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Review Article

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A LITERARY REVIEW OF RASAPUSHPA

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ABSTRACT

Rasapushpa is a Kupipakva drug which is of Nirgandha type. It is first described by Acharya Sadananda Sharma in his text Rasatarangini (6/20-58). References regarding Nirgandha type of Kupipakva Kalpana were not found upto13th cent. A.D. Rasendra Sara Sangraha is the first text in which Nirgandha type of Kupipakva Kalpana described. Overall it can be said that the origin of Nirgandha Yogas is 13 cent. A.D. Uptill now 3 most common Nirgandha Yogas are found in Rasa Classics viz. Mugdharasa, Rasakarpura and Rasapushpa. Out of these Rasakarpura and Rasapushpa are most controversial regarding their self existence. Most of the people supposed that both are same but Acarya Sadananda Sharma was the first person who clearly differentiated them. He gave

different methods of preparation of Rasapushpa. But on careful study. Those can be classified into two only viz. Bahirdhuma and Antardhuma Methods. Rasapushpa has properties like Pittahara, Mutrala (Diuretic, Vranadosahrta (antiseptic), Param Virecanakaram (Strong Purgative) and Bhutavisapaham (Antibacterial toxine). Swasthikaranamatyantam (Health giving/good curing). Jaliyansa-visosanam (Dehydrating); Malapittapasarakam (Secretes conjugated bile by irritating the gallbladder). It kills bacterias causing Visucika and Phiranga & twak roga. Also it curves Hicca, Jalodara etc. very quickly.

KEYWORDS: Rasapushpa, Rasakarpura, Kupipakva, Bahirdhuma, Antardhuma Visucika.

INTRODUCTION

Ayurveda is science of life because its primary objective is to provide a happy and long life. Ayurveda also specifies the path towards attaining the 'moksha' with healthy, satisfied and happy life. In the fulfillment of these objectives, with the developments of different principle and sources of Ayurveda, principles of *Rasashastra* also originated. *Rasashastra* – the '*Rasa*' word in the *Rasashastra* is used for mercury. The ability of mercury to dissolve any metals, make it to be called as "*Rasa*". The science developed, by using this property of mercury is called as *Rasashastra*. There are three most common *Nirgandha* Yogas found in *Rasashastra* viz. *Mugdha Rasa, Rasakarpura* and *Rasapushpa*. Out of these *Rasakarpura* and *Rasapushpa* are most controversial regarding their self existence. Most of Acharyas opinioned that both are same but *Acharya Sadanand Sharma* firstly mentioned the difference between them. He mentions separate methods for preparation of *Rasakarpura* and *Rasapushpa* in *Rasa Tarangini*. Rasakarpura name is firstly mentioned in Rasa Chintamani in 13th century AD^[2] which indicate its physical property. The word Rasakarpura comprise of two words, 'Rasa' and 'Karpura'.

Rasa means Parada

- As it has the capacity to dissolve or absorb all the metals in it.
- It can overcome old age, disease and death.

Karpura means

- A substance which is white in colour.
- A substance with particular smell.

Rasakarpura is a white colored mercurial product prepared by Kupipakva method. In Rasa literature Kundendu, Dhavalam, Karpura Sannibham, Sashi Dhavalam etc. terms are also used for Rasakarpura which indicates its colour.

In the present paper a review on *Rasapushpa* has been carried out compiling literature from various classical texts of Ayurveda.

Synonyms of Rasapushpa

Rasapushpa, Rasasuma, Rasakusuma, Sudhanidhirasa. [3]

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Discription in classical texts

Table 1: Various references for the preparation of Rasapushpa / Rasakarpura in classical texts.

Sr. No.	Reference
1	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–1, Page 224)
2	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–2, Page 224)
3	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–3, Page 224)
4	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–4, Page 225)
5	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–5, Page 225)
6	Ayurved Prakash, Rasa Yoga Sagar (Rasakarpura-7, Page 226)
7	Ayurved Prakash, Rasa Yoga Sagar (Rasakarpura–8, Page 227)
8	Rasa Manjari, Rasa Yoga Sagar (Rasakarpura–9, Page 227)
9	Rasa Manjari, Rasa Yoga Sagar (Rasakarpura–11, Page 228)
10	Rasa Manjari, Rasa Yoga Sagar (Rasakarpura–12, Page 229)
11	Rasakaumudi, Rasa Yoga Sagar (Rasakarpura–13, Page 229)
12	Brihatyoga Tarangini, Rasa Yoga Sagar (Rasakarpura–14, Page 229)
13	Rasa Yoga Sagar (Rasakarpura–15, Page 230)
14	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–16, Page 230)
15	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–17, Page 231)
16	Rasa Yoga Sagar (Rasakarpura–18, Page 231)
17	Rasa Yoga Sagar (Rasakarpura–19, Page 232)
18	Rasa Yoga Sagar (Rasakarpura–20, Page 232)
19	Rasa Yoga Sagar (Rasakarpura–21, Page 233)
20	Rasa Yoga Sagar (Rasakarpura–22, Page 233)
21	Rasa Yoga Sagar (Rasakarpura–23, Page 233)
22	Rasa Yoga Sagar– (Rasakarpura–24, Page 234)
23	Rasa Yoga Sagar– (Rasakarpura–25, Page 235)
24	Rasakamadhenu, Rasa Yoga Sagar (Rasakarpura–26, Page 235)
25	Rasa Chintamani, Rasa Yoga Sagar (Rasakarpura–27, Page 236)
26	Rasa Chintamani, Rasa Yoga Sagar (Rasakarpura–28, Page 236)
27	Rasa Chintamani (Page 3)
28	Rasendra Chintamani (Page 23)
29	Rasendra Chintamani (Page 15)
30	Rasendra Chintamani (Page 16)
31	Rasayana Sara (Page 181)
32	Rasayana Sara (Page 184)
33	Rasa Tarangini (Page 115)
34	Rasatantra Sara Va Siddha Prayog Samgrah (Page 524)
35	Rasatantra Sara Va Siddha Prayog Samgrah (Page 525)
36	Kupipakva Rasa Nirman Vijnan (Page 142)
37	Rasamrita (Page 24)
38	Bharatiya Rasashastra (Page 229)
39	Parada Samhita (Page 315)
40	Parada Samhita (Page 316)
41	Parada Samhita (Page 316)
42	Parada Samhita (Page 316)
43	Parada Samhita (Page 317)

44	Rasa Kamdhenu – Sutakriyapada
45	Rasakamadhenu
46	Rasaprakash Sudhakara (Page 53)
47	Bhashma Vigyan (Parada Bhasma-18, Page 135)
48	Bhashma Vigyan (Parada Bhasma-24, Page 137)
49	Bhashma Vigyan (Parada Bhasma-27, Page 139)
50	Rasendra Purana (Page 93)
51	Rasendra Purana (Page 95)
52	Rasendra Purana (Page 95)
53	Rasendra Purana (Page 96)

In Rasa Yoga Sagar— (Rasakarpura 6 and 10) both are the method for formulation of Rasakarpura; those are not the methods for the preparation of Rasakarpura.

Vd. Maniraj Sharma in his book written on *Rasendra Chintamani* mentioned that *Hingula* can be used instead of *Shuddha Parada* if *Shuddha Parada* is not available.

Table 2: Details of each reference for preparation of Rasapushpa.

		Ingredients										
Methods	Parada	Saindhava	Sphatika	Kasisa	Gairika	Navasadara	Ishtika	Khatika	Others	Bhavana Dravya	Instrument	Heating Duration
01	+	+	-	+	-	-	-	+	-	-	Damaru	1 day
02	+	+	+	-	+	-	-	-	-	-	Vidhyadhar	16 Yama
03	+	+	ı	+	+	1	-	+	Majika, Valmika, Khatika	-	Damaru	7 days
04	+	+	+	-	-	-	-	-	Sphatika Mani	-	Damaru	4 Yama
05	+	-	+	-	+	+	-	-	Tankana, Ahiphena, Chandana	Akasavalli etc.	Кирі	4 days
06	+	+	+	-	+	-	+	+	Valmika, Kshar	-	Sthali	4 days
07	+	+	+	-	+	-	-	+	Kshara Lavana etc.	-	Damaru	3½ days
08	+	-	-	-	-	-	-	-	Tankana, Madhu, Laksha, Oona	Bhringaraja	Andha Musha	-
09	+	+	-	-	+	1	-	-	-	Snuhi Dugdha	Musha, Damaru	2 days
10	+	+	-	-	+	1	+	+	Valimika, Gandhaka	-	Damaru	18 Yama
11	+	+	+	-	-	-	-	+	Patu	Jambiri Rasa	Patana	4 Yama
12	+	+	+	-	-	+	-	-	Tankana	Chitraka	Valuka	4 days
13	+	ı	-	-	-	-	-	-	Gandhaka	Kumari	Valuka	8 Yama

	Ingredients											
Methods	Parada	Saindhava	Sphatika	Kasisa	Gairika	Navasadara	Ishtika	Khatika	Others	Bhavana Dravya	Instrument	Heating Duration
14	+	+	+	+	-	-	+	+	Valmika		Damaru	16 Yama
15	+	+	+	-	+	-	+	-	Valmika, Gruhdhuma, Kharpara	Snuhi, Danti	Valuka	15 Yama
16	+	+	-	-	-	-	-	ı	Gandhakamla	-	Valuka	2 Yama
17	+	+	+	-	+	-	-	-	-	-	Valuka	28 Yama
18	+	-	-	-	-	-	-	-	-	Punarnava Mula	-	1 day
19	+	+	-	+	-	-	+	-	Dhatura, Lakucha	-	Damaru	12 Yama
20	+	+	-	-	-	-	-	-	-	Kumri etc.	Damaru	2 days
21	+	+	+	+	-	-	+	+	Yavakshara	Jambira	Damaru	16 Yama
22	+	+	-	-	-	-	-	-	-	Kumari, Nirgundi etc.	Damaru	12 Yama
23	+	+	+	-	-	+	-	-	-	Kumari, Tulsi	Damaru	12 Yama
24	+	+	+	+	-	-	-	-	-	-	Damaru	1 day
25	+	+	+	+	-	-	-	-	-	Lakucha	Damaru	3 days
26	+	-	-	-	-	+	-	-	-	Ankola, Kumari etc.	Damaru	16 Yama
27	+	+	-	-	+	-	+	-	Valmik	-	Patina	48 hr
28	-	+	-	-	-	-	-	-	Hingul	-	Valuka	-
29	+	+	-	-	-	-	-	-	-	MarakaGana	Valuka	-
30	+	+	+	-	-	-	+	-	-	Kumari	Damaru	3 days
31	+	+	+	-	+	-	+	+	Valmika, Kumhara Mitti, Pansu	-	Damaru	-
32	+	+	-	-	-	-	-	-	-	Snuhi	-	-
33	+	+	-	-	-	-	-	-	Gandhakamla	-	Valuka	12 Yama
34	+	+	+	+	-	+	-	-	-	Kumari	Valuka	2 Yama
35	+	+	-	-	-	-	-	ı	Gandhakamla, MnO ₂	-	Valuka	12 Yama
36	+	+	+	+	-	+	-	-	Tankana, Yavakshara, Somala, Sora etc.	-	Valuka	-
37	+	+	+	+	-	+	-	-	Tankana, Tuttha, Sora	-	-	-
38	+	+	+	-	+	-	-	+	Kshara Lavana, Somala	-	Valuka	12 Yama
39	+	+	+	-	+	-	-	+	Sambhar	-	-	120 kg wood

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	Ingredients											
Methods	Parada	Saindhava	Sphatika	Kasisa	Gairika	Navasadara	Ishtika	Khatika	Others	Bhavana Dravya	Instrument	Heating Duration
40	+	-	-	-	-	+	-	-	-	-	Vajra mudra	2.5 mana wood
41	+	+	-	-	-	-	-	-	Sambhar	Snuhiksheer	Lavana	24 hr
42	+	+	+	-	+	-	+	-	Valmik	-	Valuka	12 hr
43	+	-	-	-	-	-	-	-	Tuttha	Nagarmotha kwath	Valuka	1 ½ prahar
44	+	+		+	-	-	-	+	-	-	Chullika	2 yama
45	+	+	-	-	+	-	+	-	Valmika	-	Damaru	16 Yama
46	+	+	+	-	-	-	-	+	-	-	Damaru	12 Yama
47	+	+	+	+	-	+	-	-	-	Kumari Swarasa, Tulsi Swarasa	Damaru	10 prahar
48	+	+	+	-	+	+	+	+	Valmik	Dadhi, Lasuna, Dronapuspi	Damaru	3 prahar
49	+	+	-	-	-	-	-	-	-	Dhatura Swarasa, Erand	Damaru	10 prahar
50	+	+	+	ı	+	-	+	+	Valmik, Bhand ranjak mitti	-	Damaru	4 days
51	+	+	-	-	-	-	-	-	-	Snuhi Ksheer	Damaru	-
52	+	+	+	+	-	+	-	-	-	-	Damaru	-
53	+	+	+	-	+	-	+	-	Katuki	-	-	-

Table 2. depicts the different ingredients in various proportions are used to prepare *Rasakarpura*. The main drugs are *Parada, Saindhava Lavana, Sphatika, Kasisa, Gairika, Khatika* etc.

In some references herbal drugs are also found in the form of *Bhavana Dravya* e.g. *Dhatura*, *Eranda*, *Kumari*, *Nimbu*, *Lakucha*, *Punarnava* etc.

Examination of Rasakarpura

Rasakarpura and Rasapushpa both are Nirgandha type of Kupipakva Rasayana. The test for the Rasakarpura is prepared by Rasa tarangini method; put a drop of water on clean and shiny iron apparatus. Then add a small piece of Rasakarpura on that drop. After a moment throw away the water drop. If there is blackening at the drop side it is confirmed to be Rasakarpura.

On literary survey, there are 53 formulas are found described for *Rasakarpura* preparation. These formulations reveal that it can be prepared from *Parada* with *Gandhakamla*, *Kasisa*, *Sphatika*, *Tuttha* etc. sulphate compound.

According to Sir P. C. Roy, both *Rasakarpura* and *Rasapushpa* preparations method is chemically mixture compound of mercuric chloride and murcurous chloride.

According to Vaidya Shri Vasudev Dwivedi, Pt. Girijadayalu Shukla Shastri and Vd. Siddhinandan Mishra, *Rasakarpura* is chemically mercuric chloride (HgCl₂).

Whereas according to Dr. V. G. Desai, Dr. Nadkarni, Kaviraj Prabhakar Chatterjee, *Rasakarpura* is chemically similar to mercurous chloride (Hg₂Cl₂/HgCl).

So a lot of doubts exist in regards to chemical nature and composition of *Rasakarpura* and *Rasapushpa*.

According to Vaidya Vasudev Dwivedi, *Rasakarpura* prepared by ancient method is mercuruous chloride (calomel), while by recent method it is mercuric chloride.

Table 1.3: Confirmative tests of Rasakarpura and Rasapushpa. [4]

Tests	Rasakarpura	Rasapushpa
Soluble in	 1/16 part in cold water More than this in hot water Alcohol Ether 	Nitric acid
Precipitation in liquid ammonia	Mix 120 mg of Rasakarpura with distilled water and later on adds few drops of liquid ammonia, it starts to boil quickly and white precipitates occur.	• Mix 120 mg of Rasakarpura with distilled water and later on add few drops of liquid ammonia, it starts to boil slowly and black precipitate occur.
Chemical composition	HgCl ₂	Hg ₂ Cl ₂ /HgCl

Properties of Rasapushpa^[5]

Rasa : KashayaVirya : Ushha

Doshaghnata : Tridoshashamaka

■ Varna : Shweta

Shape : Needle shaped crystal

Guna : Vishaghna, Grahi, Ruchivardhaka, Kriminashaka, Balya

Dose of Rasapushpa

Rasakarpura is to be prescribed in the dose of $^{1}/_{2} - 2^{1}/_{2}$ Ratti (62 – 300 mg). [6]

Pathya^[7] (Indication)

During the use of *Rasa* preparation the following substance have been considered as most beneficial as *Pathya – Vrintaka*, *Tandula*, *Patola*, *Punarnava*, *Puranashali*, *Godugdha*, *Dadhi*, *Goghrita*, *Godhuma*, *Munga Dala*, *Hansodaka*, *Jeeraka* etc.

Apathya^[8] (Contra-indication)

While *Rasakarpura* is prescribed, certain items have been contraindicated. Under the contraindicated items, the "*Kakkaradi Gana*" is very famous which includes—

■ Kushmanda	■ Kamatha (Kachhapa)	Kalinga Phala
■ Kola	Kulattha	■ Karkoti
Kataka	 Kusumbha Pushpa 	

All those items have the name starting with the later 'Ka'. How this *Kakkaradi Gana* acts adversely during intake of *Parada* as medicament require a scientific study for explanation. However, Acharya Sadananda Sharma has stated that *Kakkaradi Gana* causes quick excretion of *Parada* through the urine, faeces and such the maximum benefit of the *Parada* administration can not be achieved.

Nirgundi, Narikela Jala, Kanji, Nimbu, Anupa Mansa, Guru, Ushna, Tikshna Ahara etc. have also been contraindicated while one is taking *Parada* or *Parada* formulation.

Formulations of Rasapushpa

Rasakarpura is used internally as well as externally.

• For internal use: Chandanadi Vatika^[9]

For external use: Rasapushpadi Malahara^[10]

MODERN REVIEW - MERCURIAL SALTS

Rasakarpura is a mercurial salt, unlike the other member of its periodic group (II B), mercury forms two series of compounds i.e. the mercuric compound and mercurous compoundd [11] So

with chlorine mercury forms mercuric chloride (HgCl₂) and mercurous compound (Hg₂Cl₂/HgCl) by the process of sublimation.

Process

(1) Mercuric chloride is made by heating or dry mixture of equal weight of mercuric sulphate and common salt with a little manganese dioxide (being added as an oxidizing agent to prevent the formation of mercurous chloride) in a glass bottle (with a long neck) on a sand bath. The mercuric chloride separates by sublimation (hence, its trivial name) on the cooler upper part of the bottle. The cake of the sublimate is removed and the mercuric chloride is purified by recrystallization from the hot water^[12]

$$HgSO_4 + 2NaCl \rightarrow HgCl_2 + Na_2SO_4$$

(2) It is formed by heating mercury in chlorine^[13]

$$Hg + Cl_2 \rightarrow HgCl_2$$

The mercuric and mercurous salts in solution are distinguished as follows^[14] –

Table 1.4: Confirmative tests of mercuric and mercurous salts.

Reagents	Mercuric salt	Mercurous salt
Dilute HCl	No precipitate	White precipitate of Hg ₂ Cl ₂
H ₂ S solution	White, then yellow, brown and finally black precipitate of HgS.	Black precipitate of HgS + Hg
SnCl ₂ solution	White to grey precipitate	Grey precipitate of Hg
KI solution	Scarlet precipitate of HgI ₂	Green precipitate of Hg ₂ I ₂
NaOH solution	Yellow precipitate of HgO	Black precipitate of HgO
NH ₄ OH solution	White precipitate	Black precipitate

Properties

Appearance : Needle like rhombic prism, translucent crystal

Colour : White

• Solubility : In 100 parts of water at 100 °C dissolved 54 parts of this salt.

Dissolved in 3 parts of alcohol and in 4 part of ether

■ Molecular weight : 271.52

■ Composition : Hg - 73.88%

Cl - 26.12%

Melting Point^[15] : 277⁰C
 Boiling Point^[16] : 320 ⁰C

■ Specific Gravity : 5.41

■ pH of aqueous solution of HgCl₂: 4.70

CONCLUSION

Literary review of *Rasapushpa* is compiled here to find various references for analysis of ingredients, uses etc. It is one of the precious formulations of Ayurveda. It is very effective in *Phranga*, *Vicharchika*, *dushta varna* etc. So this review helps the researcher to explore this formulation and Its pharmalogical activities on different model.

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