

Indian Alchemical Literature in Medieval Period – A Review Through Rasendra Chudamani

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ABSTRACT

Ancient Indians had not only mastered philosophy, but they were also experts in various fields of science and literature. Rasashastra (Indian Alchemy) was also researched and experimented upon extensively. Indian alchemy seems to have been evolved from techniques of transmutation of metals and minerals into their application in therapeutics. Few of the compilations based on experiences of practitioners of alchemy, metallurgical processes etc. became extinct in due course of period from 7th Century onwards. Rasendra Chudamani is a prominent text of 12th Century AD containing the experiences of previous authors. In a bird's eye view, it may seem as an ordinary text written in Sanskrit regarding the crude metallurgical procedures. However, thorough study will throw insight of the deep and intricate procedures prevalent in that period. Present paper will deal with the status of Indian Alchemy with special emphasis on Rasendra Chudamani, its framework and contributions in the field of Rasashastra.

Keywords: Indian Alchemy; Rasashastra; Parada; Rasendra Chudamani.

INTRODUCTION

Indian alchemy has its roots in Tantric literature dedicated to the Lord Shiva¹. It flourished from 7th Century AD and reached its peak during 15th Century AD². During the due course of 800 years, more than 100 books were written compiling the experiences of authors regarding alchemy, metallurgical processes etc³. Beauty of Indian Alchemy doesn't lie in its marvellous procedures of purification and

calcination, but it has gone beyond one step further and designated therapeutic applications of various metal and minerals prevalent during the medieval period. Medieval period of Rasashastra (Indian Alchemy) can be considered from 11th Century AD onwards upto late 15th Century AD⁴.

The compendiums compiled or written originally during this period include various classics of Rasashastra viz. Rasendra Chudamani, Rasa Prakasha Sudhakara, Rasa Ratna Samucchaya etc.

Around 13th century AD, inclination towards therapeutic application of Alchemical knowledge increased, which may be due to repeated failure of alchemical experimentations or due to increased influence of Buddha and Jain clans. In the field of therapeutics, they gave a quick and fast relief to the sufferings which led the alchemists towards the health and medical science. As a result of this, after

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13th Century AD, the knowledge and practise of Alchemy slowly started to deteriorate. This is clearly seen in the texts belonging to the later part of aforesaid period, where the therapeutics was given more importance than the alchemical knowledge and practice.

Rasendra Chudamani is a prominent text of this period encompassing the personal experiences of author in the field of alchemy. It was originally written and various other authors' viz. Rasavagbhatta, Yashodhara Bhatta etc., later, followed the suite and quoted almost entirely the text in their compilations. At first appearance, it may seem as an ordinary text written in Sanskrit regarding the crude metallurgical procedures; but, thorough study will throw insight of the deep and intricate procedures prevailing during 12th Century AD. In the current exercise an attempt has been made to review Rasendra Chudamani, its framework and contributions in the field of Rasashastra.

Main Corpus

Development of Rasashastra was directed towards achieving two main objectives; viz. transformation and transmutation of lower elements (Naga, Vanga etc.) into valuable ones (Suwarna, Rajata etc.) and conquest over aging and diseases (Raseshwara Darshana).

Both these objectives were accomplished by evolving various processings of Parada (Mercury). Murchana and Jarana were the main procedures intended to impart miraculous transforming prowess to Parada. Therefore, Parada has been the mainstay of Indian Alchemical events and all other procedures revolved around it. Alchemists like Nagarjuna, Nandi, Govinda Bhagwad Padacharya, Gorakshanatha, Manthana Bhairava etc. have documented their valuable researches in the form of treatises which are found scattered in rudimentary form. Rasendra Chudamani can be considered fortunate enough to escape the strides of ruthless time and entire length of the text is available today.

The Book:

Two books with name of Rasendra Chudamani authored by two different scholars are mentioned by Dr. N Gopalakrishnan, Indian Institute of Scientific Heritage, Trivandrum⁵. The text authored by Nakinchadeva is unavailable, making it difficult for further comments in that respect.

Acharya Yadavji Trikamji, in association with Acharya Jayadeva Vidyalankara made strenuous efforts in publishing Somadeva's Rasendra Chudamani from Motilal Banarsidas Press, Lahore in 1932 AD. In this edition, the author didn't mention the source of original manuscript. Partial form of the book, only 6th Chapter is available in Saraswati Bhavan, Library of Sampurnananda Sanskrit University, Varanasi⁶. The book published by Yadavji vanished in mean time and was unable for further reference for next 30 years.

Further attempts on revitalizing were made by Acharya Siddhinandana Mishra who has written a Hindi commentary, Siddhi Prada on this text with the help of his colleagues in 1988. The proof copy was verified with the manuscript available at Goenka Library, Varanasi (Kashi Vishvanatha Library). Very recently, Dr. Rameshwar Dayal Vajpayee has written a Hindi commentary on the text, which is published by Chaukhambha Krishnadas Academy, Varanasi.

It is assumed that, Somadeva has also authored Rasa Ratna Samucchaya. The text by same name is also written by Rasa Vagbhatta, is available; however, any information regarding this Somadeva and his work is inaccessible [5]

Prediction of period (1200 - 1300 AD)

Historians have affixed the time period of Rasa Ratna Samucchaya (RRS), another classical text of Rasashastra, as latter half of 13th Century. The author of RRS has quoted the verses of Rasendra Chudamani. Nearly 2/3rd of Sutrasthana (Chapter 1-11) of RRS are accredited to Rasendra Chudamani. Therefore it can be placed ahead of RRS⁷.

Similarly, Rasa Prakasha Sudhakara⁸, on detailing the properties of Divaushadhies authorizes it to the author of Rasendra Chudamani. RPS is said to be written in first half of 13th Century. Therefore, Rasendra Chudamani can be placed even before that.

In the text, Rasendra Chudamani, author cites quotations of alchemists like Nagarjuna, Bhaluki, Nandi, Govida Padacharya, Bhaskara etc. (Rasendra Chudamani 6/1, 15/32-35) These scholars are believed to be in existence from 7th – 11th Century AD. Therefore, Rasendra Chudamani is probably written between the period of 12th and 13th Century AD.

The author, eminence and place (Acharya Somadeva):

Two people by the name of Somadeva are seen in ancient Sanskrit literature from 11th Century AD onwards. Somadeva (1035 - 1085), composer of Katha Sarita Sagara and resident of Kashmir is different from author of Rasendra Chudamani⁹.

In the colophons placed at the end of each chapter, the author refers himself as “Sri-Karavala-Bhairava-Pura-Vara-Pati-Sri-Somadeva-Virachte..... Mahavira-Vamshavatansa.” This clearly indicates the author as Acharya Somadeva residing in Bhairava Pura and a descendent of Mahavira.

At the completion of treatise, he introduces himself as son of Shri Narayana. In addition, at second chapter, while enlisting his qualities, says that he is a master of artillery and science likewise. Similarly, he has also mastered Puranas, Darshanas (Nyaya, Samkhya, and Vedanta). He also has profound skills in Sanskrit Grammar and Ayurveda. Apart from a renowned Rasacharya, he was also the ruler of Bhairava Pura. His mastery of the subject can be understood from the quotation that only five persons are able to fathom out the depth of Rasa, Somdeva amongst one of them (Rasendra Chudamani 16/60). In another place, he says that only Lord Shankara and Somadeva are capable of unfolding the attributes of Parada on earth (Rasendra Chudamani 15/54).

Subject matter of Rasendra Chudamani: This text is complete with 1398 verses disseminated across sixteen chapters:

Chapter 1: It is also mentioned as Rasasutra Sthana. Detailed description of importance, quality, **Panchvidha** pooja (worship) and Dhyana (meditation) of Parada etc. have been explained.

Chapter 2: Qualities of Guru and scholar, Rasasiddhimarga etc.

Chapter 3: Pharmacy, necessary requirements like Chalani (sieve), Kokila (coal), Upal (cow dung cake) etc. for pharmacy.

Chapter 4: Paribhasha (technical terminology) which is useful in mercurial processing. Samskara of Parada in short. 114 terminologies of Rasashashtra have been described.

Chapter 5: Deals with elaborative description of Yantra (equipment), Koshti (furnace), Musha (crucible) and Puta (quantum of heat required for metal incineration).

Chapter.6: 64 types of Divya-aushadhi (divine herbs) like. Somalata, Somabriksha etc.,

Chapter.7: 68 types of Rasa-aushadhi and their habitat.

Chapter.8: Nearly 100 herbs have been included in some Ganas like Sarpakshadigana, Pancharatna etc.

Chapter.9: Definition of 30 common group terminologies like Madhuratraya, Mutravarga etc.

Chapter.10: Detailed description of eight Maharasa - Abhraka (mica), Vaikrant (tourmaline), Rajavart (ultramarine), Sasyaka (peacock ore), Vimala (iron pyrite), Shilajeet (mineral pitch), Makshika (copper iron pyrite) and Rasaka (zinc carbonate).

Chapter.11: Detailed description of eight Uparasa - Gandhaka (sulphur), Gairika (ochre), Kasisa (ferrous sulphate), Haratala (orpiment), Kunati (realgar), Tuvani (potash alum), Suveera (collyrium), Kankushta (gamboge tree) and description of eight Sadharanarasa - Kamppilaka (Mallotus philippinensis), Gauripashana (arsenic trioxide), Navasadara (ammonium chloride), Kaprdika (calcium carbonate), Vahnijara (amber), Girisindoor (Red oxide of mercury), Hingula (cinnabar) Bodarshring (litharge).

Chapter.12: Detailed description of nine Ratna (precious stone) - Manikya (ruby), Mukta (pearl), Phalavidrumani (coral), Panna (emerald), Pushparaga (topaz), Bhidoorum (diamond), Neelama (sapphire), Gomeda (zircon) and Vaidurya (cat's eye).

Chapter 13: Detailed description of Rasayana yoga of nine Ratnas like Manikyadi-Rasayana etc.

Chapter 14: Detailed description of nine Louha (metal and alloy) - Kanaka (gold), Rajata (silver), Bhanu (copper), Loha (iron), Naga (lead), Vanga (tin), Pittala (brass), Kansya (Bronze) and Varta (bell metal).

Chapter 15: Description on origin, etymology, properties, impurities, purification, incineration and Mukhikarana of Parada.

Chapter 16: Detailed description of Jarana (digestion procedure).

DISCUSSION

The text is complete in itself as far as arrangement of basic principles of Rasashastra is concerned. Somadeva has justified the matter to its fullest extent by giving reasonable quotations.

Enlisting the prominence of Parada, he says calcinated Parada is called as Maha Murcchana, since;

Lord Shiva has refrained from calcinating Parada. Further he says that mercurial preparations are effective at low doses, initiates prompt action, are good appetizers and digestives etc (Rasendra Chudamani 1/33). Citing the demerits of herbs, he says that they are unpalatable, hence are unfit for consumption due to their vitiation of bodily humors (Rasendra Chudamani 1/25). Similarly, metallic preparation cause deleterious effects and make body unstable. Therefore, mercurial preparations are to be consumed as they have differing qualities and ensure longevity and health (Rasendra Chudamani 1/25) Typical description of Vrischikali herb is available at Chapter 1.

Chapter 3 deals with distribution and division of pharmacy units into different areas and directions on the basis of pharmaceutical processing. Collection of necessary equipments for pharmacy, requirements like Chalani (sieve), Kokila (coal), Upala (cow dung cake) etc., qualities of good alchemist, pharmacist, worker, Rasa physician etc have been dealt in detail.

Chapter 4 deals extensively with definitions of Rasashastra and focussed an innovative insight of descriptions pertaining to Dhanvantari Bhaaga, Rudra Bhaaga (Commission from patient and pharmacy), Kajjali (Black sulphide of mercury), Amalgams (Navaneeta Pisthi, Patana Pisthi etc.), alloy formation (Vara Loha, Shulva Naga, Chandra Arka, Pinjari, Nirvahana, Vara Naga), transformation of metals, gold and silver plating (Hemarakti, Tararakti, Chandradala, Analadala, Sitadala, Raga etc.), extraction of metals from alloys (Tadana) or recovery of calcinated metals (Utthapana, Hema Krishti, Tara Krishti etc.), confirmatory tests for properly incinerated metals (Varitara, Rekha Purna, Niruttha etc.). Metallurgical procedures of element extraction (Sattva, Ghosha Akrishta Tamra, Guhya Naga, Hingulakrishta, Naga Sambhuta Chapala etc.), qualities of fuel, quantification of heat during extraction (Eka Kolika Shikha, Beejavarta, Shuddhavarta etc.), definitions of 18 Samskaras of Parada.

Detailed description of instruments required for various procedures of Parada and their importance

has been enlisted in chapter 5. Yantra (30 types of equipments), Musha (17 types of crucible), Kosthi (4 types of furnace), Puta (10 types of Puta viz. quantum of heat required for metal incineration) have been dealt within this chapter.

Chapter 6 and 7 have enlisted herbs used in the transformation of Parada and other dhatu into various formulations having astounding therapeutic attributes. 4 types of 64 Divyaushadhies (divine herbs) having 6 sources of origin have been enlisted. They include climbers, creepers, shrubs, herbs, tall plants, tubers etc. Some are Rudantika (*Capparis moonii* Wight), Varahi Kanda (*Discoria bulbifera* Linn), Uchata (*Abrus precatorius* Linn) Ishwari (*Aristolochia indica* Linn). They are attributed with the properties of rejuvenation, Parada Bandhana, Parada Jarana and Marana.

68 Rasaushadhies like Chinchā (*Tamarindus indicus* Linn.), Apamarga (*Achyranthes aspera* Linn), Kakamachi (*Solanum nigrum* Linn), Jatamansi (*Nordostachys jatamansi* DC), Vasa (*Adhatoda vasica* Nees), Tulasi (*Ocimum sanctum* Linn) etc. are mentioned in chapter 7. They are useful for Parada Bandhana, Marana, Niyamana, Jarana and alleviating Parada from its blemishes.

Chapter 8 has enlisted numerous mystifying herbs under different groups like Sarpakshyadi Gana (46 herbs), Vyaghrikadi Gana (85 herbs), Rakta Snuhyadi Gana (40 herbs), Kadalyadi Gana (8 herbs), Kakamachyadi Gana (18 herbs), Vajra Dandyadi Varga (13 herbs), Bhupatalyadi Varga (8 herbs) and Pancha Ratnaka Gana (5 herbs). These herbs are useful in Dravana, Marana, Niyamana, Bandhana etc. of Parada. Most of the drugs mentioned in these chapters are unidentified or controversial in current scenario. Few amongst them are endangered.

Chapter 9 has detailed about compilation of various important terms related with mercurial preparations. To mention a few, Mutra Varga (urine of 8 animals), Kshara Varga (15 plants of alkali group), Amla Varga (group of sour substances), Lavana Varga (8 types salts), Visha Varga (5 poisonous plants), Upavisha Varga (7 sub-acute poisons). He has quoted Sarpa Visha (Snake poison) as most potent poison amongst poison of herbal, metallic and ani-

mal origin. Further groups include Taila Varga (10 oil yielding plants), Dugdha Varga (latex yielding 8 herbs and milk yielding animals), Pitta Varga (8 sources of Gall), Rakta Varga (9 red staining plants) etc. Makshika (honey) has been placed in Rakta Varga. Compilation pertaining to different drugs from the point of view of colour involved is highlighted. Shodhaniya Gana has combination of 3 drugs viz. Kacha (silica), Tankana (Borax) and Kshipra (Pearl oyster). They are utilized for extraction of metals from ores, purification of metals etc. Mrudukara Varga consists of drugs intended for softening of metals. Dravaka Gana consisting of combination of 6 drugs has been indicated for effortless and quicker melting of metals

General properties of Kshara (Alkali) as a media for removal of blemishes, Amla (Sour) for purification and Jarana, Visha (Poisons) as a potentiator and Sneha for oleation are also quoted by Somadeva.

Chapter 10 has detailed compilation of origin, properties, types, Grahya-Agrahya (desirable and undesirable properties), Shodhana (methods of purification), Marana (methods of incineration), Sattva Patana (Extraction of metals from ores), posology, indication, toxic effects of 8 Maharasas. Ambiguity lies in the counting of Sasyaka and Tuttha as two distinct entities and counting Rajavarta in the group. Rasaka has not been counted in the original verse whereas its detailed description has given in the respective chapter later. He has emphasized the fact that, it is impossible to prepare Drutis of metals without the favour of Lord Shiva.

Chapter 11 has detailed about of origin, properties, types, Grahya-Agrahya, Shodhana, Marana, Sattva Patana, posology, indication, toxic effects of 8 Uparasas. Regarding clarification of Kankustha, opinion of different scholars has been compiled by Somadeva. Elephant calf dung, umbilical cord of just delivered foal etc. are to name a few. Purification of Kankustha has been advocated in Shrestha Ambu. And also detailed description about origin, properties, types, Grahya-Agrahya, Shodhana, Marana, posology, indication, toxic effects of 8 Sadharana Rasas have been enumerated. Common method

of Shodhana of all Sadharana Rasa has been advocated in Matulunga Swarasa (expressed juice of Citrus medica). Similarly, the Sattva of all Maharasa, Uparasa and Sadharana Rasa are also to be purified in the same.

Chapter 12 has detailed description about origin, properties, types, Grahya-Agrahya, Shodhana, Marana, posology and indication of 9 Ratna (Precious stones). Relation of precious gems with specific planets has been contributed by Somadeva. Ratnas are used for Rasakarma (mercurial processing), Rasayana Karma (Rejuvenation), Dana (Donation), Dhyaana (Spiritual meditation) etc. Enumerating 5 common demerits of gems like Grasa, Trasa, Bindu, Rekha and Jala Garbhata; Somadeva emphasizes that gems are unaffected by atmospheric changes. Common method of purification and incineration of gems has also been quoted.

Chapter 13 can be considered as unique contribution of Somadeva, as the Acharya has enlisted rejuvenating formulations of individual 9 gems.

Chapter 14 has detailed description of origin, properties, types, Grahya-Agrahya, Shodhana, Marana, posology and indication of 9 Lohas (metals and alloys). They have been further classified in to 3 subtypes i.e. Shuddha Loha (Pure metals – Swarna, Rajata, Tamra and Loha), Puti Loha (metals with low melting point – Naga and Vanga) and Mishra Loha (Alloys – Pittala, Kamsya and Varta). Artificial preparation of Gold and parameters for assessing purity of gold has also been mentioned.

Four classes of metal calcination has been mentioned i.e. mercurial incineration as best, herbal incineration as intermediate, incineration with Sulphur as media as inferior and by anti-metals as most awful. 3 subtypes of Loha (Iron metal) have been mentioned. 4 sub-types of Kanta Lauha have been enlisted. Toxic effects of improperly calcinated metals have been described by Acharya Somadeva. Mention of Bhrashtra Yantra for Naga calcination is also a unique contribution. Purification of inferior quality of Vanga (Mishraka Vanga) is also men-

tioned. Apart from Kapota coloured, red coloured Bhasma of Naga has been mentioned. Preparation of artificial Bronze by melting and mixing 8 parts of Tamra and 2 parts of Vanga is also another contribution of the author. Varta Loha is an alloy formed by combination of Bronze, Brass, Copper, Lead and Iron. Somadeva has contraindicated consumption of food material kept in bronze utensils except Ghrita.

All the metals, minerals, gems, etc after calcination become compatible for mercury and its utility for human body. Extraction of copper from earthworm droppings has been also mentioned. 6 methods oil extraction from Ankola (Alangium salvifolium Linn) fruits have been mentioned. They are either with or without application of heat by use of Kanduka Yantra.

Chapter 15 has enumerated descriptions pertaining to Parada with relation to 4 etymology, 4 types, 12 blemishes, properties, merits, 18 Samskaras, purificatory procedures, calcination etc. Only 4 types of Parada and their etymology have been described. Justification of Padarasa as a synonym of Parada has been given. It says that as only 1/4th part of mercury remains after purification, it is called Parada. He advocated to take not less than 5 Palas of Parada for Samskaras. In the same chapter, with reference to Samskaras and Parada Shodhana, Somadeva has cited opinions of other scholars of Rasashastra like Nandi, Dineshwar, Bhaluki etc. Practical details of individual Samskara has been given in this particular chapter. Citing the quotation of Acharya Bhaluki, procedures of Swedana and Sanyasa has been modified from as mentioned in Chapter 4. Mukhi Karana, Rakshasa Vaktra Parada and Bubhukshita Parada have been also mentioned in the context of merits of Samskara.

Chapter 16 is written from the point of view of Loha Vada, whereby Abhraka Sattva Jarana from 1/4th part upto 8 times of Parada has been given. Properties of Sattva Jarana are also told. Siddhi with Kshara and Abhraka only renders it useful for Deha Vada. Similarly, with Abhraka Sattva Jarana, Sattva

Jarana of Makshika along with Naga, Vanga, Tamra, Suvarna, Tikshna Lauha Jarana etc. have been advocated. Garbha Druti, Paksha Chinna Parada etc have been explained. Characteristics of Chinna Paksha Parada have been enumerated. Charana has been also explained.

The contribution

Author's vast knowledge of plant kingdom can be seen through vivid classification of mystifying herbs. Rasendra Chudamani is perhaps the first authoritative text of Rasashastra where one can find the mention any of a new class/group of drug i.e. Sadharana Rasa encompassing 8 drugs. Most of them, except Hingula (Cinnabar), Girisindoora (Red oxide of Mercury) and Kaparda (conch shell), other minerals and marine products seem to be new addition to the then existing chemical knowledge. But for the sake of proper study, author must have classified them under a new group. The addition of Gauripashana (Arsenic trioxide) seems to be a new drug adopted by author from the contemporary Hakim, as the later were the first users of this poisonous drug in therapeutics purpose, although it has been mentioned under metallic poisons in Sushruta Samhita. Similarly, most of the matter of Rasendra Chudamani finds it's resemble with Ananda Kanda, another treatise of Rasashastra, however, its exact period is still controversial.

CONCLUSION

The text Rasendra Chudamani is complete in itself encompassing the basic principles of Rasashastra. The cornucopia of Rasashastra has been dealt in specific and very systemic order which is lacking in previous texts. Starting from qualities of tutor and taught, guidelines for pharmacy, lexicon of various equipments etc., the author has vividly classified collection of specific inexplicable herbs used in chemical processes, various classes of Maharasa, Uparasa, Sadharana Rasa each counting to 8 in number and

aggregated on the grounds of their utility in mercurial processing. Ratna, Dhatu both 9 in number etc. have been dealt with their methods of purification and incineration. The importance of text can be understood from the fact that its followers have quoted the text in its specific parts or almost entirely in later works of the 13th Century AD. Overview of the book point out the deep scientific understanding of ancient seers by the processes evolved by them in the medieval period.

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