PHARMACEUTICAL PREPARATION AND ANALYTICAL STUDY OF AMEER RASA

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ABSTRACT

Rasashastra, the ancient alchemical science, a branch of Ayurveda originated with the twin aim of attaining Deha Siddhi and Loha Siddhi. But in the due course of time, this science became more oriented towards Deha Siddhi and for therapeutic purpose. A careful survey of the original texts on Rasashastra shows that the subject covers the entire field of inorganic pharmaceutical preparations like metallics, non-metallic compound of Ayurvedic materia medica. These Rasausadhis are appreciated for their smaller dosages, quicker effectiveness, long durability etc. Thus the rasausadhi preparations play an important and major role in curing the allaying human beings. Ameer Rasa is a product with Rasakarpura, Rajata (Silver) Gota, Suddha Hingula, Dalachikana (Hydrargyrum Ammoniatum) and Saindava lavana (Rock Salt). This study includes formation and Chemical Analysis of Ameer Rasa.

KEYWORDS: Ameer Rasa, Rasakarpura, Nirgandha Murchana.
1. INTRODUCTION

The Rasaausadhis are the backbone of the Ayurvedic therapeutics. It is chiefly based on metals and minerals, small doses, tastelessness, quick action, effectiveness; Rasayana property make rasaausadhis more popular and superior over the other medicines and this attract the attention of patients as well as pharmaceutical manufacturers. Ameer Rasa \[^1\] is a Nirgandha \[^2\] type of Murchhana \[^3\]. The reference of Ameer Rasa does not found in all four Vedas and also in Brihatrayi and Laghutaryi, it is found only in Siddhabheshajamanimala. Pharmaceutical preparation of Ameer Rasa takes place in two steps, first formation of Rasakarpura with Suddha Parada\[^{[4]}\] (Murcury), Ganghakamala (Conc. H\(_2\)SO\(_4\)), Saindhava lavan and then formation of Ameer Rasa with Rasakarpura, Rajata (Silver) Gota, Suddha Hingula, Dalachikana and Saindhava lavana. Rasakarpura is a Kupipakva Rasayana, Among the Rasausadhis Kupipakva Rasayanas are more unique due to their specific method of preparation, long shelf life and medicinally more valuable for physicians and patients. It is a highly toxic drug in drug & cosmetic act 1940\[^{[5]}\] if it is not used in a systematic manner. It is very well known fact to Ayurvedic physicians so they have taken certain measures to be covered in Munnaka and Guda or mixed with other herbal drugs in very minute doses. Parada\[^{[6]}\] occurs in nature in various forms, as it is very active substance so it occurs in compound state. In the classical text of rasashastra Hingula\[^{[7]}\] is main ores of parada from which Suddha parade\[^{[6]}\] can be obtained. Higula (Cinnabar-Hgs) it is chemically mercuric sulphide and diamosphus depending upon the impurities present in different quantity. It occurs in different colours hence it is described as different names- Hanspada Hingula, Darada Hingula, Charmara Hingula, Pravalabha Hingula, Daityendra Rakta and Girisindoore. Dalachikna (Hydrargyrum Ammoniatum) is a White Precipitate. The Precipitate produced when Liquor Ammonia is added to a solution of Rasakarpura and distilled water. Rajata\[^{[8]}\] (Silver) is a chemical element with soft, white, lustrous metal, the metal occurs naturally in its pure, free form (native silver). Silver has long been valued as a precious metal. The guna\[^{[9]}\] of Rajata is Ayushya, Vrishya, Medhavardaka and Vatapittashamak. Saindhava lavana is the best Lavana, It is one lavana which is having Sheeta Virya. It has mainly sodium chloride with trace elements of sodium sulphate, sodium carbonate and sometime calcium and magnesium chloride is also found.

2. AIM AND OBJECTIVE

1. Preparation of Rasakarpura.
2. Preparation of Ameer Rasa.
3. Chemical Analysis of Ameer Rasa.

3. MATERIAL AND METHODS

A. Step 1: Preparation of Rasakarpura

MATERIALS

Main Contents

- *Suddha Parad* (60 gms), *Sandra Gandhakamala* (Conc. Sulphuric Acid) (90 ml), *Saidhava lavana* (100 gms).

INSTUMENTS


METHOD

Rasakarpura is generally prepared by method given in *Rasa Tarangini*, due to easy and convenient preparations method. By this method, 60 gms purified *Parada* (mercury) and 90 ml *Gandhakamla* (conc. Sulphuric acid) are taken in a glass vessel and placed on a tri-pot. It is heated with a spirit lamp till the mixture becomes moisture less powder. Then equal amount of *Saindhava Lavana* (rock salt) is mixed by grinding and this mixture is filled in *Kachakupi* and after proper setting, heat treatment is given by *Valuka Yantra* for 12 hours. After self cooling *kachkupi* and examine the position of *Rasakarpura*, breaks the *kachkupi* (kupibhedan) and collect the drug.

B. Step 2: Preparation of Ameer Rasa

MATERIALS

Main Content

- *Rasakarpura* (50 gm), *Suddha Hingula* (50 gm), *Rajata* (Silver) Gota (50 gms), *Dalachikna* (50 gms) and *Saindhava Lavan* (200 gms).

INSTURMENTS


METHOD
Taken a iron pan make a circular line of saindhava lavan (Rock salt) on the pan then put small pieces of Rajata patra (silver foil), now put the coarse mixture of Rasakarpura, Sudh hingula and Dalachikna and again cover the total mixture with silver foil, After this whole drug covered with a sarava (Earthen pot) and Sandhibandhan\textsuperscript{17} is made with Vanhimritti. Then after iron pan is placed on gas stove and heat treatment is given for nine hours. After self cooling sandhibandhana is removed and collect the drug from internal side of sarava.

5. RESULTS
1. For Rasakarpura, Sadhu Parad (60 gms), Sandra Gandhakamala (Conc. Sulphuric Acid) (90 ml), Sadhava Lavana (100 gms) - obtained Rasakarpura 70gm, 180gm substances lossed. This loss in weight of the substances due to process of jarana.
2. For Ameer Rasa, Rasakarpura (50 gm), Sudhha Hingula (50 gm), Rajata (Silver) Gota (50 gms), Dalachikna (50 gms) and Saindhava Lavan (200 gms) – obtained 85gm, 315gm material lossed. This loss in weight of the material due to process of jarana.
3. In chemical analysis, (1) White crystalline power, Odourless (2) U.V. spectral Analysis wave length 210 nm to 430 nm of 1 % w/v - Does not show absorbance, (3) pH of 5.0 % w/v suspension was 4.95 (4) Ash Value was 0.223 % w/w (5) Loss of Drying 0.176 % w/w (6) Acid insoluble ash was 0.087 % w/w, (7) Iron cal. (as Fe) 0.261 % w/w (8) Mercury (as Hg) was 68.75 % w/w (9) Silver (as Ag) was 0.106% w/w (10) Sulphur (as S) was 0.725 % w/w measured for Ameer Rasa.

![Temperature and Time relation](image)

**Fig.1:** Temperature and Time relation.
After preparation of Ameer Rasa the samples were taken for chemical analysis. Samples were carried out at Oasis Test House Limited, Jaipur (Ref. No. G/3/16/08/3063).

Table 1: Chemical Analysis of Ameer Rasa.

<table>
<thead>
<tr>
<th>S. No.</th>
<th>Parameter</th>
<th>Observation</th>
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<tbody>
<tr>
<td>1.</td>
<td>A. Description</td>
<td>White crystalline power</td>
</tr>
<tr>
<td></td>
<td>B. Odour</td>
<td>Odourless</td>
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<tr>
<td></td>
<td>C. Appearance</td>
<td>Crystalline power</td>
</tr>
<tr>
<td>2.</td>
<td>U.V. spectral analysis wave length 210 nm to 430 nm of 1% w/v</td>
<td>Does not show absorbance</td>
</tr>
<tr>
<td>3.</td>
<td>PH of 5% w/w solution</td>
<td>4.95</td>
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<tr>
<td>4.</td>
<td>Loss of drying</td>
<td>0.176 % w/w</td>
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<td>5.</td>
<td>Ash Value</td>
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<td>Acid in solution ash</td>
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<tr>
<td>10.</td>
<td>Mercury (as Hg)</td>
<td>68.75 % w/w</td>
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STEP 1 – PREPARATION OF RASAKARPURA

Fig. - 3 Suddha Parada, Gandhakamala, Saindhava lavana.
STEP 2 – PREPARATION OF AMEER RASA

4. DISCUSSION

A. Agni and Temperature measurement
Agni indicates the time limit for maintenance of heating pattern. Mridu, Madhyam and Tivra agni was maintained for Rasakarpura (12 hours) and for Ameer Rasa (9 hours) each and the temperature pattern was recorded.

B. Shalaka Sanchan
Insertion of hot and cold iron rod and observation of fumes, to burn substances deposited at the neck of kachkupi at the time of Rasakarpura formation.

C. Fumes and Flame
All the appearance of flames and flame like colour, intensity, duration were noted at the time of rasakarpura and Ameer Rasa preparation.
D. Corking of kachkupi

The parameters like absence of fumes from bottle, absence of flames, absence of fumes and red hot appearance at the bottom of kachkupi indicates the time of corking. Copper plate test also indication of corking. A piece of brick wrapped with muslin cloth being smeared with mixture of multani mitti is used for corking.

The temperature ranges for maintenance of Mridu, Madhyam and Tivra (heating pattern) were recorded as follows; the temperature ranges were recorded as in Fig. - 1for Rasakarpura and in Fig. - 2 for Ameer Rasa.

6. CONCLUSION

This work was aimed at implying simplicity and uniformity in the preparation of Ameer Rasa. The maximum output of final product of Ameer Rasa was 21.25%. Ameer Rasa prepared by this method will substantially prove to be helpful for Rasavaidyas who believe in preparation of Ameer Rasa by this method is easy to execute, require minimum agni in terms of temperature and time duration can be easily manage, this gives a defined sequence of processes involved in formation of Ameer Rasa by which one can perform the work scientifically to obtain expected output. Present study of Ameer Rasa has done out, in future this can be helpful in the medication of Upadansh (Gonorrhea) patient and also in other research work.

7. REFERENCES


