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Pharmaceutico - Analytical Study of *Haragouri Rasa*

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ABSTRACT

Rasa Shastra basically deals with the pharmaceuticals of drugs of mineral and metallic origin. In *Rasa Shastra Kupipakwa Rasayana* holds an unique importance as compared to other formulations due to its miraculous effects on dreadful and chronic ailments, with rapid action. *Kupipakwa Rasayana* are well known to be potent because of specific pharmaceutical process, excellent clinical result, long lasting potency and safety even on prolonged use. The *Kupipakwa Rasayanas* are prepared in especially prepared glass bottle, called as *Kupi*, by adopting a specially designed instrument, known as *Valuka Yantra*. *Haragouri Rasa* is a sublimated mercurial preparation known for its use in different types of *Vata-Vyadhi*, *Rasayana*, *Vajikarana*. Now a days people are more suffering from different types of *Vatavyadhi* due to different kinds of lifestyle, food habits etc.

Key words: *Kupipakwa Rasayana*, *Haragouri Rasa*, *Valuka Yantra*, *Pharmaceutical*, *Analytical Study*.

INTRODUCTION

In *Rasa Shastra*, *Kupipakwa Rasayana* holds an unique importance as compared to other formulations due to its miraculous effects on dreadful and chronic ailments, with rapid action. The practical experience of preparation of medicines for raw drugs is most importance in *Rasa Shastra*. *Kupipakwa Rasayana Niramana* is considered as one of the tedious procedure in *Rasa Shastra*.^[1] *Rasaoushadhis* are novel molecules for combating the various diseases. Among them *Kupipakwa Rasayana* are well known to be potent because of specific pharmaceutical process, excellent clinical result, long lasting potency and safety even on prolonged use. *Haragouri Rasa* is one

of the *Kupipakwa Rasayana* containing *Shuddha Parada*, *Shuddha Gandhaka*, *Shuddha Navasadar*, *Dhatra Patra Swarasa*. *Haragouri Rasa* is having mainly *Vatahara* property and is thought to be an effective drug in combating *Vedana*.

Parada possesses the properties like *Rasayana*, *Yogavahi*, *Balya*, *Vajikarana*, *Vataroga*, *Sarvaroga* and *Tridoshagna*.^[2] *Gandhaka* possesses the properties like *Agnidipana*, *Pachana*, *Rasayana*, *Kaphavatahara*, *Amadosha*.^[3] *Navasadara* possesses the properties like *Tridoshagna*, *Pachan*, *Jataragnidipana*, *Hrudroga*, *Gluma*, *Switra*.^[4] *Dhatra* possesses the properties like *Vedanasthapana*, *Shoola Prashamana*, *Amavata*. *Dhatra* leaves are used to treat pain. The paste of roasted leaves is applied over the area to relieve pain.^[5] *Dhatra* seeds and leaves are used as antiasthmatic, antispasmodic, hypnotic and narcotic. The leaves of *Dhatra* are good to relieve headache.^[6]

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AIMS AND OBJECTIVES

1. Pharmaceutical preparation of *Haragouri Rasa*.
2. Analytical study of *Haragouri Rasa*.

METHODOLOGY

- Extraction of *Parada* from *Hingula*.
- *Shodhana* of *Gandhaka*,

- Shodhana of Navasagara.
- Preparation of Kjjali.
- Preparation of Haragouri Rasa.

1) Hingulottha Parada Nirmana^[7]

Drugs used: Hingula 400 gms, Nimbu Swarasa 200 ml.

Apparatus: Khalva Yantra, juice extractor, knife, spatula, two equal sized mud pots, cloth, multani mitti, Agni Chullika, cold water, cotton pad, etc.

Procedure

- Ashodita Hingula was taken in a Khalva Yantra, and finely powdered.
- 200 ml of Nimbu Swarasa was added to powdered Hingula and triturated uniformly at a rate of 30 strokes / min for 3 Yama.
- Then allowed to dry in shade.
- Weight of dried Hingula powder after Bhavana was 450 gm. These powder was placed in the earthen pot; another large sized earthen pot was placed over it inversely.
- Upper pot is made with an adjustment of Toyadhara.
- Sandi Bandhana was done with a cloth smeared with multani mitti and dried. Such seven layers were applied after drying of the earlier one.
- Urdhwa Patana Yantra was kept over the Agni Chullika, Madhyamagni was given for 4 hrs and then Tivragni was given for 2 hrs.
- On self cooling, the next day Sandhi Bandhana was carefully removed. 2 pots were separated; mercury globules were collected from the upper pot by scraping with a plastic spoon and brush.
- Parada was filtered through double fold cloth to get clear mercury

RESULTS

Weight of S.Hingula powder	-	400gms
Weight of Parada extracted	-	240gms
Loss of weight	-	160gms

2) Shodhana of Gandhaka^[8]

Materials

1. Gandhaka : 250 gram
2. Godugdha : 1 litre
3. Goghrita : 125 ml

Equipments: Wide mouth earthen vessel, multani mitti, mortar and pestle, cloth pice, thread, cow dung cakes, weighing machine.

Procedure

A wide mouth earthen vessel is taken and filled with 1 litres of Godugdha and 125 ml of Goghrita, then the mouth of vessel is covered by a cloth and tied by thread. Coarse powder of Gandhaka (250 gms) spread upon the cloth and closed with another Sharava (lid) by placing in up down position. The edges of the both lids are sealed with multani mitti smeared cloth for seven times and allowed it to dry under sunlight. This Yantra (apparatus) is kept inside a pit (1.5 feet) beneath the surface of soil in such a way that, the brim of the vessel should be at ground level. Empty space of the pit around the apparatus was filled by soil. Upalas (25 Cow dung cakes) were kept on above side brim of the vessel and set on the fire. The sulphur, after melting by fire flows down through cloth into the vessel, contained milk and ghee. After Svangasita (self cooling), the apparatus is taken out from the pit and Sandhi Bandhana (seal) was opened carefully. Purified Gandhaka is collected from the bottom of vessel and washed with hot water (5 litre 550 ml) till Gandhaka gets free from oiliness of ghee. After that it is shade dried, weighed and stored in a clean jar.

RESULTS

Initial	-	250 gms
Final	-	245 gms
Loss	-	5 gms

3) Navasagara Shodhana^[9]

Materials: Ashoditha Navasagara - 100 gms, Jala - 300 liters

Equipments: Vessel, cora cloth, tray, beaker, spoon.

Procedure

Impure *Navasadara* is first dissolved in water and the water is filtered and spread in a flat pan and kept in sunlight or under fire. After evaporation of water, white crystals are formed.

Results of *Navasadara Shodhana*

Initial weight of *Navasadara* - 100 gms

Weight of *Navasadara* after *Shodhana* - 90 gms

Loss of weight after *Shodhana* - 10 gms

4) Preparation of *Haragouri Rasa*^[10]

POORVA KARMA

A) Name of Practical : Preparation of *Kajjali*

Materials : *Hingulottha Parada* - 240gms
Shodhita Gandhaka - 80gms.

Equipments : *Khalwa Yantra*, Spatula.

Procedure

240 grams of *Hingulottha Parada* was put in *Khalwa* and 80 grams of finely powdered *Shodhita Gandhaka* was added and triturated. Triturating was done slowly with uniform speed till all the *Kajjali Lakshanas* were observed i.e. the whole mixture converts into a fine, black, smooth, lusterless powder.

B) Preparation of *Kachakupi*

C) Preparation of mixture (*Kajjali*) for HGR

Materials : *Parada + Gandhaka* mixture - 300 gms

Shodhita Navasadara - 22.5gms.

Equipments : *Khalwa Yantra*, Spatula.

Procedure

300 grams of *Kajjali (Parada + Gandhaka)* was put in *Khalwa* and 22.5 grams of finely powdered *Shodhita Navasadara* was added and triturated. Triturating was

done slowly with uniform speed till all the ingredients are properly mixed.

D) *Bhavana with Datura Patra Swarasa*

Materials : *Kajjali (Parada + Gandhaka + Navasadara)*
Dhattura Patra Swarasa - 50ml

Equipments : *Khalwa Yantra*, spoon.

Procedure

Mixture of *Kajjali + Navasadara* - 324 g and *Dhattura Patra Swarasa* - 50 ml is added and triturated. Triturating was done slowly with uniform speed till all the ingredients were properly mixed.

RESULT

Weight of mixture (*Kajjali + Navasadara*) - 324 gms

Weight of *Navasadara* - 22.5 gms

Total weight of mixture of *Kajjali* - 327 gms

Weight gain - 03 gms

E) *Kupi Poorana*

Materials: *Kajjali* - 225 gms. weighing machine, *Kacha Kupi*, funnel, glass rod.

Total height of the *Kupi* measured i.e. - 27 cms

Procedure

225 grams of *Kajjali (Haragouri Rasa)* was slowly filled into a *Kacha Kupi* with the help of a funnel and a glass rod. The lower 1/3rd of the *Kupi* was filled with *Kajjali* it measures upto 6.5 cms. Gap or empty space in *Kupi* was 18 cms.

F) Placement of *Kupi* in *Valuka Yantra*.

PRADHANA KARMA

The temperature was maintained according to the classical procedure i.e. *Kramagni Tapa*.

For the first 16 hrs *Mrudvagni* was given i.e. temperature maintained between 125°C to 250°C. Next 16 hrs *Agni* was gradually raised to *Madhyamagni* stage i.e. 250°C to 450°C. *Tivragni* was

given for 16 hours. Temperature maintained between 450°C to 850°C for 2hrs.

Table 1: Showing observations during the preparation of HGR

Time	Observations
1-3 hr	<i>Agni</i> is given and maintained in mild temperature.
3-6 hr	Slight white fumes were coming out of <i>Kupi</i> .
6-9 hr	The fumes became slight dense inside of <i>Kupi</i> , but bottom of <i>Kupi</i> can be seen with torch.
9-12 hr	The fumes became dense, can't see the bottom of the <i>Kupi</i> with torch. Slight sulphur with irritant smell found. Still dense brownish fume found inside the <i>kupi</i> and even fumes have seen come out of <i>Kupi</i> .
12-15 hr	Slight yellow particles were adhered to the neck of the <i>Kupi</i> .
15-18 hr	Dense yellow fumes observed with irritant odour.
18-21 hr	Yellow substance started to collect outside the neck of the <i>Kupi</i> .
21-24 hr	Same observations noticed.
24-27 hr	Dense yellow fumes observed with irritant odour. Yellow substance started to collect outside the neck of <i>Kupi</i> .
27-30 hr	Partially Melting of the <i>Kajjali</i> seen at the bottom through torch light.
30-33 hr	Small Mercury globules seen at the bottom of the <i>Kupi</i> .
33-36 hr	Honeycomb appearance.
36-39 hr	Bluish flame appeared inside <i>Kupi</i>
39-42 hr	Flame disappeared
42-45 hr	Slight fumes found after inserting <i>Tapta Shalaka</i>

45-48 hr	Copper foil test positive, Corking done, <i>Teevragni</i> started.
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PASCHAT KARMA

A) Removal of *Kupi* from *Valuka Yantra*.

Breaking of *Kupi* and collection of *Haragouri Rasa*.

Materials: Knife, thread, kerosene, matchbox, wet cloth and *Kupi* containing final product.

Procedure

After complete cooling of the *Bhatti*, *Valuka Yantra* was removed out from the *Agni Bhatti*. The mud smeared cloth layers of the *Kupi* were scrapped out with a knife. A jute thread dipped in *Kerosene* was tied at the middle of the *Kupi* and Ignited. When the whole thread gets burnt off, wet cloth was wrapped around that burning thread where it is tied. The bottle gets broken into 2 halves with a breaking sound. The product was collected and stored in a clean sterile container.

RESULT

Total weight of *Kajjali* - 225gms

Obtained product - *Kantastha* - 157 gms.

Residue - 3 gm

Loss - 68 gms

Colour of the product - *Kantastha* - *Sindhura Varna*

ANALYTICAL STUDY^[11]

The study has been divided into two parts

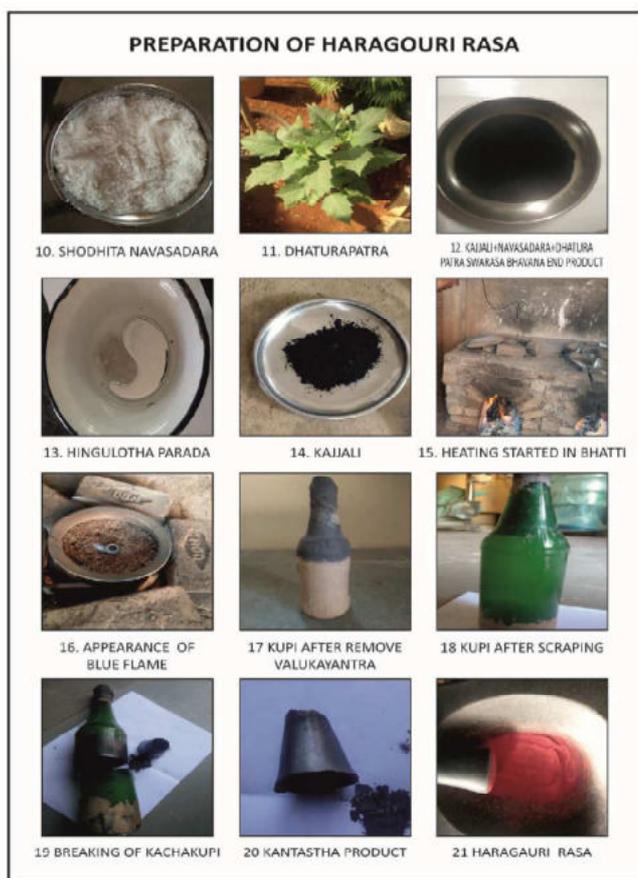
- Physical analysis
- Chemical analysis

1. Physical Analysis

Organoleptic characters

- Colour : Saffron
- Odour : Characteristic
- Touch : Amorphous

- Taste : Tasteless



2. Chemical Analysis and Results

SN	Tests	Result
1	Determination of pH Value	3.19 %
2	Determination of Total ash Value	BDL
3	Determination of Acid Insoluble ash	BDL
4	Determination of Water soluble ash Material	BDL
5	Determination of loss on drying	1%

DISCUSSION

- Kupipakwa Rasayana* preparation method is much exhaustive and complicated, but has its own significance because of specific pharmaceutical process and excellent clinical results with minimum therapeutic dosage.
- Haragouri Rasa* is *Sindhura Varna*.
- The change in black colour of *Kajjali* to *Sindhura Varna*, after the heat contact may be due to change in their allotropic form (Stoichiometry) and rearrangement of crystalline structure.
- At different temperature Mercuric Sulphide will change from meta cinnabar form to cinnabar.
- Nischandratva* indicate absence of mercury in elemental form. *Varitaratva* confirmed the fineness of the product.

CONCLUSION

Kupi Pakwa Rasayana is unique because of long standing sustained gradual heat pattern, the potency of drug is significantly increased, stability is attributed by lattice energy, hence enhanced bio-availability reaches the target area instantaneously. *Haragouri Rasa* is a unique procedure of *Kupipakwa* preparation

which is a *Saagni, Sagandha Murchana of Hingulotha Parada, Gandhaka* and *Navasadara* in the ratio of 3:1:1/10 through *Kramagni Paka* for 16 *Yama's*.

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