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Review Article

### Concept of Satvapatana: a review

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#### ABSTRACT

Rasashastra is a branch in Ayurveda that deals with Ayurveda Pharmaceuticals using drugs of varied origin like metals, minerals, gemstones, mercury, etc. Indian alchemy consists of various processes like shodhana (purification), marana (incineration), amrutikarana (processing the incinerated ash to imbibe more qualities), etc. One among these processes is Satvapatana (extraction of essence from mineral ores). Satvapatana is a process where the mineral ore mentioned in texts of Indian alchemy are mixed with other drugs and subjected to heat by which the essence of the ore is obtained. The satva of the drugs are of different colours and different types of heat are mentioned to extract the satva for different minerals based on the hardness of the drug. These satvas are used in different processes of Mercury and also in therapeutics.

**Keywords:** Satvapatana, rasashastra, satva, minerals, mercury

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#### INTRODUCTION

In Rasashastra- Indian alchemy, various processes have been explained like shodhana (purification), marana (incineration), satvapatana (extraction of core metal from ores), murchana (processes of mercury), jarana (processes of mercury), etc. so that these drugs can be used for various samskaras (processes) of mercury and also for therapeutics. One such process is satvapatana.

Satvapatana is a process wherein the mineral ores are mixed with other substances and subjected to heat by which the satva or essence of the mineral is obtained.

Satva Lakshana: Any mineral is mixed with kshara (alkali), amla (sour) and dravaka varga and subjected to heat in a koshti or musha (crucible) by which the satva is procured.<sup>1</sup>

In Rasashastra, satvapatana of many rasa dravyas (mineral ores) has been explained in various books of Indian alchemy. The satvas (essence of ores) extracted are used not just in therapeutics but also mentioned for the processing of Mercury.

#### General method of extraction of satva:

Any mineral whose satva has to be extracted is mixed with guda (jaggery), tankana (borax), guggulu (Gum of *Balsamo dendron*), laksha (lac) and sarjika (alkaline material containing soda bi carb); triturated with goat's milk and a bolus is prepared and subjected to heat by which the satva is procured.<sup>2</sup>

In Rasa Ratna Samuchchaya, the author opines to extract the satva by giving bhavana with any of the juice of these drugs suryavarta (*Heliotropium indicum*), kadali (*Musa paradisiaca*), vandhyakarkoti (*Momordica dioica*), koshtaki (*Luffa acutangula*), suradali, shigru (*Moringa oleifera*), vajrakanda (*Ampelocissus araneosa*), jalapippali (*Phyla nodiflora*), kakamachi (*Solanum nigrum*); then combining amla (sour), kshara (alkaline material) and subjecting to heat<sup>3</sup>.

#### Mixing of the satvas:

The satvas that have to be amalgamated, are mixed with shodhana varga dravyas (purification drugs), later kept in a musha (crucible) and subjected to heat. By this the satvas get mixed well.

Table 1: Colour of satvas:

Rasa Dravya	Colour of Satva
Abhraka (Mica)	Lohanibha (like loha), Swarnavarna (colour of gold), Kamsyanibha (like Bell metal)
Vaikranta (Tourmaline)	White like Shankha (chonch shell) and Chandra (moon)
Makshika (Chalcopyrite)	Gunjanibha (red colour)
Vimala (Iron Pyrite)	White or Greyish (sisha sannibha)
Ardrija (Black bitumen)	Lohasannibha (like iron)
Sasyaka (Blue viriol)	Indragopa samkasha, Tamrarupa (red in colour)
Rasaka (Zinc ore)	Sishopama, Vangabha (White colour)
Haratala (Orpiment)	White like Vajra
Gauripashana (White Arsenic)	White
Hingula (Cinnabar)	Sutasamkasha (White)
Mruddarashringa (Litharge)	Nagasankasha (like lead)
Bhunaga (Earthworms)	Like copper
Mayurapiccha (Peacock's feathers)	Copper

### Uses of Satva:

Abhraka satva is used for the purpose of rasa and rasayana<sup>4</sup>, and is said that it does pakshachinna of mercury (making mercury stable to heat). Mercury does charana of the abhraka satva similar to loha (iron). Makshika satva for dehavada (making body free from diseases and old age) and lohavada (converting lower metals to noble metals)<sup>5</sup>, vimala satva when mixed with parada makes a good rasayana (rejuvenate)<sup>6</sup>; rasaka satva is used for various purposes<sup>7</sup>. The satva of Tuvri (alum) is used for the bandhana of rasa and uparasa and for Kramana (process of mercury)<sup>8</sup>. The satva of gairika (red ochre) mixes well with mercury and has more qualities<sup>9</sup> and the satva of chapala (tin ore) for multiple effects.

The mudrika (ring) prepared with tuttha satva (blue vitriol) and bhunaga satva (copper extracted from earthworms) when placed in water and when this water is taken internally, it is said to relieve shula (pain) and also useful in curing charachara visha (poisons), bhutadibhaya (fear), netraruja (pain in eyes), in wound healing, etc<sup>10</sup>.

### General purification method of satvas:

The samanya shodhana (general method of purification) of all satvas is by triturating with Nimbu rasa (juice of *Citrus limon*) and juice of ardraka rasa (juice of *Zingiber officinale*) for three days each by which the shodhana (purification) occurs and also the satvas will be able to mix with other drugs<sup>11</sup>.

### Types of agni (heat):

Based on the hardness, the amount of heat given to the ores to extract the satva is different. Tivragni (high heat) is given for Abhraka, Vaikranta, Makshika, for Vimala- heat with six prastha (4608g) of kokila (charcoal), Drudagni for Tuttha, heat in Baluka yantrapaka (sand as a media to give more heat) for Talaka (orpiment), and Khadirangara (heat with coals of Khadira plant) for Rajavarta (lapis lazuli).

### DISCUSSION

Satvapataana is an important process in rasashastra. The satvas extracted from different ores are utilised in the processing of mercury and also used in therapeutics. A literary review carried out also put light on the colour of different satvas and these can be taken as the prashasta lakshana (test of perfectness) for these satvas. The quantum of heat mentioned for the extraction of the satvas also varies based on the hardness of the drug. Different types of fuel and

amount of heat have been mentioned. The purification processes of the satvas have been mentioned to throw light that the satvas have to be used only after purification to get the desired therapeutic result.

### CONCLUSION

Satvapataana process is mentioned not just to use extract the essence of the mineral ore for therapeutic purpose but also for the processing of mercury. Kankshi satva (alum) is an example for this, as the satva of it is used for the kraamana of mercury. And also in the jarana of parada, the satva jarana is mentioned; where the jarana of abhraka will make the parada (mercury) agnisthayi (heat resistant). Thus satvapataana is an important process in rasashastra and extensive research can be carried out in this area.

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