PHARMACEUTICALLY – ANALYTICAL STUDY OF HINGULIYA MANIKYA RASA – A KUPI PAKWA RASAYANA

Nischitha¹ and Dinesh²

¹Assistant Professor, Dept. of Rasa Shastra, JSS, AMC, MYSORE
²Physician, Bangalore

ABSTRACT
Rasa Shastra is the Ayurvedic chemistry, the science of life which deals with mercury and its processings. The induction of new physical and chemical properties to the drug by this unique technology can be investigated scientifically through analytical, Biochemical, pharmacological and Toxicological studies which may contributes to standardise the Rasa formulations in global market. The quality of the pharmaceutical products depends not only on the care taken in its preparation but also in confirming that the material has been correctly identified and then Heated and properly processed. Khalvi Rasayanas comes under murcchna variety intended to render the chapalatva and durgrahatva of Parada and potentiating it. It is one such category of Kajjali, where in Phytomedicine are triturated and pharmacologically has various advantages. The specialty of Khalvi Rasayana lies is binding different varieties of drugs into a single molecular form and there by minimizing the dose. Kupi pakwa rasayana impose proper particle size to drug, proper mixing occurs and gives the proper form to the final product.

KEYWORDS: Rasa Shastra, Khalvi Rasayana.

INTRODUCTION
• Khalvi Rasayana, Parpati Rasayana, Kupipakwa Rasayana and Pottali Rasayana have been regarded as parada yogas
• Kupipakwa Rasayanas are said to be popular and therapeutically effective mineral preparation of Rasa Shastra
• Preparations in Ayurvedic therapeutics have to be considered for their high potency, therapeutic efficacy and least toxicity in treating almost all types of ailments.

Aims and Objectives
• Preparation of Hinguliya Manikya Rasa by Kupipaka method for 72 hours.

Physico-Chemical analysis of Hinguliya Manikya Rasa
METHODOLOGY

Initial weight of Hingula : 300gms
Final weight : 290 gms
Loss of weight after Shodhana: 10gms

Initial weight of Gandhaka : 300gms
Weight after Shodhana : 450 gms
Loss of weight after Shodhana: 50gms

Initial weight of Hartala : 270 gms
Weight after Shodhana : 255 gms
Loss of weight after Shodhana: 15gms

Initial weight of Kajjali : 330 gms
Weight of Kajjali after mardana: 310 gms
Loss of weight : 20 gms

Observations

The Kupi Paka was done for 72 hours continuously in Kramagni and the observations made during that time is as follows

- Fumes observed totally for 40 hours.
- The odour of fumes was Arsenic odour but initially it was sulphur odour.
- When the fumes are thick the odour was also strong.
- Flame was observed for 4 hours.
- When hot shalaka was removed out of Kupi blue flame seen at the lower end of hot Shalaka.
- For Corking the mouth of Kupi, Mud Cork was used.
- Cold Shalaka was inserted to assess the state of Kajjali at different Stages of Agni.
- The heat was increased in three Successive Stages.
- Wood was drawn at 53 hours 10 minutes to facilitate the process of corking
- Valuka Yantra took fourteen hours for Swanga Sheeta.
- The maximum temperature attained throughout the procedure was 718°C.
- The intensity of heat was more from 40th-47th-hours.
**Physical Tests**

Ancient parameters carried out for Hinguliya Manikya rasa were as follows

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varna</td>
<td>Reddish brown</td>
</tr>
<tr>
<td>Sparsha</td>
<td>Smooth, fine (Mrudu)</td>
</tr>
<tr>
<td>Gandha</td>
<td>Non-specific</td>
</tr>
<tr>
<td>Rekha purnatva</td>
<td>When fine powder of Hinguliya Manikya Rasa was rubbed in between first finger and thumb it settled in furrows of fingers.</td>
</tr>
<tr>
<td>Varitaratwa</td>
<td>A small amount of Fine powder of Hinguliya Manikya Rasa floated on water.</td>
</tr>
<tr>
<td>Nischandratva</td>
<td>The Hinguliya Manikya Rasa was devoid of any shining particle</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Physical Tests</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acid Insoluble Ash</td>
<td>0.19 %</td>
</tr>
<tr>
<td>Loss on drying</td>
<td>0.20 %</td>
</tr>
<tr>
<td>Total Ash</td>
<td>0.32 %</td>
</tr>
<tr>
<td>Water soluble extractive</td>
<td>10.3%</td>
</tr>
<tr>
<td>Alcohol Soluble Extractive</td>
<td>1.2%</td>
</tr>
<tr>
<td>pH</td>
<td>5.3</td>
</tr>
</tbody>
</table>
CONCLUSION

- **Hinguliya manikya rasa** preparation needs about 72 hours by kupipaka method.

The observations and results of ESCA of Hinguliya Manikya Rasa were interpreted by experts of IICT.

- The elements detected by ESCA are Hg, S, As, O and C.
- Mercury indicating to be present in the form of HgS due to the Binding energy of 101 ev and no elemental Mercury is present.
- Arsenic is indicating to be present in the form of As$_2$Se$_3$ (Arsenic Selenide) due to the binding energy of 43 ev and no elemental Arsenic present.
- Sulphur, indicating to be in the form of complex due to the binding energy of 163 ev.
- Oxygen is present at Binding energy of 533 ev as Hinguliya Manikya Rasa is a Bahirdhuma process.
- Carbon is present at Binding energy of 285 ev it may be due to the burning of organic compounds present in the product.
• Time required for attaining sindoora lakshana is proportional to the quantity of raw material used
• ESCA study of finished product suggests presence of Mercuric arsenous selanide
• Presence of selanide (Selanium radicle) must be related to the Rasayana effect of Hinguliya manikya rasa.

REFERENCES
2. Ibid, 1st Chapte, Version 20-22, 24 pp