

PHARMACEUTICAL PREPARATION OF RAJATA BHASMA AS PER CLASSICAL TEXTS

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ABSTRACT

Pharmaceutical process follows the series of steps to prepare a formulation. *Rasa shastra* is branch of *Ayurveda* which deals with the preparation of various minerals, herbomineral, metallic, herbo-metallic, marine-herbal formulations. As *Rajat* (silver) cannot be admissible in metal form, so it is advised that it should be converted to *Bhasma* form by various procedures right from its *Grahya* properties (acceptable quality) to *Shodhana* (purification), *Marana* (incineration) etc. and these whole processes which are used to prepare *Bhasma* is included as its pharmaceutical preparation. This topic is based on how *Rajatbhasma* is prepared from *ShudhaParada* and *Shudha Gandhaka*, along with different changes that observed during *Shodhana* and *Marana* of these drugs. Material and methods include, *Shodhana* of all the ingredients which was used to prepare *Bhasma*, their changes during *Shodhana* and *Marana*. It also includes amount of *Putra* required for the *Rajat* metal to *Bhasma* form also obtained *RajataBhasma* after *Putra*, colour changes, *Nischandrikaran* (lustreless). Discussion and conclusion based on the various changes during and after *Putra*, probable form of *RajataBhasma* after *Putra* various steps included in finally, how much *RajatBhasma* prepared after completion of process which was done as per classical text *RasTarangini*.

Keywords: *Rajat* metal, Pharmaceutical preparation, *Shodhana*, *Marana*, *Bhasma*, *Pariksha*

INTRODUCTION

Pharmaceutical study means the practical experience of preparing formulations from raw material (drugs) that may be of plant origin, animal origin, metal, mineral. The success of treatment depends upon skilful preparation of the drug from raw material, processes used for its preparation and its application against the diseases.

Ancient scholars of *Rasa Shastra* were aware of the fact that metals and minerals may produce some toxic effects on the human body when it used direct as mentioned in texts, hence they are subjected to various suitable and systematic processes like *Shodhana*, *Jarana*, *Marana*, *Amritikarana* etc., so that these drugs could be

made therapeutically more effective. The procedures adopted for the preparing of *RajataBhasma* being described here in detail along with the particulars of equipment used in the pharmaceutical study.

Material and Methods: Methods involved in the pharmaceutical study:

RajatShodhan¹: 100gm of *RajataPatra* was placed in iron ladle and heated on LPG flame till it became red hot and quenched in *NimbuSawrasa*. Then, it was washed with warm water and process was repeated for seven times. *RajataPatra* was washed with warm water and collected precautionary. After heating, shiny appearance of *RajataPatra* was converted into slightly blackish in color. The final weight was found to be 49.5gm.

ParadaShodhana²:

Parad Shodhana with *Sudha Churana*: Admissible (*Grahya*) *Parada* was procured from Charak Pharmacy Paprola, after organoleptic testing and *Sudha* (Lime powder) was locally procured from market. Then, *Parada* and *Sudha* were triturated in *KhalvaYantra* till it became *Greyish* in color. Then, the greyish powder was filtered through double folded piece of cotton cloth. After that, material was washed with warm water, until *Parada* remained. Final weight was 411.3gm which was obtained from 500gm of *AshudhaParada*.

ParadShodhana with *LahshunKalk* and *Saindhav Lavana*: Stage 1 procured *Parada* of 411.3gm was poured in *Khalva Yantra*. Again, subjected for the trituration (*Mardan*) process with *LahsunKalka* (paste) of 411.3 gm and *Saindhav Lavana* of 205gm. After trituration, this mixture became black and it was washed with lukewarm water. The material was kept for settled down and decantation was done. The process of washing done till *ShudhaParada* i.e. 401.5gm was procured.

Gandhaka Shodhan³: *Ashudha Gandhaka* 500gm was procured from Govt. Charak Pharmacy Paprola and reduced to powdered form in Pestle and mortar. It was poured into *Ghritha* smeared heavy base iron ladle and heated over medium flame. Simultaneously, cow's milk was taken in in s's'' container and muslin cloth was tied over mouth. When *Gandhaka* was completely molten, it was poured into cow's milk through cloth and continuous stirring was done during whole process.

Then *Gandhaka* was allowed for coolness. After cooling down, *Gandhaka* was taken out in s's'' tray and washed with warm water. It was allowed for dry and same procedure was done for two more times. The impurities like sand, stone was observed on tied cloth and greasiness (sticky) of *Ghritha* was completely removed after washing with warm water. The weight of *Shudha Gandhaka* after *Shodhana* was 486.5gm.

Scraping of Aloe Vera Pulp: Freshly locally collected leaves were washed with water to remove dust and impurities. The margins were cut off and leaves were cut longitudinally in such a way that the dorsal part of leaf was separated from the ventral part exposing the mucilage. The mucilage was separated by cutting and scraping. The mucilage was then churned in juicer to form homogenous mixture. It was greasy white in appearance.

Rajata Bhasma preparation⁴

ShudhaRajataPatra were cut into very small pieces in *Khalvayantra*. It was mixed with equal quantity of *Kajjali* prepared from *ShudhaParada* and *ShudhaGandhaka* triturated till its conversion into lustrous coarse powder. For *Bhavana process*, *Ghrithumari Sawrasa* was added and triturated for five hours. In the initial stage of trituration, material was found greenish yellow in color and converted to greenish grey color. The *Bhavana* was done with *Ghrithumari Sawrasa* and *Lustrous Blackishgray* color was found. After trituration for about five hours, as the paste became dough like consistency. This was followed by preparation of *Chakrika* by hands and then kept for drying under sunlight (*AtapaShoshita*). After complete drying, these *Chakrika* were kept inside *SharavaSamputa* and *KapadMitti* was done properly and again kept for dryness. After drying, the *Sharava Samputa* was placed in an electric Muffle furnace at the 480° C which was maintained for one hour. First 10 puta were given at 480°C and subsequent *Putra* was given at 500°C temperature. After this, the Electric Muffle Furnace was switched off and allowed for *Swanga Sheeta* (self-cool). After *Swanga Sheeta*, *Sharava Samputa* was opened cautiously. The obtained material was weighed, and observations were recorded. This whole process was repeated for 17 times using end product of previous *Putra*.

Results:

Total Weight of Compound (<i>Rajata+Kajjali</i>)	135gm
Obtained <i>RajataBhasma</i>	51.5gm
Total <i>Putra</i> Applied	17
Color	Dark Brown
Taste	<i>Kashaya</i>
Odor	Odorless
Touch	Soft
<i>Varitarata</i> ⁵	100%
<i>Nishchandrata</i>	Positive
<i>Rekhpurnta</i> ⁶	Positive

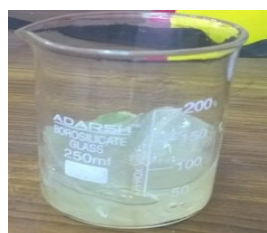


Fig. 1: AshudhaRajataPatra Fig. 2: RajataPatra After Shodhana Fig. 3: Ghritkumari pulp Fig. 4: Levigation of Rajata Bhasma



Fig. 5: Chakrika Preparation

Fig. 6: After Puta

Fig. 7: Unam⁷pariksha

Fig. 8: Varitara⁵Pariksha

DISCUSSION

The whole preparation of Rajatbhasma is nicely elaborated in our classical texts. However, some modifications are done by various expertises according to their experiences. During the *Shodhana* of *RajataPatra*, colour change was observed from silvery shiny to dull lustreless with slightly black that may be due to the media of *ShodhnaDravya* and the method of heat applied. *RajataPatra* was tarnished with jagged margins indicating oxidation. The media play important role to form the product of the metal. If sulphur used as media, then product may be in the sulphide form. The uniform pellets formation can archive the homogenous heat pattern. There is no specific *Putra* was mentioned for the preparation of the *Bhasma*, some references of *LaghuPutra*⁸ are observed. The *Kajjali* prepared from equal amount of

ShudhaParada and *ShudhaGandhaka* was added in first *Putra*, thereafter on *ShudhaGandhaka* was added till 17 *Putra* and *Rekhpurnta* and *Nishchandrtta* were observed after 10 *Putra*. The colour of *Bhasma* was brownish black, with 100% *Varitara* after 17 *Putra*. The prepared *Bhasma* is examined by various *Ayurvedic* parameters for *Bhasma SidhiLakshans*.

CONCLUSION

Rajatabhasma after 17*putra* fulfilling the criteria of *bhasmapariksha* and said to be best *bhasma* for internal use. The preparation of *Rajatabhasma* was explained by use of different drugs and *puta*. Here *Shudha Gandhaka* and *ShudhaParada* were used because the *bhasma* prepared from *Rasa* are of supreme quality. The different procedures of pharmaceutical process are used to enhance the therapeutic properties

by removing various impurities. The incinerated *Rajata* in the form of *bhasma* as a final product was also examined both ancient and modern analytical parameters for its physiochemical, microscopic and chemical compound. The final documented data may be used as future studies.

REFERENCES

1. Prnacharya Shri Sadananda Sharma, Pt. Dharmananda Shastri Hindi Commentary 'Ras Vigyana', Chapter 16, Rasa Tarangini, Motilal Banarsidas Publication, Delhi, 11th Edition, 1979 p.n.388.
2. Prnacharya Shri Sadananda Sharma, Pt. Dharmananda Shastri Hindi Commentary 'Ras Vigyana', Chapter 5, Rasa Tarangini, Motilal Banarsidas Publication, Delhi, 11th Edition, 1979 p.n. 79
3. Smt. Malti S Sinha, Chapter 2, Ayurvedic Formulary of India, Part 1, Vol. B, Ministry of Health and Family Welfare, Govt. Of India 2nd Edition, 2003, p.n.3.
4. Prnacharya Shri Sadananda Sharma, Pt. Dharmananda Shastri Hindi Commentary 'Ras Vigyana', chapter 3, Rasa Tarangini, Motilal Banarsidas Publication, Delhi, 11th Edition, 1979 p.n.380-381
5. Prnacharya Shri Sadananda Sharma, Pt. Dharmananda Shastri Hindi Commentary 'Ras Vigyana', chapter 2, Rasa Tarangini, Motilal Banarsidas Publication, Delhi, 11th Edition, 1979 p.n. 22
6. Prnacharya Shri Sadananda Sharma, Pt. Dharmananda Shastri Hindi Commentary 'Ras Vigyana', Chapter 2, Rasa Tarangini, Motilal Banarsidas Publication, Delhi, 11th Edition, 1979 p.n. 22-23.
7. Sri Vagbhatta Acharya, Acharya Ambikadutt Shastri-hindi commentary, Chapter 5, Ras Ratna Samuchya, Chuokhamba Amarbharti Publication, Varanasi, 9th Edition 1995 p.n.137
8. Prnacharya Shri Sadananda Sharma, Pt. Dharmananda Shastri Hindi Commentary 'Ras Vigyana', chapter 3, Rasa Tarangini, Motilal Banarsidas Publication, Delhi, 11th Edition, 1979 p.n.380-381

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