



Research Article

PHARMACEUTICAL PREPARATION OF HINGULLOTHA PARADA

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ABSTRACT

In Ayurveda Classics *Rasaushadhi* are prepared from *Ashtasanskarita Parada* because of its *Rasayana guna* and therapeutic properties, but it require great patience, time, skill and money hence a way has been given in the literature i.e. *Hingulatha parada* can be used in place of *Astha sunskarita parada*. Present study done with the aim of pharmaceutical Standardization of Extraction of *Hingullotha Parada* & study for usefulness of *Hingullotha parada* instead of *Ashtasanskarita Parada* in Ayurveda formulations.

In the present study Extraction of *Hingullotha Parada* was done three times then last three *Sanskaras* were done for *Gunavardhana*. After extraction of *Hingullotha Parada* % of yield was 42.61 % that is less it may be because of instrumental error.

In *Ashtasanskara* of *Parada* last three *Sanskar Bodhana, Niyamana & Deepan* are having *Gunavardhana* property. *Deepan sanskar* improve *Boobhuksha* (bonding capacity) of *Parada*. After going through the classics it can be concluded that *Hingullotha parada* can be used instead of *Astasanskarit Parada*. The last three *Sanskara Bodhana, Niyaman Sanskara, Dipan Sanskaracan* can be done for *Gunavardhana* (improving the *Rasayana & Rogashamana* property) to *Parada*.

KEYWORDS: *Hingullotha Parada, Ashtasanskarita Parada.*

INTRODUCTION

Rasashastra is a science of *Parada*. In *Rasaushadhi parada* has great role because of its therapeutic property. In all the classical texts, priority is given to *Asta sanskarita parada*, because of its *Rasayana guna* and therapeutic properties, but *Ashtasanskara* of *Parada* is a time taking procedure, require great patience, time, skill and money. Hence to overcome the inconvenience a way has been given in the literature i.e. *Hingullotha parada* can be used in place of *Astha sunskarita parada* with following benefits.

1) Without having done *Asta sanskara, Hingulatha Parada* suitable for all kind of uses.^{1,2}

2) Some author claim that its property are equivalent to *Sama guna* as well as, *Shada Guna gandhaka Jeerna Parada*.³

3) Some gives the view, that it can be used in *Kalpa*.⁴ So considering all above facts, for the present study *Hingullotha parada* was used and for removal of the impurities which are left after extraction & also for *Gunavardhan*, last 3 *Sanskaras* were done.

For the purpose of extraction of *Parada* from *Hingula*, reference of AFI part 1, app. 2 was followed: (Rasamritam 1/16-17)⁵.

Table 1: List of text showing similar procedure for extraction with their variants

Texts	Yantra	Variations
R.T. ⁶	<i>Vrdhwapatana</i>	No Variation
R.S.S. ⁷	-----	No Variation
R.P.S. ⁸	<i>Damru Yantra</i>	Time for distillation/ <i>Bhawana 4 Yama</i>
R.R.Vr.k. ⁹	<i>Patana Yantra</i>	No Variation, Time for <i>Bhavana 1 Yama</i>
R. Chu. ¹⁰	<i>Vidyadhar Yantra</i>	No Variation
R.Mi. ¹¹	<i>Patana Yantra</i>	No Variation

AIMS & OBJECTIVES

- Pharmaceutical Standardization of Extraction of *Hingullotha Parada*
- Study for usefulness of *Hingullotha parada* instead of *Ashtasanskarita Parada* in Ayurveda formulations.

- Detail study of *Hingullotha Parada*.

All the ingredients were taken from National Institute of Ayurveda, Jaipur.

EXTRACTION OF HINGULLOTHA PARADA**A. Shodhan of Hingula****Reference:** A.F.I., Part-1, Edi.2nd Pg. (Rasamitra 1/16-17)**Ingredients and their proportion**

- *Hingula* - 498 gm
- *Nimbu Swaras* - Q.S.

Procedure

- *Hingula* pieces were grounded in *Khalva* into fine powder and then *Mardana* should be done with *Nimbu swarasa* till the liquid was totally dried.
- Likewise 7 *Bhawana* were given.

Observation

- During initial *Bhavana* liquid was dried easily but in subsequent *Bhawana* liquid (*Nimbu swaras*) stop drying & *Hingula* was changed into orange colored sticky paste.

Result

- Yield :- 515 gm
- Gain :- 17 gm (3.30%)

B. Urdhwapatana of Hingula**Reference:** A.F.I., Part-1, Edi.2nd Pg. (Rasamitra 1/16-17)**Table 2: Showing observation of Extraction of Hingula**

S.No.	Date	Amount of HgS	Amount of Parad Extracted	Residue in Lower pot	Other
1.	15.12.08	276 gm	115 gm. (41.67%)	Nothing left	Sulphur fumes are not appears vigorously at the time of heating. Residue from upper pot was black in color, heavy weight substance. <i>Parad</i> easily comes in globules form after rubbing this powder.
2.	22.12.08	239 gm	99 gm. (41.42%)	29.20 gm.	Sulphur fumes founds during heat. Earthen pot becomes slightly black in color at the time of heating.
3.	20.01.09	250 gm	112 gm (45%)	10 gm.	Sulphur fumes are not appears at the time of heating.

- It was observed that at the time of sublimation of *Parad*, wet cloth was dried quickly as compared to completion of process.
- Quantity of *Parad* sublime depends on the heat given & condensed procedure.

Precaution

- ❖ Seven times *Kapad mitti* must be done to avoid leakage of Sulphur fumes & *Parad* vapors.
- ❖ High heat of pressure burner should be used for proper extraction of Mercury.
- ❖ Bottom of upper pot should be kept cool to facilitate concentration of *Parad* vapors. Height of the two earthen pot which is used for *Urdhwapatana* not exceed more than 2 feet.

Result

- Total yield - 326 gm.
- Total Hg S used - 765 gm.
- % of yield - 42.61 %

After Extraction of *Hingullotha Parada* Last three *Sanskara* were done for *Gunavardhana*.**PARADA SANSKARA****Ingredients and their proportion:** *Hingula* - 515 gm**Equipment:** two earthen pots, Glass Beaker, Cloth, Weighing machine**Procedure**

- *Hingula* was placed in an earthen pot in the form of *Chakrika*/ powder.
- Mouth of both the pots was sealed 7 times by *Kapada mitti*. (*Damaru yantra*)
- Heat was given from below to the lower part having *Hingula*, Bottom of the upper pot covered with thick cloth drenched with water.
- *Mridu agni* was given for first hour, *Madhyamagni* for second hr., *Tivragni* was given for four hrs.
- After self cooling upper part was rubbed with cloth to collect *Parad* in the form of black powder.
- Powder was sieving through cloth to obtain *Parad* in the globules form.
- Same procedure was conducted two times.

Observations

Here we are showing all the observations in the form of tables.

1. Bodhana**Reference:** A.F.I. Part-1, app.2 ;(R.C.4/88) ¹²**Ingredients and their proportion:**

- *Hingulottha Padada* - 188 gm.
- *Saindhava* - 105 gm.
- Water - 500 ml.

Equipment: Beer bottle, S. S. Vessel, Glass beaker, Cotton cloth, String, Wooden sticks, Heating apparatus, Weighing machine.**Procedure**

- At first salt was powdered.
- *Saindhav jala* was prepared by mixing *Saindhava* & luk warm water.
- Firstly *Parada* was kept in a beer bottle over which *Saindhava jala* was poured.
- The mouth of the bottle was sealed and was wrapped in thick jute cloth and kept aside undisturbed in a close cabinet for 3 days.
- After three days bottle was opened and *Parad* was taken out and kept aside after washing with warm water.

Observations

- Color of water become turbid and appeared slightly dirty.
- Shine of *Parad* enhances after the process.

Result

- Yield of Hg - 186gm
- Loss - 2 gm

Precaution

- ❖ *Parad* should be filled carefully into the glass bottle.
- ❖ For the process of *Bodhan sanskara* warm water should be used.
- ❖ Washing & drying of the *Parad* should be done with care to minimize loss.

2. Niyaman Sanskara

Reference: A.F.I. Part-1, app.2 ;(R.H.T.2/10) ¹³

Ingredients and their proportion:

Parada - 186gm
Lasuna - 12gm
Nagavalli - 12gm
Ambuja - 12gm
Karkoti - 12gm
Markava - 12gm
Chincha phala- 12gm
Kanji - Q.S. for *Swedana*

Equipments: Stainless Steel vessel, Glass beaker, Cotton cloth, *Vatpatra*, Tray, Wooden sticks, heating apparatus, Measuring Flask, weighing machine

Procedure

- **Kanji preparation:** Following the reference of *Dravyaguna Vigyan of Acharya Yadavji Trikamji*. 2kg rice was cooked by using five times water and then three times water added by weight of cooked rice (12.30kg). in this rice 200gm *Saindhav Lavan*, 200gm Rye & 50gm *Haridra* powder were added and kept aside in a sterilize container, after sealing its mouth with clay smeared cloth for fermentation. It took 20 days for fermentation of *Kanji* in the month of October. Final yield obtained was 20 liters (pH-3).
- At first *Kalka* of *Nagwalli*, *Lasuna* (after peeling), *Karkoti*, *Chincha Phala*, *Markava* was prepared in a grinder by using *Kanji*.
- All the drugs were taken in ratio of 1/16th of the weight of *Parad*. *Ambuja* was used in powdered form. Paste of all these drugs was utilized to make a small bowl which was supported by *Vatapatra* from all sides.
- After preparing small bowl a leaf of *Vatapatra* was carefully placed in the bottom of the bowl on which *Parad* was poured and then slowly leaf was pulled out.
- This bowl was kept in a four layered cotton cloth & prepared a *Dolayantra* with filling *kanji* for the process of *Swedana* up to 3 days. (8 hrs/ day).
- After 3 days, *Potalli* was opened and *Parad* was recovered by washing *Kalka*, *Vatapatra* and also from vessel in which it was suspended with the help of warm *Kanji* & warm water.

- Later *Parad* was washed & stored in air tight glass container.

Observation

- After opening the *Potalli* it was observed that the globules of *Parad* from *Kalka* escape into *Vatapatra* & layer of cloth as well as *Kanji*.
- Color of *Kanji* change from pale to brown & its viscosity also increased.
- Shining of *Parad* was also enhanced after the procedure.

Result

- Yield : 183.50gm
- Loss : 2.50gm

Precaution

- ❖ All the drugs should be finally fine powdered.
- ❖ Consistency of the paste & *Kalka* such as to make easily shaped bowl.
- ❖ Directly *Parad* should not be poured into the bowl of *Kalka* because it may pass through it & can make hole.
- ❖ Fresh warm *Kanji* should be added from time to time to maintain temperature in a vessel.
- ❖ *Swedana* should be done on a low flame.
- ❖ *Pottali* should be kept half immersed in *Kanji*.

3. Dipan Sanskara

Reference: A.F.I. Part-2, app.2 ;(R.H.T.2/11)¹⁴

Ingredients and their proportion

Padada : 183.50gm
Spatika : 12gm
Shodhita Kasis : 12gm
Shodhita Tankana : 12gm
Maricha : 12gm
Lavana : 12gm
Asuri : 12gm
Shigru beej : 12gm
Kanji : Q.S. for *Swedana*

Equipments: As mentioned in *Niyamana sanskara*.

Procedure

- Procedure followed was similar to *Niyamana sanskara*.

Observation

- Shine of *Parad* was enhances after the procedure.

Result

- Yield : 179.79gm.
- Loss : 3.71gm.

Precautions

- ❖ *Sphatika*, *Tankana* and *Kasisa* should be used after *Shodhana*.
- ❖ Rests are same as to *Niyamana Sanskara*.

Discussion

In Ayurveda classics in *Rasaratnakar Vriddhi Khanda*, *Rasamitra*, *Rasa Tarangini* mentioned *Hingullotha parada* equivalent to *Sama guna* as well as *Shada guna gandhak jirna Parada* & it can be use in Ayurveda preparation as it is. Last three *Sanskara* i.e., *Bodhana*, *Niyamana*, *Deepan* are for the improvement of

the quality of *Parada*. *Deepana* improved the capacity of *Jarana* by improving *Agni bala* of *Parada*. So considering all above facts, in the present study *Hingullotha parada* was extracted from *Hingula* and for removal of the impurities which may left after extraction & also for *Gunavardhan*, last 3 *Sanskaras* was done.

Extraction of *Hingula* was done three times. Each time yield revolving nearly towards 42% that was not too much. It may be because of instrumental error and improper heat. While doing last three *Sanskara* of *Parada* total loss was occurs (8.21gm=4.36%). It may be because of *Jala & Hansa Gati* of *Parada*.

CONCLUSION

- *Ashtasanskara* of *Parada* is a lengthy, time taking procedure due to this *Hingullotha parada* can be best option in *Rasaushadhi* preparations.
- Last three *Sanskaras* can helpful for improving the property of *Parada* then last three *Sanskara* can be done for the *Gunavardhana*.

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