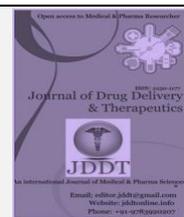


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Research Article

## An Ayurveda Perspective on *Khageshwar Rasa* W. S. R. to *Rasayogsagar*

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### ABSTRACT

The stream of ayurveda science that deals with therapeutics properties of minerals, precious stones, metals and poisonous herbs is termed as *Rasashastra*. This branch not only related with therapeutic properties of *Rasaushadhies* but deals with processing of *Rasa-Dravyas*. The *Rasa* drugs help to treats many diseases and imparts rejuvenating effects. The theories and principles of *Rasashastra* help to convert toxic substance into non-toxic life saving medicines. The process involved in the preparation in of such drugs need to be followed carefully and must be analyzed to ensure safety of formulations. Considering this current study presented various analytical aspects related to the *Khageshwar Rasa*.

**Keywords:** *Ayurveda, Rasashastra, Khageshwar Rasa, Analysis*

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### INTRODUCTION

*Rasashastra* the important therapeutic modality of ayurveda which provides several theories and principles for the management of diseases using mineral and metal based formulations. *Rasashastra* mainly deals with preparations and uses of *Bhasmas, Kharaliya, Pistis, Kupipakva Rasayanas, Parpati* and *Pottali* etc. The preparations of such drugs needed uses of specific techniques like; *Shodhana, Jarana* and *Marana*, etc. These procedure converts non-consumable, toxic materials into safe and edible forms. The procedures adopted to prepare such drug must be followed as per guideline; moreover authenticity and safety of drugs must be checked through various analytical techniques which also confirm validity of procedures.

The optimization of preparatory stages is prerequisite to control quality of final product. Therefore in present study an attempt was made to perform analytical study of *Khageshwar Rasa* as per Ayurveda and modern science. Study aimed to authenticate quality and safety of raw materials and procedures involved in the preparation of *Khageshwar Rasa*. Study also establishes quality and standardization parameters for *Khageshwar Rasa*.

### MATERIALS AND METHOD

*Khageshwar Rasa* prepared as per classical methods described in ancient texts of ayurveda and subjected to analytical studies as follows:

#### Analytical study

1. Physical analysis as per ayurveda
2. *Kajjali Pariksha*
3. Loss on drying
4. Total Ash
5. Acid insoluble Ash
6. Water soluble Ash

#### Experimental study

1. **Physical analysis as per ayurveda**

Physical analysis performed as per classical concepts of ayurveda and formulation checked for parameters such as; *Shabda, Sparsha, Laghuta, Shlakshna, Rasa* and *Gandha*, etc.

##### ✚ *Shabda*

Checked for metallic sound when crushed by teeth.

##### ✚ *Sparsha*

Formulation checked for the presence of coarse particles which can be detected by touch.

##### ✚ *Varitaratva*

Capacity of product to floats on the surface of water was investigated.

#### ✦ **Nirdhuma**

Production of smoke observed when putting over the fire.

#### ✦ **Rekhapurnatva**

Formulation was rubbed between thumb and index finger to observe properly of *Rekhapurnatva*.

#### ✦ **Rasa**

Formulation tested for its tasteless property.

### 2. **Kajjali Pariksha**

#### ✦ **Rekhapurnatva**

*Kajjali* was rubbed in between thumb and index finger to check whether it was entered the furrows of finger or not.

#### ✦ **Varitaratva**

It should possess property of *Varitaratva* when puffed on the surface of water.

#### ✦ **Nishchandravta**

*Kajjali* was rubbed on palm with a drop of water and was observed in bright sunlight for appearance of any shiny particle.

### 3. Loss on Drying

About 2 gm sample was dried at 105°C in a china dish, cooled in desiccator and weighed. Procedure repeated again until the constant weight and loss on drying was calculated as per standard formulae.

### 4. Total Ash

About 2 gm was incinerated at a temperature not exceeding 450°C, cooled and weighed. Procedure repeat till to get constant weight and total ash value was calculated.

### 5. Acid Insoluble Ash

Ash of sample was treated with dil. HCL and insoluble matter was collected and washed with hot water then insoluble matter was transferred to original crucible dried on hot plate and ignited to constant weight, this gives percentage of acid insoluble ash.

### 6. Water soluble Ash

Ash of sample was treated with 25 ml of water then insoluble matter was collected on filter paper, washed and ignited for 15 minutes. The subtracted value provides percentage of water soluble ash as per standard formula.

## RESULTS AND DISCUSSION

The observations made during study were reported in **Table 1**.

**Table 1: Analysis of Khageshwara Rasa**

S. No.	Parameters	Observations/results
1	<i>Shabda</i>	Absence of metal particles
2	<i>Sparsha</i>	Smooth & <i>Shalakshna</i>
3	<i>Rupa</i>	Black & Lustrous
4	<i>Gandha</i>	<i>Nirgandha</i>
5	<i>Varitartva</i>	Float on water
6	<i>Rasa</i>	Tasteless
7	Loss on drying	1.84%w/w
8	Total Ash	24.25%w/w
9	Acid insoluble Ash	3.36%w/w
10	Water soluble Ash	2.37%w/w

*Khageshwara Rasa* is considered as *Kupipakvarasayana* prepared from *Parada*, *Gandhaka* and *Kasisa* along with *Bhavana* of *Arjuntwakakwath*. The findings of analytical study suggested following characteristics of *Khageshwara Rasa*:

#### ➤ **Shabda**

There were no free metal particles observed in *Kajjali*.

#### ➤ **Sparsha**

It indicates smoothness.

#### ➤ **Varitartva**

Study indicates low density of formulation so it can float on water.

#### ➤ **Rasa**

Tasteless; free from metallic taste as it should be like other metallic formulations.

#### ➤ **Gandha**

Formulation does not impart smell of sulphur or other metal means free from typical metallic characteristics.

The study on modern parameters indicates that it possess significant amount of ash since Total Ash Value was observed 24.25%w/w, the component of Acid Insoluble Ash was found to be more as compared to Water Soluble Ash. Loss on drying was found below 2 %w/w which indicates complete drying or free from moisture content which is important to restore shelf life of such formulations.

## CONCLUSION

Study observed low moisture content in *Khageshwara Rasa*, study concluded presence of inorganic matter in formulation since ash value observed at higher side. Acid insoluble Ash was found to be 3.36%w/w, so it can be concluded that more than 90% drug may be absorbed in body for therapeutic action. The formulations possess most of the characteristics properties of herbo-metallic formulations since it was observed free from metal particles, possess smoothness, low density and tasteless. It does not impart smell of sulphur or other metal means free from typical metallic odour. Study concluded that these analytical studies can be used to authenticate quality of *Khageshwara Rasa*; however further standardization studies with validation parameters recommended to establish quality of *Khageshwara Rasa*.

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