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## PHARMACEUTICAL PREPARATION OF *SOMANATHITAMRABHASMA* BY *KUPIPAKWA* METHOD

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### Abstract:

Tamra is one among the Shuddha Loahas which is highly potent and effective in wide spectrum of diseases. In Rasashastra, Parada is considered as supreme because it can engulf all other metals and minerals. When it is combined with other drugs, it enhances the property of drugs, as well as providing the Yogavahitwa. Parada marita bhasma is considered to be the best. Somanathi Tamra Bhasma is a highly potent Tamrabhasma explained by acahrya Somanatha.

The treatise Rasa RatnaSamucchaya was reviewed for deciding the quantity of the ingredients of the formulation; and the text book Parada vignaniya was reviewed for planning the method of preparation of SomanathiTamrabhasma by Kupipakwavidhi.

Two samples were prepared by adopting the traditional method of Kupipakwanirmana. Product obtained from the Talasthabhaga is considered as the SomanathiTamraBhasma and from the Kandasthabhagais called SomanathiTamraSindhura.

Tamra Pishtinirmana, Kajjalnirmana as well as kupipakwarasayanavidhi were carried out to prepare Somanathitamrabhasma (STB). It took approximately 10.45 hours for the preparation of the first sample and 23.40 for the second one; with a peak temperature of 613°C.

For Tamra, gandhaka is the marana dravya; Haratala and Manashila also enhance the process of Marana since they are sulphur compounds. STB prepared by Kupipakwavidhi had been passed Bhasmapareekshas including curd test. Hence it is a better way of preparation of Tamra bhasma.

**Key-words:** Somanathitamrabhasma, Kupipakwavidhi, Parada vijnaniya

### **Introduction:**

Tamra is one among the Shuddha Lohas which is highly potent and effective in wide spectrum of diseases. In Rasashastra, Parada is considered as supreme because it can engulf or digest all other metals and minerals<sup>1</sup>. When it is combined with other drugs, it enhances the property of drugs, as well as providing the Yogavahitwa. Parada marita bhasma is considered to be the best<sup>2</sup>. Somanathi Tamra Bhasma is a highly potent Tamra bhasma explained by many Rasaacharyas. The method of preparation by kupipakwa vidhi explained in the text book Parada vijnaniya ;this method was adopted in this study.

Concept of Somanathitamrabhasma was introduced by Acharya Somanath and the speciality of the yoga is it contains the ingredients like Haratala & Manashila. The ratio of this yoga is taken from the treatise Rasa Ratna Samucchaya<sup>3</sup> and the ratio is explained in table 01.

Tamrabhasmanirmana is a tedious procedure which requires long time and more manpower to fulfil the dream of Tamrabhasma with good quality. Kupipakwavidhi provides one of the best platforms for the proper jarana of Parada, Gandhaka, Tamra, Haratala and Manashila.

### **Aim & objective:**

The aim of this present study is to obtain Somanathitamrabhasma using the method of kupipakwa. And the objective is to establish basic method of preparation of the selected formulation.

### **Materials and method:**

The treatise Rasa RatnaSamucchaya was reviewed for deciding the quantity of the ingredients of the formulation; and the text book Parada vignaniya<sup>4</sup> was reviewed for planning the method of preparation of Somanathitamrabhasma by kupipakwavidhi.

Ayurveda pharmacopeia & textbooks of Dravyagunawere referred for conducting the Contextual review of the used herbal as well as mineral drugs. The study has been carried out to enunciate basic operating procedure for preparation of SomanathiTamraBhasma. Two samples were prepared by adopting the traditional method of Kupipakwanirmana. Product obtained from the Talasthabhaga is considered as SomanathiTamraBhasma and from the Kandasthabhaga is SomanathiTamraSindhura.

### **Observation and result:**

Gandhaka jarana<sup>5</sup> is an important concept which helps in detoxification of mercury. Gandhaka is considered as the maranadravya of tamra. Hence the combination of the two will contribute the formation of much potent medicine with high therapeutic efficacy.

Kupipakwavidhi provides bahirdhoomagandhakajarana and produces highly efficient bhasma in a short period. So, we can save time, man power and can reduce the expense for making the formulation.

Parada- 1part -80g; Gandhaka- 1 part-80g; Tamra- 1 part- 80g; Haratala ½ part- 40g; Manasshila-1/4 part- 20g is taken for the kajjalnirmana of current study. Parada undergone samanyashodhanagandhakashodhana by kacchapa<sup>6</sup>vidhi and all other drugs subjected to visheshashodhana is utilized in this study. Details of kajjalnirmana is explained in table 02.

**Table 01 showing ingredients & their quantity**

<b>Ingredients</b>	<b>Quantity</b>
Parada	1 part- 80 g
Tamra	1 part- 80 g
Gandhaka	1 part- 80 g
Haratala	½ part – 40 g
Manashila	¼ part- 20g

**Table 02 showing observations of kajjalnirmanana**

<b>PishtiNirmanana</b>	
Initial quantity of drugs taken	300g
Time taken for Pishtinirmanana	63.hrs 5minutes
Total quantity of nimbuswarasa used for pishtinirmanana	772ml
<b>Kajjalnirmanana</b>	
Total time taken of trituration	122.5 hours
Quantity of Kajjali obtained	368g
Total loss	-
Time taken for practical	20 days
Consistency	Fine powder
Colour	Brownish black
Touch	Smooth
Odour	Irritant, characteristic odour

### **Requirements:**

Valuka yantra, Weighing balance, spatula and steel tray, wooden logs, torch, kupi, sand, sheethasalaka & ushnashalaka (iron rods), copper coin, kapadamritika and Cora cloth.

### **Ingredients & Quantity -**

Sample A- 180 g

Sample B- 154g

### **Procedure**

#### **Poorvakarma**

- Shudha Parada and Shudha Tamra were taken in prescribed quantity in Khalva Yantra<sup>7</sup> and amalgamated by continuous trituration. Nimbu Rasa was added little by little to enhance the amalgamation process. The mixture of copper and mercury became navaneetha form at the end of 61.5 hours
- To this pishti<sup>8</sup>, fine powder of Gandhaka was added and triturated well. After the compound mixed well with Gandhaka, a black coloured Kajjali was formed; and after Kajjalipareekshas became positive, Haratala and Manashila were added one after the other and triturated well to form a proper homogenous mixture<sup>9</sup>.
- Previously prepared Somanathi Tamrabhasma Kajjali was taken, triturated well in Khalvayantra and filled in Kachakupi [kupi was covered with 7 consecutive layers of multanimitti and cloth then dried well]. Temporarily it should be closed with a cork. The kupi was placed exactly at the centre of the Valuka yantra, which was filled with sand 2 angula height; and fixed in proper position. Then sand was covered till its neck portion carefully.

#### **Pradhana karma**

- After that, cork was removed and heating was started then Kramagnipaka was given. To lock Parada properly, initially very mild heat was given. And gradually temperature was increased. This phase is upto melting of Kajjali, and it could be

realised by inserting sheetashalaka. In the initial stage temperature was maintained below 250<sup>0</sup>c.

- After melting, it entered to boiling stage. This phase continued upto starting of formation of Sindhoora. Initially there was mild white fumes. It gradually became dense. Flames appeared later. Then entered to no fumes, no flame stage. In this middle phase temperature was maintained between 250<sup>0</sup>c -450<sup>0</sup>c.
- After confirming proper paka, by observing Balaruna varna, Coppercoin test became positive, and Sheethashalaka test; Corcking was done. Intense heat was given thereafter for one hour.

### **Pashchat karma**

Breaking of the kupi:

After 23 hours and 40 minutes of heating, furnace left as such for Swangasheeta. Kupi was removed from the valukayantra after self cooling. The layer of Kapadamitti was removed by scraping out with the help of knife and external surface of Kupi was cleaned. A thread soaked in kerosene was tied 1 inch high from the level of compound on the external surface of the Kupi and burnt. When the thread was ignited properly and allowed to burn for 2 minutes and a wet cloth wrapped on Kupi. The Kupi was broken exactly at the level of thread.

Material was collected from the bottom of the Kupi, weighed and powdered. Obtained bhasma triturated for several hours. Somanathitamrabhasma passed the classical Bhasma Pareekshas<sup>10</sup> such as Varitaratva, Unnamapareeksha, Rekhapoornatva, Dadhipareeksha and Amlapareeksha.

**Table 03 showing kajjalipareekshas**

<b>Pareeksha</b>	<b>Result</b>
Rekhapoornata	+ve
Varitaratva	+ve
Unnama	+ve
Nishchandrata	+ve
Copper sheet test	+ve

**Table 04 showing observations of STB by Kupipakwa method**

<b>Observation</b>	<b>Sample A [hrs]</b>	<b>Sample B [hrs]</b>
Slight dull fumes	3.15	5
White fumes	3.47	6
Pale yellow fumes	3.57	6.38
Pale yellow fumes with pungent odour	4	7.10
Yellow fumes	4.5	7.30
Hot shalaka used to remove fumes	4.7	7.35
Dense yellow fumes	4.10	9
Flame over hot shalaka when inserted	4.15	11.03
Particle sticking at neck	4.45	12
Blackish semisolid material- sticking at neck	5.30	12.30
Height of flame	2 inches	1 inch
Bottom of bottle brownish yellow	6.5	17.54
Bottom- meroon	6.13	20.30
Bottom – balaruna varna	9.38	22.30
Sheetashalaka test	9.38	22.31
Copper coin test	9.40	22.35
Corcking	9.45	22.40

**Table 05 showing Bhasmapareekshas**

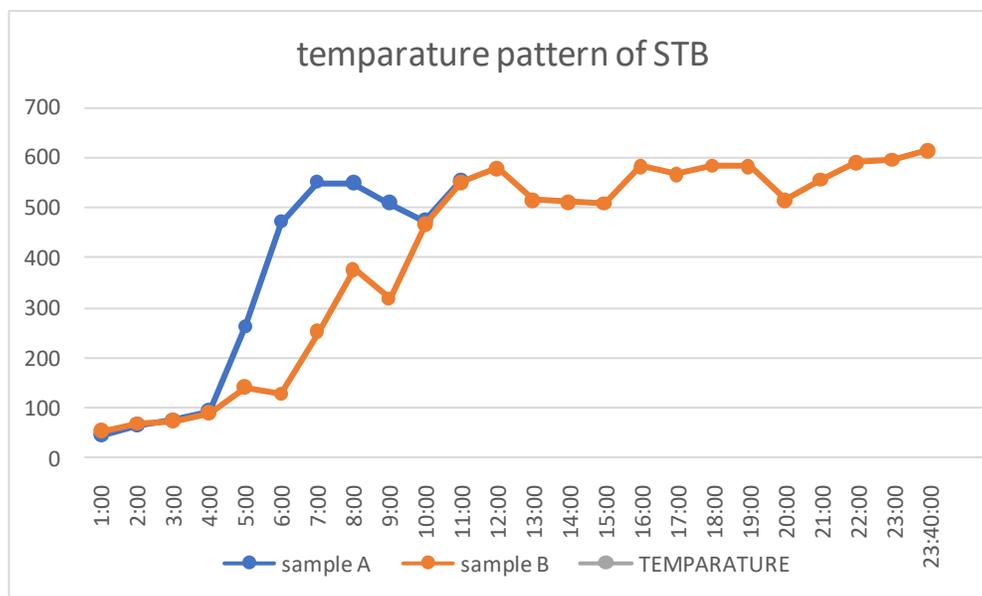
Pareeksha	Result
Rekhapoornata	+ve
Varitaratva	+ve
Uthama	+ve
Dadhipareeksha	+ve
Amlapareeksha	+ve

**Table 06 showing results of STB by kupipakwa method**

Sample A		Sample B	
Total qty of kajjali taken	180g	Total qty of kajjali taken	154g
Talasthabhaga	82g	Talasthabhaga	64g
Kantasthabhaga	50g	Kantasthabhaga	41g
Total quantity obtained	132g	Total quantity obtained	105g
Loss 48	48g	Loss	49
Time taken for procedure	10.45 hrs	Time taken for procedure	23.40 hrs

**Table 07 showing physio- chemical parameters of STB**

Test	Somanathi Tamrabhasma
Ash value	91.1± 0.32
Acid insoluble ash	25.40 ± 0.25
Water soluble ash	83.81± 0.18
Loss on drying	4.61± 0.09
pH	5.5



## Discussion

Concept of somanathitamrabhasma was introduced by Acharya Somanath and the same was mentioned by many acharyas in their treatises. Some of them bring about some variation in the ratio of the ingredients. The speciality of this Tamrabhasma is it includes the ingredients like Tamra, Parada, Gandhaka, Haratala and manashila. Acharyas used garbahyantra, valukayantra, putayantra etc for the preparation of STB. In the current study kupipakwavidhi is utilized for making STB.

The ratio of this yoga was taken from the treatise Rasa Ratna Samucchaya. And followed the kupipakwavidhi as told in Parada vijnaniya for the preparation of STB.

First prepared tamrapishti by using above said ratios of Tamra and Parada. It took around 63 hours for the Tamra Pishtinirmana. And total of 122.5 hours was taken for the proper formation of kajjali.

Kupipakwarasayanas are the medicines prepared in kachakupi smeared with 7 consecutive layer of kapadamitti and then subjected it for kramagnipaka. The aushadha obtained from talasthabhaga is taken as Somanathitamrabhasma and kandatha is Somanathitamrasindhura. Since Tamra needs high temperature to convert as bhasma

form it requires a high temperature in kupividhi too. So, first sample was prepared with a duration of 10.45 hours; and based on that experience preparation of the second sample was planned. And it could able to maintain the temperature up to 23 hours and 40 minutes. Greater the duration of gandhakajarana will result in attainment of good quality product.

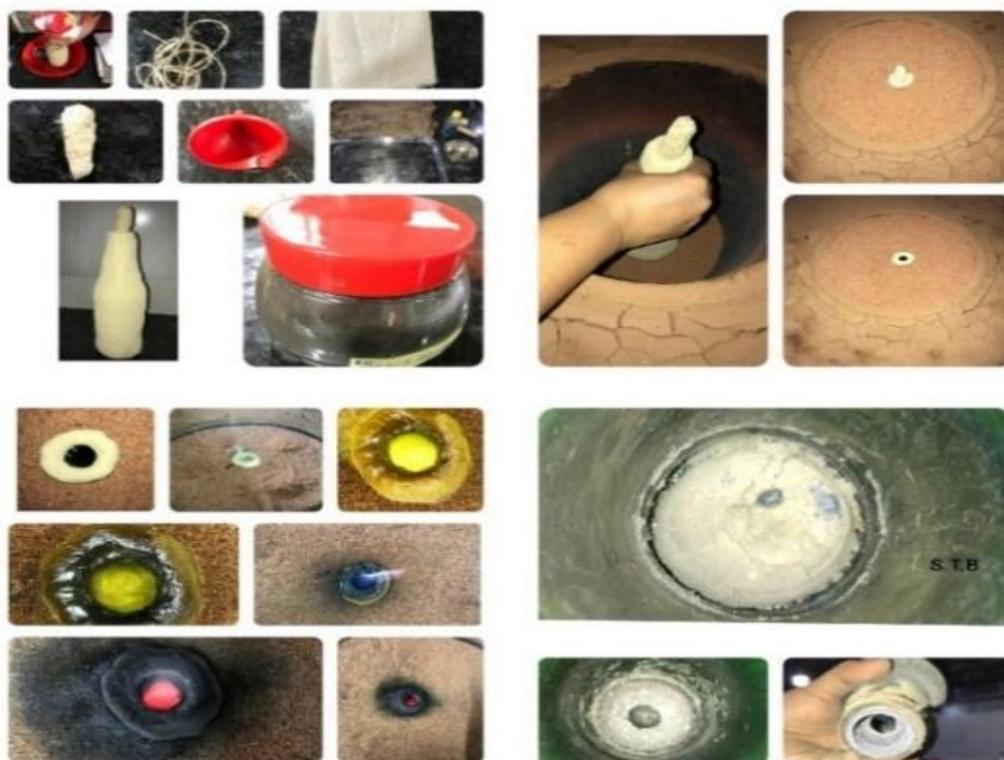
The product obtained [bhasma] was brownish ash in colour. After trituration for many hours the bhasma was subjected to bhasmapareekshas. And good results were obtained; and easily passed even the special test for tamrabhasma i.e. curd test.

STB is also underwent physio chemical analysis like Ash value, Acid insoluble Ash, Water soluble ash, Loss on drying and pH which shows in table no.6.

### Conclusion:

In the current research work an attempt has been made to figure out an easy method for preparing Somanathitamrabhasma. It is such a difficult task to prepare a bhasma which is able to pass all bhasmapareekshas. Acc. to our classics bhasma which passes bhasmapareeksha is fit for therapeutic purpose and is capable for curing chronic diseases as well as restoration of health. In fact STB prepared by this method was passed all Bhasmapareekshas and it is really a boon to Ayurveda fraternity.





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