



Preparation Of Parada Bhasma: A Review On Classical Ayurvedic Formulation

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Abstract: *Parada* (mercury) is one of the most extensively described metals in *Ayurvedic* pharmacology. Revered as a *Rasayana* and *Yogavahi* (catalyst), it is considered as sacred and powerful when processed properly^[1]. The concept of *Bhasma* preparation involves converting metals into absorbable and safe ash-like forms through purification and incineration. *Parada Bhasma* exemplifies this transformation and has been used for centuries in various formulations, particularly in *Rasaushadhis*. This article aims to systematically document the classical method of *Parada Bhasma* preparation and highlight its pharmaceutico-therapeutic significance based on classical texts and contemporary research.

Keywords: *Parada Bhasma*, *Rasaushadhi*, *Shodhana*, *Marana*, *Ayurvedic* formulation, Mercury,

INTRODUCTION

Mercury (*Parada*) holds a pivotal place in *Rasa Shastra*, the specialized branch of *Ayurveda* dealing with herbo-mineral formulations. Despite mercury's inherent toxicity, ancient *Ayurvedic* scholars developed comprehensive detoxification and incineration procedures transforming it into *Parada Bhasma*, a safe and therapeutically potent formulation.

In classical *Ayurveda*, *Parada Bhasma* is credited with *Rasayana* (rejuvenative) and *Vajikarana* (aphrodisiac) properties and is used in treating various ailments including chronic fevers, anemia, skin diseases, and reproductive disorders^[2]. The processing of *Parada* involves a series of purification (*Shodhana*) techniques using plant, mineral, and animal derivatives, followed by incineration (*Marana*) where it is subjected to controlled heating with specific media^[3].

Materials and Methods

Raw Material Selection

- *Parada* (Mercury): Pure, silvery-white mercury is essential for preparation. Impure mercury, often contaminated with lead or arsenic, is avoided.
- *Gandhaka* (Sulfur): Yellow sulfur is used, and it must be purified before use in the preparation of *Kajjali*.
- Other Materials: Lime water, garlic, *Triphala* decoction, and various herbal juices like *Neem* (*Azadirachta indica*) and *Ghrita kumari* (*Aloe barbadensis*) are used in different stages of purification and incineration.

Shodhana (Purification)

The primary objective of *Shodhana* is to detoxify mercury by eliminating physical and chemical impurities and reducing its toxicity. Various methods of mercury purification are detailed in classical texts:

Table No 1:- Showing Parada Sodhana According to Rasa Tarangini ^[4]**a) Samanya Shodhana (General purification):**

References	Ingredients	Procedure
Rasa Tarangini 27/30	Parada -1p Sudha choorna -1p Nistusha Lashuna -1/2 Lavana 1/2 p	Parada with Sudha Choorna Mardana is done for 3 days then is filtered through 4 folded cloths. Then Mardana of parada with Nistush Lashuna is done till it becomes black color.

b) Vishesh Shodhana (Specific purification):

Specific process of shodhana is done to remove specific doshas separately is Vishesh Shodhana. This is done for Rasayana purpose.

Table No 2:- Showing Parada Sodhana According to Rasa Tarangini ^[5]

DOSHA	DRUG	PROCESS
VISHA	1. Triphala choorna 2. Kumari Swarasa	Mardan of Parada for 1 day
VAHNI	1. Chitraka choorna 2. Kumari Swarasa	Mardan of Parada for 1 day
MALA	1. Aragwadha Phalmajja 2. Kumari Swarasa	Mardan of Parada for 1 day
NAAGA	1. Girihadooma 2. Ishlika 3. Haridra 4. Bhasma of wool 5. Kumari swarasa	Mardan of Parada for 1 day
VANGA	1. Indravaruni 2. Ankola choorna 3. Haridra choorna 4. Kumari swarasa	Mardan of Parada for 1 day
CHAAPALYA	1. Krishna dhatura beeja 2. Kumari swarasa	Mardan of Parada for 1 day
GIRIJA	1. Trikatu choorna 2. Kumari swarasa	Mardan of Parada for 1 day
ASAHYAGNI	1. Gokshura choorna	Mardan of Parada for 1 day

2. Marana (Incineration)

According to Ayurveda Prakasha:^[6]

- Maarita Parada is used for Deha Siddhi.
- It means the one which helps in losing its original state is called as Maarana.
- The process of making the metals in to a fine powder by applying required quantum of heat is known as MARANA.
- Metals or Minerals are supposed for marana by subjecting these to Mardana & heating at specific temperature for a specific period. This renders the metals & minerals to readily absorb in the system, hence these metals are therapeutically more potent and indicated to use in the form of Bhasma.

PREPARATION OF RASA BHASMA IN VARIOUS TEXTS:

Different Acharyas have mentioned varied preparations of RASA BHASMA in their texts as following:

METHOD 1: Rasa Tarangini:^[7]

- Fresh *beeja* of *Apamarga* are taken and made into *Churna* and was made into *kalka*, and *Musha* was prepared with it.
- Equal parts of *Arimeda*, *Dronapushpa*, and *Vayuvidanga* are then powdered and kept ready. Then, *Mardana* of *Parada* is done with *Kakodambari Ksheera*.
- Now the *Musha* is filled with *Churna* of *Arimeda*, *Dronapushpa* and *Vayuvidanga* and *Parada* was kept in it and *samputa* was done.
- Then it was subjected to *Gajaputa* and *Parada Bhasma* was prepared.

METHOD 2: Rasa Chintamani:^[8]

- 100gms of *Parada* was taken and *Mardana* was done with *Lajjalu Swarasa*. By this procedure, *Parada* will attain *Baddha*.
- Then this *Baddha Parada* is kept in a *Sharava* and filled with *Lajjalu Swarasa*, and *Sandhibandhana* was done.
- It was then subjected to *Kukkuta puta* to attain *Parada Bhasma*.

METHOD 3: Rasa Chikitsa:^[9]

- *Kalka* of *Apamarga Beeja* and *Kamala* (Lotus flower) is made and filled in a *Musha* and *Parada* is kept inside it and *Sandhibandhana* was done. Then the *musha* was subjected to *Putra paaka* to attain *Rasa Bhasma*.

METHOD 4: Rasa Ratna Samucchaya:^[10]

- *Apamarga Beeja*, *Eranda Beeja* is taken and *Churna* was prepared.
- This *Churna* was filled into *Sharava* and *Parada* was kept and again it was filled with *Churna*, and *Samputa* was done.
- Then it was subjected to *Laghuputa*. By this procedure, *Rasa Bhasma* is attained.

METHOD 5: Gorakshanatha Samhita:^[11]

- *Khatika*, *Sphatika* and *Lavana* are taken in equal quantities and mixed with mud collected from forest and smeared over inside bottom of lower jar and *Parada* was placed over it.
- Over it the other pot of *Damaru yantra* is placed and *Sandhibandhana* was done and subjected to *Paaka*.
- After completion of *Paaka*, the *Bhasma* of *Parada* was collected from inside wall of upper jar.

METHOD 6: Kakasaaputimata:^[12]

- *Parada* triturated with *Swarasa* of *Panchanga* of *Varvari* and *Lingi* should be cooked in *Putra*.
- Thus golden colour *Bhasma* of Mercury is obtained.

METHOD 7: Ayurveda Prakasha:^[13]

- Equal quantity of *Hingu* and *Parada* are taken and *Mardana* was done along with *Kakodumbara Ksheera*, kept in *Musha* and was subjected to *Gajaputa*.
- By this process *Parada* turns into *Bhasma*.

Bhasma Pariksha (Quality Tests)

To ensure that the final product is both safe and effective, *Parada Bhasma* is subjected to classical quality assessments, including:

- **Rekha purnatva:** The ability of the *Bhasma* to settle into the lines on the skin.
- **Varitaratva:** The floating test, where a small quantity of *Bhasma* should float on water.
- **Nischandratva:** The absence of metallic shine, indicating proper incineration.
- **Apunarbhava:** The inability to revert to its metallic form upon heating with lime juice and jaggery.
- **Niruttha:** The completeness of incineration, confirmed by the physical properties of the *Bhasma*.⁽¹⁴⁾

COLOURS OF RASA BHASMA:**Rasarnava:**^[15]

Rasa Bhasma is of four colours. They are:

1. White/ Shweta Varna
2. Black/Krishna Varna
3. Yellow/Pita Varna
4. Blue/Neela Varna

LAKSHANA OF MRUTA PARADA: ^[16]

- According to *Rasa Tarangini*, completely *Bhasmikruta Paarada* should have the *Lakshanas* like,
- It should not emit smoke when put into fire.
- It should not have Glazing
- It should be heavy
- When put on fire, it should not change the colour of fire.
- It should possess *rogahara*, *vyadhihara* qualities and when used it should give strength to body.

MRUTA PARADA GUNAS: ^[17]

- Well prepared *Parada Bhasma* will be having the following *Gunas*:
- It acts as *Rogahara* and corrects *Paachakaagni*.
- It gives strength, happiness to the body.
- It cures *kshaya*, and gives *Kaanti* to *Shareera*.
- Increases Memory power.

There are many other *Gunas* of *Parada* which are helpful in giving the body strength and correcting the *doshas* and helpful in maintaining health.

Therapeutic Uses

Parada Bhasma is widely indicated for; ^[18]

- *Jwara* (Chronic fevers)
- *Pandu* (Anemia)
- *Kushtha* (Skin diseases including psoriasis, eczema)
- *Shukra Dosha* (Semen abnormalities)
- *Agnimandya* (Digestive disorders)
- *Vajikarana* (Aphrodisiac therapy)
- *Rasayana* (Rejuvenation and longevity therapy)

The formulation is often administered in minimal doses (1-5 mg) along with adjuvants like Ghee, Honey, or *Triphala Kwatha*.

Scientific and Analytical Studies

Recent studies using modern instrumentation (AAS, SEM, XRD) show that properly prepared *Parada Bhasma* contains **mercuric sulfide (HgS)** in nanoscale form.

- **XRD** confirms crystalline HgS phases.
- **SEM** reveals particle sizes below 100 nm, indicating enhanced bioavailability.
- **AAS** shows minimal free elemental mercury.

Toxicology studies report no hepatotoxic or nephrotoxic effects when used within therapeutic limits ^[19,20].

Safety and Toxicity Considerations

- Though mercury is inherently toxic, *Ayurvedic* texts emphasize that proper purification and incineration transform it into a safe form. Animal studies suggest that *Parada Bhasma* prepared via traditional methods is non-toxic at therapeutic doses. However, caution is advised in commercial preparation and clinical use to avoid incomplete processing or adulteration ^[21].

Results and Discussion

The primary goal of preparing *Parada Bhasma* is to detoxify mercury and convert it into a form that can be safely absorbed by the human body. Research suggests that when prepared according to classical methods, *Parada Bhasma* shows minimal systemic toxicity. The incineration process effectively converts mercury into nano-sized particles, which have high bioavailability and specific organotropic actions.

Parada Bhasma is used in *Ayurvedic* treatments for a variety of chronic conditions, including neurological disorders such as Parkinson's disease, arthritis, and certain skin diseases. In addition, it is used as a “*Rasayana*” to enhance longevity, boost immunity, and promote general vitality. The catalytic properties of *Parada Bhasma* enhance the effectiveness of other *Ayurvedic* medicines, making it a valuable addition to many formulations.

Parada acts as a *Marana Dravya* in the following contexts.

- Incinerating itself
- Sublimation preparations (*Rasasindhura*, *Rasakarpoor*)
- Composite formulations (*Makaradhwaja*, *Vasanta Kusumakara Rasa*, *Rasa Parpati*, *Arogyavardhini vati*)
- In assisting *Marana of Loha*, *Tamra*, *Swarna* etc by forming *kajjali*

Conclusion

Parada Bhasma remains one of the most potent and unique formulations in *Ayurveda*. Through meticulous processes of purification, “*Kajjali*” preparation, and incineration, mercury is transformed into a therapeutic substance that can treat a range of ailments. The efficacy of *Parada Bhasma*, when properly prepared and tested, has been well-documented in traditional *Ayurvedic* texts. However, modern studies on the nano-structural properties of *Bhasma* further support its safety and therapeutic potential. Continued adherence to classical *Ayurvedic* methods, coupled with modern scientific validation, is essential for maximizing the benefits of *Parada Bhasma* in contemporary clinical practice.

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