

## Pharmaceutical Preparation of *Sameera Pannaga Rasa* under Standard Temperature Conditions

Neelam Choudhary\*

\*Rasa Shastra & Bhaishajya Kalpana), Gaur Brahmin Ayurvedic College, Rohtak, Haryana, India

### Abstract

In *Ayurveda*, *Kupipakwa rasayana kalpana* is the most popular, unique and highly significant pharmaceutical preparation of the *suddha parada* and *suddha gandhaka* and is prepared in *kachkupi* (glass bottle). *Sameera Pannaga Rasa* is an arsenal mercurial formulation mentioned in *Rasa Chandanshu*. It is a *Kupipakwa Rasayana* containing heavy metal contents such as *Parada* (Hg), *Somala* (As<sub>2</sub>O<sub>3</sub>), *Haratala* (As<sub>2</sub>S<sub>3</sub>) and *Manahshila* (As<sub>2</sub>S<sub>2</sub>). It is mentioned in *Rasa Chandanshu* in which *Manahshila* is not a component and later on it has been added by *Ayurveda Aaushadhi Guna Dharma Shashtra*. It is a very effective medicine and has been used extensively for *Tamaka Shwarsa* (bronchial asthma) type of *Shwasa Roga*. In the *rasa* classics *sameera pannag rasa* has its own significant role to eliminate the *doshas*<sup>4</sup> like *Tridoshagn*, *Sandhivata*, *Unamad*, *Shwas* (Bronchial asthma), *kasha* (cough), *Jwar*, Pneumonia, etc. In this article, *Sameera Pannaga Rasa* is prepared using references mentioned in AFI in the standard laboratory and temperature conditions. While preparing *Sameera Pannaga Rasa* standard temperature conditions are maintained and necessary precautions are maintained during each stage. The *Sameera Pannaga* obtained was brick-red in colour and total yield was 150 grams which included 100 gms of *Talastha* and 50 gms of *Kanthastha*. Finally, we have presented the pharmaceutical preparation of *Sameera Pannaga Rasa* with special reference to the different temperature stages during its preparation.

### Keywords

*Sameera, Pannaga, Kupipakwa, Tamaka swasa, Bronchial Asthma*



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## INTRODUCTION

In *Ayurveda*, *Kupipakwa rasayana kalpana* is the most popular, unique and highly significant pharmaceutical preparation of the *suddha parada* and *suddha gandhaka*. *Kupipakwa rasayana kalpana* is prepared in *kachkupi* (glass bottle). The properties like small drug dose, rapid action and palatability made *kupipakwa rasayana* on the superior position. *Gandhaka*, *Hartala* and *manhshila* comes under *uparasa*<sup>1</sup> and *somal* come under *sadharan rasa*<sup>2</sup>. *Parada*, *Hartala*, *Manhshila* and *Somal* is highly potent mineral which is included in the list of poisonous drug by Drug & Cosmetic Act 1940 under Schedule E because of its highly toxic nature in crude form<sup>3</sup> but after drug preparation it eliminates various diseases. In the *rasa* classics *sameera pannag rasa* has its own significant role to eliminate the *doshas*<sup>4</sup> like *Tridoshagn*, *Sandhivata*, *Unamad*, *Shwas* (Bronchial asthma), *kasha* (cough), *Jwar*, Pneumonia, etc. There are three different references available in the *Rasavangmaya* with difference in ingredients and method of preparation. *Sameera pannaga rasa* is prepared using *kupipakavidhi*, *putapakavidhi* and as *khalvarasayana vidhi*. The ingredients of the preparation are *Parada*, *Gandhaka*,

*Haratala*, *Gouripashana* with and without *manashila*; and *Abhraka bhasma*, *Parada*, *Gandhaka*, *Trikatu*, *Vatsanabha* and *Tankana*. The *bhavana dravyas* are also different in these methods.

*Sameera Pannaga Rasa* is a *Kupipakwa Rasayana* containing heavy metal contents such as *Parada* (Hg), *Somala* (As<sub>2</sub>O<sub>3</sub>), *Haratala* (As<sub>2</sub>S<sub>3</sub>) and *Manahshila* (As<sub>2</sub>S<sub>2</sub>). It is mentioned in *Rasa Chandanshu* in which *Manahshila* is not a component and later on it has been added by *Ayurveda Aaushadhi Guna Dharma Shashtra*. This later version has been accepted by Ayurvedic Formulary of India but, justification regarding the addition of *Manahshila* has not been provided. In addition to this; there is controversy regarding the final product, i.e., whether to collect *Talastha* or *Ubhayastha* (*Galastha* + *Talastha*). *Sameera Pannaga Rasa* very effective medicine and has been used extensively for *Tamaka Shwarsa* (bronchial asthma) type of *Shwasa Roga*<sup>5</sup>. *Sameer Pannaga rasa* has also shown good results in patients with Hemiplegia (*Pakshawadha*). It acts as stimulant (*Uttejaka*) upon nerve centers of central

nervous system<sup>6</sup>. *Sameera Pannaga rasa* has also shown good effects on *Amavata*<sup>7</sup>.

## MATERIALS AND METHODS

The preparation was carried out in Pharmacy, Department of *Rasa Shastra & Bhesaj Kalpana*, Gaur Brahmin Ayurvedic College, Rohtak, Haryana.

### Ingredients:

1. *Parada* – 50 gms
2. *Gandhaka* – 50 gms
3. *Somala* – 50 gms
4. *Manahsila* – 50 gms
5. *Haratala* – 50 gms

Total Quantity – 250 gms.

**Table 1** Formulation composition of *Sameera Pannaga Rasa*

Ingredients	Chemical/Botanical Name	Proportion
<b><i>Sameera Pannaga Rasa (Rasa Chandanshu)</i></b>		
<i>Parada</i>	Mercury	1 part
<i>Gandhaka</i>	Sulfur	1 part
<i>Somala</i>	White Arsenic	1 part
<i>Haratala</i>	Orpiment	1 part
<i>Tulasi Patra Swarasa</i>	Ocimum sanctum Linn.	Q.S.

### ***Sameera Pannaga Rasa (AFI-I 15:8)***

<i>Parada</i>	Mercury	1 part
<i>Gandhaka</i>	Sulfur	1 part
<i>Somala</i>	White Arsenic	1 part
<i>Haratala</i>	Orpiment	1 part
<i>Manahshila</i>	Realgar	1 part
<i>Tulasi Patra Swarasa</i>	Ocimum sanctum Linn.	Q.S.

### Method of Preparation<sup>8</sup>:

*Sameer Pannaga Rasa* was prepared in the local pharmacy of *Gaur Brahmin Ayurvedic College*. All the ingredients (Table 1) were taken in pure (*shodhit*) form in equal amounts. First of all, *Parada* and *Gandhaka* were mixed together in a *Khalva* and *kajjali* was prepared, then *Somala*, *Haratala* and *Manashila* were poured and mixed with

*Kajjali* and a mixture of ingredients was prepared. This mixture was then subjected to *Tulsi Patra Swarasa Bhavna*. Then, a glass flask was taken and clay smeared pieces of cloth were pasted round the bottle in seven consecutive layers. When this was dried, the mixture of ingredients were poured upto 1/3<sup>rd</sup> of the glass flask. This was then kept over the *Valukayantra* upto the neck and

heated gradually with *Mriduagni* for 3.5 hours, then *Madhyamagni* for 3.5 hours and *Tikshagni* for 3 hours. During these temperature phases, temperature variations were observed during preparation (Figure 1). A red hot iron rod of about 5 mm diameter was inserted into the glass bottle through its opening and stirred now and then so that the opening of the flask may not be choked by the thick coating of subliming sulphur. Otherwise, the pressure of the vapour may break the flask. The cork was applied to the opening of flask after 8 hours of the beginning of the process and then *Tikshagni* was given for almost 3 hours. This was then kept overnight for cooling. When the flask cooled, it was removed carefully and broken in the middle so as to separate the upper and lower halves of the body of glass flask. For

this, a kerosene dipped string round the bottle was wrapped and set the string afire. After the fire extinguished, the burnt string with a spatula was removed and the bottle was wrapped with a wet piece of cloth. It then broke into the two pieces. The prepared medicine deposited both at the neck and bottle was scraped and collected. This was done carefully so that no part of glass pieces mixed with medicine.

## DISCUSSION

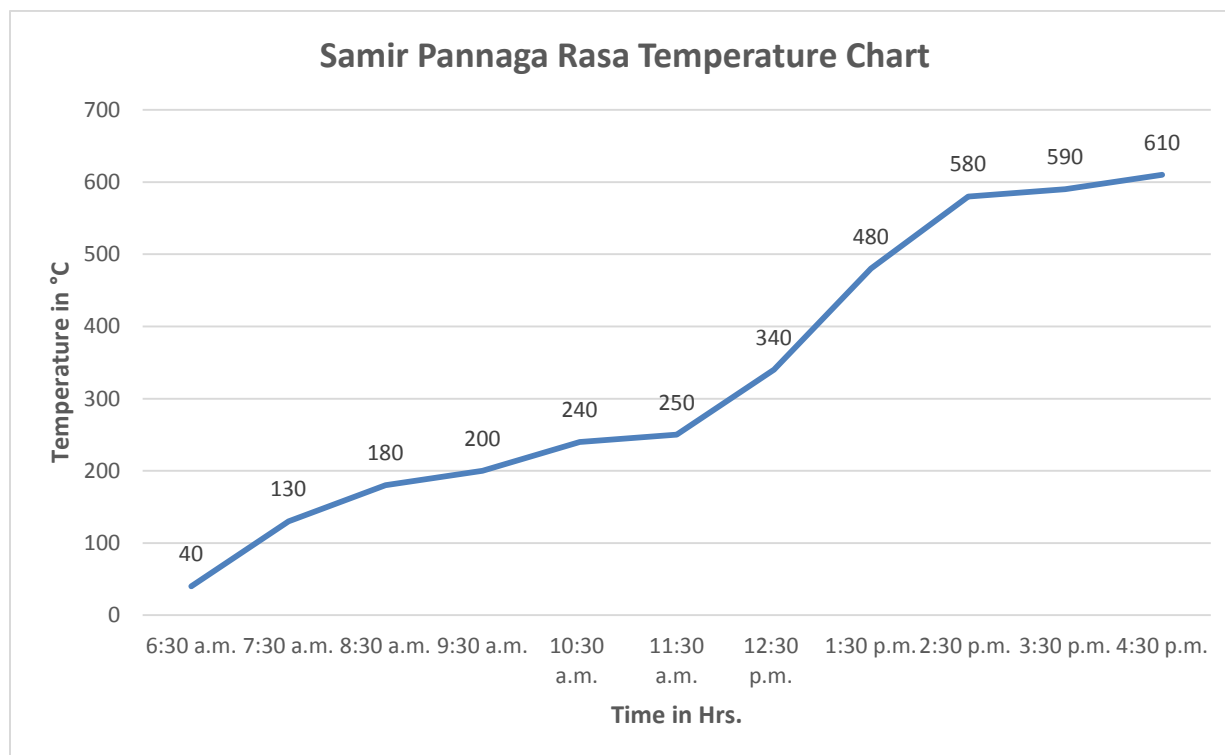
*Sameera Pannaga Rasa* was prepared using reference in AFI in the local pharmacy of Gaur Brahmin Ayurvedic College, Rohtak, Haryana. The process for preparation of *Sameera Pannaga Rasa* started at 6:15 AM.

**Table 2** the temperature patterns of *Sameera Pannaga Rasa* preparation

First 3 ½ Hrs		Second 3 ½ Hrs.		Last 3 Hrs	
Time	Temperature	Time	Temperature	Time	Temperature
6:15 a.m.	Room Temperature	10:00 a.m.	220 °C	1:30 p.m.	480 °C
6:30 a.m.	40 °C	10:15 a.m.	230 °C	1:45 p.m.	520 °C
6:45 a.m.	75 °C	10:30 a.m.	240 °C	2:00 p.m.	540 °C
7:00 a.m.	110 °C	10:45 a.m.	250 °C	2:15 p.m.	580 °C
7:15 a.m.	120 °C	11:00 a.m.	260 °C	2:30 p.m.	580 °C
7:30 a.m.	130 °C	11:15 a.m.	270 °C	2:45 p.m.	600 °C
7:45 a.m.	140 °C	11:30 a.m.	250 °C	3:00 p.m.	580 °C
8:00 a.m.	160 °C	11:45 a.m.	250 °C	3:15 p.m.	580 °C
8:15 a.m.	180 °C	12:00 p.m.	260 °C	3:30 p.m.	590 °C
8:30 a.m.	180 °C	12:15 p.m.	300 °C	3:45 p.m.	600 °C
8:45 a.m.	200 °C	12:30 p.m.	340 °C	4:00 p.m.	600 °C
9:00 a.m.	200 °C	12:45 p.m.	380 °C	4:15 p.m.	610 °C

9:15 a.m.	200 °C	1:00 p.m.	420 °C	4:30 p.m.	610 °C
9:30 a.m.	200 °C	1:15 p.m.	420 °C		
9:45 a.m.	200 °C				

**Figure 1** *Samira Pannaga Rasa* Temperature Chart



The heat was applied for 10 hours and separated into three phases based on their temperature slots.

- 1) First 3 ½ Hrs. (6:15 a.m. to 9:45 a.m.) – Room temperature to 200 °C.
- 2) Next 3 ½ Hrs. (9:45 a.m. to 1:15 p.m.) – 200 °C to 420 °C.
- 3) Last 3 Hrs. (1:15 p.m to 4:30 p.m.) – 420 °C to 610 °C.

## OBSERVATIONS

1. White fumes arose from 7:15 a.m. onwards.
2. Light yellow fumes started arose from 9:00 a.m. onwards.
3. Dense yellow fumes started arose from 9:30 a.m. onwards.
4. Density reduced at around 11:45 a.m.
5. Cork was applied at 2:30 p.m.
6. Process was stopped at 4:30 p.m. and left for self-cooling.

7. Materials were collected from the bottom and from the neck of the bottle.

**Yield :**

1. *Talastha* – 100 gms.

2. *Kanthasta* – 50 gms.

Total Quantity obtained – 150 gms.

**CONCLUSION**

Finally *Sameera Pannaga Rasa* is prepared using references mentioned in AFI in the standard laboratory and temperature conditions. The *Sameera Pannaga* obtained was brick-red in colour and total yield was 150 grams which included 100 gms of *Talastha* and 50 gms of *Kanthasta*. The prepared medicine can now be used for clinical trials for the patients in OPD and IPDs.

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**Conflict of Interest :** None declared

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