	Same as R.Y.S.	Same as R.Y.S.	Same as R.Y.S	Same as R.Y.S
Vaidya Rahasyam <sup>[viii]</sup> (Vajikarana)	Same as R.Y.S. <sup>1</sup>	Single bhavana of Godugdha and 8 bhavana each of other ingredients are mentioned.	1 Karsha (12gm.)	- do - Indicated for 2 months for kushtha, kandu, visha dosha, atisara, grahani, vatarakta, shula, Jirnajwara, prameha, all vataroga.
Vaidya Chintamani <sup>[ix]</sup>	Same as R.Y.S. (Godugdha used as shodhana dravya for gandhaka instead of bhavana)	Same as R.Y.S. - but clearly mentioned milita Chaturjata Bhavana. - Kwath or Swarasa of Bhavana dravya used.	1 karsha	Dhatukshaya, prameha, agnimandya, shula, kosthagatavata, 18 types of kushtha, kshayaroga. - Should be used after vama, virechana. - Jangala & Chhagamams apathya (contraindicated)
Rasayana Sara <sup>[x]</sup>	With Bhallataka sneha & Triphala kwatha shodhita Gandhaka Bhavana Dravya: Maricha is an addition while Patra and Nagakesara is not mentioned.	Same as R.Y.S.	1 Karsha along with Dharoshna Godugdha	20 Prameha, mandagni, shula, kushtha, makes sama dosha & dhatu. Apathya - Lavana & Amla Bhojana, Maithuna

<sup>1</sup>Rasa Yog Sagar

Vasavarajiyam <sup>[xi]</sup>	Same as R.Y.S.	Same as R.Y.S.	1 karsha	Same as R.Y.S. Apathya – Yavanala, Takra, TailaPachita Vyanjana, Lavana, Tiksha Kashaya, Kanji. - Indicated after Vamana, Virechana.
Br. Yoga Tarangini <sup>[xii]</sup>	Same as R.Y.S.	Same as R.Y.S.	2 Masha	Viryavridhikara, dridhadehakara, kandu, pama, ugravishadosha, kushtha, prameha, upadamsha, vataroga, visuchika, grahani, ajirna.
Yoga Ratnakara <sup>[xiii]</sup>	Shunti extra added as bhavana dravya	Same as R.Y.S.	1 Karsha	Viryavardhaka, pushtikara, agnivardhaka, kandu, kushtha, ugravisha, grahani associated with shula& blood atisara, jeernajwara, prameha, vataroga- if taken for 2 months. Rasayana, Prajakara & Palitanashaka –if taken for 6 months.
Rasa Tarangini <sup>[xiv]</sup>	Same as R.Y.S.	Three bhavana of Godugdha and 8 bhavana each of other ingredients are mentioned.	1 Masha for 1 month	Dhatukshayajvyadhi, koshtaroga, prameha, shiroroga, shula, kushtha. Apathya - Kshara, Amla, Lavana, Krodha, Maithuna, Dwidaldhanya, Shaka.
Ayurveda Prakasha <sup>[xv]</sup>	Same as R.Y.S. Sanskrit Tika – “Kwachita Trivaram’ etiatra ‘Vibhavya’ etiPathabhedah	Three bhavana of Godugdha and 8 bhavana each of other ingredients are mentioned (Hindi Tika not mentioned Ardraka Bhavana)	1 Karsha	Same as Vaidya Chintamani. Apathya - same as Rasa Tarangini
Brhat Ras Raj Sundar <sup>[xvi]</sup>	Same as R.Y.S.	Same as R.Y.S.	Less than 1 Tola	Dhatukshaya, prameha, agnimandya, shula, Udaravikara

### Gandhaka Rasayana 2

This formula is also mentioned by authors of classics like Br. Nighantu Ratnakara<sup>[xvii]</sup>, Rasayana Samgraha, Vaidya Rahasyam<sup>[xviii]</sup>, Vaidya Chintamani<sup>[xix]</sup>, Chikitsaratnabharanam, Rasa Ratna Kaumudi, Rasa Ratna Manimala as per Rasa Yoga Sagara. Ingredients of this formulation are Triphala churna, Shuddha Gandhaka and Loha Bhasma (Incinerated iron) in the ratio 4:2:1. It is indicated in all types of Shula (Pain) along with anupana of honey and ghee. If taken 3 months regularly, it eliminates Vata, Visphotaka, Palitya (graying of hairs) & Khalitya (Baldness).

### Gandhaka Rasayana 3

As per Rasa Yoga Sagara, this Gandhaka Rasayana is quoted by 'Agnipuranam'<sup>[xx]</sup>. The ingredients of this formulation include Amra majja, Guduchisatva, Trivritchurna (Operculina terpehum) and Shuddha Gandhaka in equal quantity which is given Bhavana with Kumari swarasa(Aloe vera juice). It is rasayana yoga and the dose prescribed is 2 Masha (2 gm.) along with ghrta as anupana.

### Gandhaka Rasayana 4

This formula quoted in Rasa Yoga Sagar is mentioned by Br. Yoga Tarangini<sup>[xxi]</sup> and Vaidya

Chintamani<sup>[xxii]</sup>. Ingredients include Godugdha shodhita Gandhaka which is given ten bhavana each with Goat milk, Ikshu rasa (Saccherum officinarum), Guduchi, Madhu, Gokshura (Tribulus terrestris), Varahikanda (Dioscorea bulbifera), Yashtimadhu (Glycerrhyza glabra), Kushta (Saussurea lappa), Bhringaraj and Tulsi. Further powders of Pippali (Piper longum), Pippalimula, Lavang (Syzygium aromaticum), Nagkeshar, Triphala and Kamalgatta (Padmaka beeja) are added in equal proportion to that of Gandhaka. One masha of the above formulation is prescribed along with Sita, Madhu and dugdha in Vali, Palita, Jara, Shandhatwa, Agnimandya, 18 types of Kushta, 80 Vataroga, 20 Prameha, all Mutrakricchra, all Vrana, Gandamala, Arsha, Bhagandara, Gulma, Pliha, Rajovikara, Halimaka, Shighrapatana, Shukrameha, Kantivardhak, Dehadivyakara.

### Gandhaka Rasayana 5

As per Rasa Yoga Sagara, this formula has been mentioned by Rasayana Samgraha, Vaidya Chintamani<sup>[xxiii]</sup> and Basavarajiyam<sup>[xxiv]</sup>. In this formulation 6 Parts of Shuddha Gandhak is mixed with powders of Triphala, Chitraka (Plumbago zeylanica), Vidanga (Embelia ribes), Trikatu, Trisugandha, Pippalimula, Jeeraka (Cuminum cyminum), Rakta Chitrakaone part each. Dose

recommendation is as per Agnibala which is 3 Masha or 6 Masha or 9 masha along with anupana like madhu, navaneeta (butter), pakwakadaliphala (Musa paradisiaca) and sharkara (sugar). It is indicated in Rasayana, Vajikarana, 18 kushtha (Leprosy), 4 types of Samgrahani (Chron's disease), Daurbalya, All Gulma, Mandagni, Prameha, Mutrakrichhra, Vataroga, Kshaya and Shukrastambha.

#### Gandhaka Rasayana 6

This formula is compiled from a manuscript named 'Bahata' (Gauriputra Kartikeya virachita), as per Rasa Yoga Sagara<sup>[xxxv]</sup>. Ingredients include Shuddha Gandhaka 6 parts and Triphala, Trikatu, Chitraka and Vidanga one sixteenth part each and raktachitraka one part each. Recommended dose is 3 masha along with ghrita anupana. It is indicated for Rasayana, Vajikarana, 18 Kushtha, 4 Grahani,

Mandagni, Atisara (Diarrhoea), and all types of Gulma (Tumor).

#### Gandhaka Rasayana7

This formula is mentioned by Rasendra Ratna Kosha (a manuscript) as per Rasa Yoga Sagara<sup>[xxvi]</sup>. Author of Rasa Yoga Sagara made some changes in this formula as per his experience. Ingredients include Rasasindhura, Shuddha Gandhaka, Tamra Bhasma (Incinerated copper), Loha Bhasma and Pippalichurna in equal parts triturated with Matulunga Swarasa (Lemon juice). Prescribed dose is 4 ratti along with madhu and ghrita. After delving through the vast literature of Rasashastra, we have come across to different formulas of Gandhaka Rasayana besides mentioned by Rasa Yoga Sagara. These formulae are given in table no.2

**Table No.2 Showing formulations in the name Gandhaka Rasayana which are not compiled in Rasa Yoga Sagara**

Formula	Text	Ingredients and Ratio	Dose	Indication
Gandhaka Rasayana 8	Vangasena Samhita <sup>[xxvii]</sup>	Shuddha Gandhaka and Tikshna Loha 4:1 ratio triturated with Kumari swarasa.	1 Karsha	Deerghayu, Divyadrishti
Gandhaka Rasayana9	Vangasena Samhita <sup>[xxviii]</sup>	Abhraka Bhasma, ShuddhaGandhaka, Maricha in the ratio 16:1:1/16 is levigated with tilataila, made into a varti and dipped in goghrita and burnt. Collect the Ganghakarasyana drop by drop in a vessel.	1 RattiTail aalong with 2 rattiParna khandaswarasa	Rasayana, ValipalitaNashak, Agnideepaka, Vajikarana.
Gandhaka Rasayana10	Vaidya Chintamani <sup>[xxix]</sup>	Shuddha Gandhaka and Shuddha Parada in the ratio 2:1 is made into kajjali and paka done in kacchapa yantra	1 masha with madhu and ghee	Daruna Kushtha.
Gandhaka Rasayana11	Sahasrayoga <sup>[xxx]</sup>	ShuddhaGandhaka - 6 Pala, Triphala, Trikatu and Erandamajja, - each 6 Nishka, Trisugandha,Haridra,Rasna, Bakuchi, Bhringaraj - each 4 NishkaandLohaBhasmainEqual quantity.	1 Aksha. Ghrita, Madhu, and Guda. One mandala (40 days) DugdhayuktaBhojana	Dirghayudayaka, Jaranashaka, Drishtivardhaka. Divyadehakaraka, Balya. 18 types of Kushtha, 5 Gulma, Arsha and Pandunashaka
Gandhaka Rasayana12	Aryabhishak <sup>[xxxi]</sup>	Shuddha Gandhaka, Marichaand triphala in the ratio 1:1:6 is triturated with Aragvadha MulaSwarasa	3 Masha	Sampurna Vyadhinashaka
Gandhaka Rasayana 13	'Chikitsa Krama Kalpa Valli' <sup>[xxxii]</sup> inRasayanadhikara.	Bhringarajaswarasa bhavita Shuddha Gandhaka	3 Pala for 2 month	Jaranashaka, Vajikarana, Satva, Sahasa and Balavridhikara
Gandhaka Rasayana 14	Rasoddhara Tantra <sup>[xxxiii]</sup>	Bhringarajswarasa shodhita Gandhaka 4 parts is mixed with powders of Ela, Shunthi, Pippali, Maricha, Dalchini, Tamalpatra, Nagkeshara,	3-12 ratti, Dugdhan	Kushtha

		Haritaki, Bhringaraj, MandoorBhasma, Bibhitaki, Amalaki, Kushtha, Chopchini, Bakuchi, Kajjali, Aswagandha, Sugar – each 1 part and triturated with Bhringarajswarasa	upana	
Gandhaka Rasayana 15	Vaidya Yoga Ratnavali <sup>[xxxiv]</sup> (Lehya, Rasayana&Guda section)	ShuddhaGandhaka 18 parts, Loha Bhasma 1 Part Madhu 7½ parts, Guda - 100 parts, Ghrita 15 parts, Trikatu and Vidanga 1½ - 1½ parts, Triphala, Trijata, Rasna, Bakuchi, Bhringaraj 1-1 Part each, Eranda bija 50 parts.	2-5 gm	chronic ulcers, eczema, boils and other chronic skin diseases

## DISCUSSION

*Gandhaka Rasayana* is formulation where the Rasayana guna of Gandhaka is augmented by bhavana samskara. However bhavana is not a processing method in all the formulations of Gandhaka Rasayana. Among the 15 references of Gandhaka Rasayana available in classics Gandhaka Rasayana 1 is quoted by majority of texts. Gandhaka Rasayana marketed by various pharmaceutical companies also follow the same reference with modifications in the number of bhavana as well as the dravadravya used for bhavana. The first reference of Gandhaka Rasayana is cited in Yoga Ratnakara where Shuddha Gandhaka is given 8 bhavana each with Godugdha, Chaturjata, Guduchi, Triphala, Shunti, Bhringaraja, Ardraka respectively which amount to total total 96 bhavana. Some authors excluded Godugdha from bhavana by interpreting the shloka '*Suddhe Bali gopayasavibhavya*' as giving shodhana with Godugdha instead of bhavana reducing the number of bhavana to 88. Ayurveda formulary of India <sup>[xxxv]</sup> quoted the reference of Yogaratnakara with slight modifications. Chaturjata dravyas individually are powdered fine and boiled for some times in Arka yantra (Distillation apparatus) to collect both the volatile oil along with Kwatha (Decoction) in order to prevent the loss of volatile principles from bhavana dravya. Some pharmacies utilize arka of chaturjata instead of kwatha, while some others incorporate the Ghana (Solidify decoction) of bhavana dravyas into the formulation. Variations are seen in the number of bhavana where 8 bhavana of chaturjata together and 8 bhavana of triphala together is considered. Previous studies has shown that more reduced size of particles was found in the samples prepared by giving 88 *Bhavana* in comparison of the sample prepared by mixing Ghana of Bhavana dravya and the sample that was given 11 Bhavana. It was also found that the sample with 88 Bhavana had uniform overlapping of the Bhavana dravya, thus highlighting the importance of bhavana during drug processing which inturn affecting the physicochemical and biological properties of a dosage form. <sup>[xxxvi]</sup>

Comparing the formulations of Gandhaka Rasayana, it was found that Gandhaka Rasayana 2,

5 and 6 does not involve bhavana process. Gandhaka Rasayana 3, 8 is given bhavana with kumari swarasa, Gandhaka Rasayana 4 is given 10 bhavana each with Goat milk, Ikshu rasa, Guduchi, Madhu, Gokshura, Varahikanda, Yashtimadhu, Kushta, Bhringaraja and Tulsi and Gandhaka Rasayana 7 is given bhavana with Matulunga Swarasa, Gandhaka Rasayana 12 is given bhavana with Aragvadhmula (Cassia fistula) swarasa and Gandhaka Rasayana 13,14 is given bhavana with Bhringarajaswarasa. Other than Shuddha gandhaka, Lohab hasma, Rasasindura (Incinerated Mercury) and Abhraka Bhasma (Incinerated Mica) are also ingredients of different Gandhaka Rasayana.

Among the 15 formulations 11 formulations are in churna form while one is in druti form and 2 are prepared as per the method of Avaleha involving Guda, ghrita and madhu. Gandhaka Rasayana 10 is a formulation which involves preparation of Kajjali and paka in Kacchapa yantra. This formulation looks alike as '*Antardhooma Rasasindura Nirmana Vidhi*'. One formulation Gandhaka Rasayana 13 is simplest of Gandhaka Rasayana formulation which consists of only Gandhaka purified by Bhringaraja. Dose of Gandhaka Rasayana varied from 1 ratti (125 mg.) to 3 pala (144 gm.). Least dose is for Gandhaka Rasayana 9 which is in druti form, while maximum dose is for Gandhaka Rasayana 13 which is simply shuddha gandhaka. It can be found that the Druti form is the most potent Gandhaka Rasayana.

Commonest anupana for Gandhaka Rasayana is Godugdha while references for madhu, ghrita, parnakhandaswarasa are also found. Godugdha being a shodhana dravya as well as antidote for untowards effects of gandhaka can be considered the best anupana for Gandhaka Rasayana. All the contra indications prescribed during the administration of Gandhaka is also the contra indications during the administration of Gandhaka Rasayana. Gandhaka with its Madhura and katu rasa, ushnaveerya, ushna and sara guna and katu vipaka is having Kaphavatahara, Deepana, Pachana, Vishahara and Jantughna properties and is indicated in skin disorders like kandu, visarpa, krimi and Kushta. It is also indicated in kshaya being a rasayana drug. All these properties of Gandhaka are augmented by repeated Bhavana process using various herbal drugs. The

phytochemical constituents along with trace elements, enhance the properties of Gandhaka and widens its therapeutic application.

## Conclusion

Gandhaka Rasayana is an important, effective and very commonly prescribed formulation especially in skin disorders. Among the various formulations of Gandhaka Rasayana, Gandhaka Rasayana 1 where shudha Gandhaka is triturated eight times

each with Godugdha, Chaturjata, Guduchi, Haritaki, Bhibhitaki, Amalaki, Shunthi, Bringaraja and Ardraka (*Zingiber officinale*) is the formulation which is quoted by majority of texts and also available in market at present. After a critical analysis of the 15 formulations of Gandhaka Rasayana, the above said formulation can be considered as the one which is having wide therapeutic applicability owing to its maximum number of bhavana.

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