

AN ENLIGHTENMENT ON *RASAKRIYA KALPANA*

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Abstract

There has been a great change in the drug dosage forms from the ancient to the modern texts of Ayurveda to increase palatability and also to help for the easy absorption of the drug. *Rasakriya* is one such dosage form which can be administered in very meager doses when compared to the whole plant drug. Preparation of the *Rasakriya* requires a skillful technique to get the maximum output. Hence the practical aspects of the preparation of the *Rasakriya* along with the standardization techniques have been enumerated in this article.

Keywords: Ayurveda, *Rasakriya*, Standardization.

Introduction:

Since the evolution of Ayurveda, the Acharyas have been trying to prepare the drugs in different forms for the palatability and for the faster action. In this process *Rasakriya* has been mentioned in the texts as one of the easy and better way of the drug administration. *Rasakriya* was said with different synonyms like *Lehya*, *Avalehya* etc. In Charaka Samhita, *Lehya* preparations are widely seen for various ailments. But *Rasakriya* preparations are not seen. But the use of rasanjanam is seen which is prepared by the similar process of *Rasakriya*.

In Sushruta Samhitha while describing the treatment of the *Vrana* has described the use of *Haridra* and *Daruharidra* *Rasakriya*. Then in the *Shaarangadhara Samhitha*, which is considered to be the best text for the *Baishajya Kalpana* has described in the madhyama khanda about the *lehya kalpanas* and he has given *Rasakriya*, *lehya* and *Avalehya* as the synonyms for the *Rasakriya*.

These preparations are comparable to the **Confection** and are called as **Majun or Kamira** in Unani medicine. The process of the *Rasakriya* is considered to be similar to the preparation of the aqueous extraction of the drug. It is considered to contain all the active principles as that of the whole drug. So the dosage of the drug can be reduced by giving the drug in the *Rasakriya* form and also the palatability of the drug is still more increased by adding sugar or jaggery to the *Rasakriya* and preparing it as syrup. This increases the palatability and also helps for the easy absorption of the drug.

This shows the consciousness of the Acharyas in processing the drugs for the better palatability and faster action.

Method of Preparation of the *Rasakriya*:

Materials:

1. Paatra (A large vessel)
2. Kosti (Stove)
3. Match box
4. Darvi (Spoon)
5. Vastra (Cloth for filtration).
6. Water (Water)
7. Dravya (Drugs)
8. Udukhala yantra (Pounding machine)
9. Weighing machine

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Types of preparation of Rasakriya:

Generally *Rasakriya* is prepared in two methods.

In the first method, juice or decoction is heated into a semisolid state and then fine powders of the prakshepa dravyas are added.

In the second method first jaggery or sugar is mixed with water and heated till it becomes syrup and then the prescribed drugs are added.

Method of preparation:

One part of the coarse powder (*kwatha churna*) of the drug, of which *Rasakriya* has to be prepared, is taken in a large vessel and 16 parts of the water is added to it. Then it is kept on the *kosti* (stove) and boiled on a low flame (*Mandagni*), till only 1/4 parts (4 liters) of the water remains. Then it is filtered and the filtrate is taken in a fresh vessel and again boiled in a water bath till it becomes semisolid (*Ghanatwam*). Then this semisolid substance is taken out of the flame and allowed for drying in hot air oven. After the substance is dried properly, it is collected. The substance thus obtained is called as the **RASAKRIYA** of that particular drug.

Precautions to be taken while preparing Rasakriya:

The plant powder that is used should not be very coarse. It must be near to the fine powder.

1. The temperature is maintained at such a level that *kwatha* should not boil and overflow from the vessel.
2. To boil the filtrate water bath has to be applied, to maintain the temperature.
3. Lid should not be kept on the vessel while boiling it.
4. After the substance becomes semisolid it should be taken out of the flame, otherwise the *Rasakriya* will be charred.

5. *Prakshepa dravyas* should be added at the end of the preparation when it is still hot.
6. *Sugandha dravyas* and *Madhu* (Honey) should be added after the preparation becomes cool.

Observations during the preparation of the Rasakriya of different plants:

1. The *Rasakriya* obtained from the dravyas will be around 1/10 to 1/20th part of the original quantity of the dravya.
2. During the preparation of the *Rasakriya* of the drugs containing fixed oils, fixed oil particles are seen which will evaporate during the boiling. And the final product appears to be dry.

Tests mentioned in the texts for the Rasakriya:

There are tests mentioned for *Rasakriya* both at the preparation stage and fully formed stage.

1. During the preparation of the *Rasakriya*, if the preparation starts sticking to ladle (*Darvipralepa*), take a little quantity of it and pour in water to see if it sinks (*Apsumajjathi*) and must be seen sinking in the form of threads in water (*Tantumantham*). Then we have to think that the *Rasakriya* is properly formed and it has to be taken out of the flame. Then it is dried in sunlight.

2. And after it is properly dried then it must form finger prints when pressed (*Angulipeeditemudra*) and must have the good taste, odour and colour (*Prakruta rasa, gandha and varna*).

Analytical specifications of Rasakriya:

- Organoleptic Properties (Description, Colour, Taste, Odour)
- Loss on drying
- Total ash
- Acid soluble ash
- pH
- Total solid
- Fat content

- Identifications TLC/HPTLC
- Test for heavy metals like lead, cadmium etc
- Microbial contamination (Total bacterial count, Total fungal count)
- Test for specific pathogen (E.Coli; Salmonella etc)
- Pesticide residue (Organochlorine pesticides; organophosphorus pesticides etc)
- Test for Aflatoxins (B₁, B₂, G₁, G₂)

Method of administration of the Rasakriya:

The *Rasakriya* can be given orally by preparing pills.

Dosage:

Sharangadhara mentioned the dosage of *Rasakriya* as 1 pala (48 gms). In *Dravyaguna vijnana paribhasha* the dose is mentioned as one karsha (10-12 gms).

Time of administration:

According to Bhaishajya Ratnavali, the preparations should be given in evening time in case of *Urdhvajatrugata rogas*. In case of *adobhaga rogas* it should be administered before food (**Prakbhakta**).

Preservation:

It should be stored in China clay or glass jars containers which are air tight.

Shelf life:

According to Sharangdhara the shelf life of these preparations is one year.

Advantages:

- Increasing of shelf life
- Minimization of dosage
- Palatability

Discussion and conclusion:

On the basis of the description of the classical texts, the evolution of *Rasakriya* has taken place basing upon the shelf life, minimization of dosage and palatability of the primary preparations of

Ayurvedic pharmaceuticals viz. Swarasa, Kalka, Kwatha, Hima and Phanta. In the present context we have tried to enumerate the practical aspects and utility of the *Rasakriya kalpana* in view of development of new dosage forms for Ayurvedic therapeutics. The opinions of different authors were one and the same in the preparation of *Rasakriya* with minute variations. That is the definition found in *sharngdhara samhita* for *Rasakriya* is given as the same for *Avalehya*, *Lehya* and *Prasa*. Sharngdhara followed the Dalhana definition that is further heating of decoction etc preparations to Ghanatwa, means nearly solid state. The same preparation can be compared literally and technically in present day life with confection or solid extract or concentrated extract prepared from the liquid extracts of the drugs.

During the preparation of the *Rasakriya*, the *prakshepa dravyas* should be added basing on the type of preparation viz, in few preparations the *prakshepa dravyas* should be added at the end of the preparation when it is still hot. *Sugandha dravyas* and *madhu* (Honey) should be added after the preparation becomes cool.

By comparing the references by Sharngdhara and *Dravya guna vijnana paribhasha* the dosage of the *Rasakriya* preparation can be taken as 50 gms in divided doses as per the need of the present day scenario.

The characteristics of *Rasakriya* as mentioned in Sharngdhara and other different texts are comparable to each other with few minute variations like *kharatva* (roughness) and *saratva* (semisolid).

In the present context, it has been tried literally to evaluate the concepts of *Rasakriya* with the practical knowledge of the preparation of the *Rasakriya* for the enlightenment of the Ayurveda fraternity and pharmaceutical industry.

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