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ANALYSIS OF RASAPUSHPA EMPLOYING NAMBURI PHASED SPOT TEST (NPST)

Pharmaceutical Science

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ABSTRACT

Rasapushpa is commonly used in Kupipakwa Rasayana, a herbo mineral preparation. This is prescribed for different diseased condition Which acts as pittahara, mutrala, vranadosha hrit, virechaka, krimihara and bhootha vishapaha. A product must first undergo a systematic study before being introduced to the market. We selected Namburi Phased Spot Test (NPST) analysis as a qualitative stage and to assess the quality of rasapushpa in the present study. The observed outcome was brick red in the centre, and the brown ring fully fades towards the periphery with a large extent, showing the quality of Rasapushpa with that of standard.

KEYWORDS

Rasapushpa; NPST analysis; Brick red; Phases; Kupipakwa rasayana

INTRODUCTION:

Rasapushpa (Calomel-Mercurous chloride Hg2Cl2) is one such Nirgandha saagni murchitha, Kantastha bahirdhuma kupipakwa preparation. Which acts as pittahara, mutrala, vranadosha hrit, virechaka, krimihara and bhootha vishapaha. Formed by Shodhita Parada, shodhita Kaseesa, and Saindhava lavana in equal quantity. In Murchana process of Parada, this preparation is mentioned. The chemical nature of Rasapushpa is mercurous chloride (Hg2Cl2) and it is also known as calomel in English[1]. The purity of any preparation is important before prescribing it to the patients. Methods are available to verify the purity of a preparation. In this study an attempt is made to understand the quality of Rasapushpa.

The Namburi Phased Spot Test (NPST) is a new technique for assessing the quality of a prepared bhasma. It is a spot test based on chemical reaction, when a drop of clear solution of a substance under examination (Bhasma or Sindhura) is put on specially prepared chemical reacting papers, a spot appears that manifests a series of colour and pattern changes. In chemistry, techniques involving spot tests or chromatography are widely used. The NPST involves observations of spot and its colour, at three successive phases spread over three different time intervals with measuring sensitivity reactions. The technique was developed and standardized by Dr. Namburi Hanumantha Rao in 1970, it has been accepted by CCRAS, New Delhi.[2]

Method Of Preparation:

Equal quantity of suddha parada, suddha kasisa, saindhava lavana is taken. All the ingredients are mixed together in Khalwa yantra and followed mardana procedure it becomes Nischandra. 7 layer of clay smeared cloth is taken and wrapped around kupi. Homogenous mixture is filled in a Kupi. Place the bottle in the valuka yantra and heat it for 2 yamas (6 hours). After completing 2 yamas of procedures, Rasapushpa attains snow/fog colour which is deposited in the kanta of the kupi (upper part or neck of the bottle). During the procedure, watery vapours are expelled out, corking should be done by moving aside the sand from neck of the kupi so that Rasapushpa can deposit there.

Examination Of Rasapushpa: To examine/test the purity and genuinity of Rasapushpa.

- Place a drop of water on a clean, shining iron pan.
- After that, sprinkle a little Rasapushpa over the drop.
- After a moment throw away the water drop and if there is no blackening at the drop site then the Rasapushpa sample should be known as pure[3].

MATERIALS AND METHODS:

Rasapushpa (1 gm) was taken into centrifuge test tube and to which drop by drop a freshly prepared 5N HNO_3 2ml was added and immediately after 2ml of Distil water is added and heated the Solution and kept undisturbed for about 24 hours to 48 hours for its reaction to be taken place. The solution was shaken occasionally during 48 hrs and allowed to react. Afterwards one drop of sample was put on the 10% Pot. Iodide paper prepared by using Whattman filter paper No 1. Single sample was used for the analysis of Rasapushpa[4,5]

OBSERVATION AND RESULTS

During a study, colour changes were noticed in three phases: 0 to 5 minutes, 05 minutes to 20 minutes, and 20 minutes to 72 hours. At the end of the third phase reaction, the centre was brick red, and the brown ring faded away to the periphery.

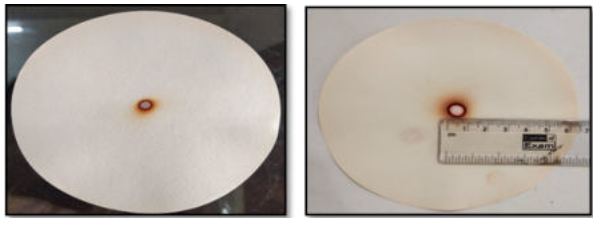

Figure 1: 1st Phase

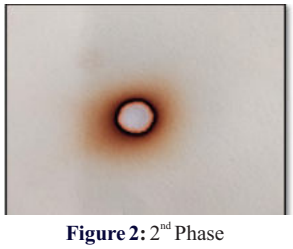

Figure 2: 2nd Phase

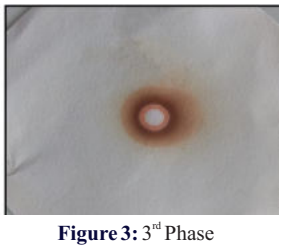

Figure 3: 3rd Phase

Table 1: Results of NPST analysis

Sample	Solution	Paper	Observation	
Rasapushpa	1g of Rasapushpa + 2ml of 5N HNO_3 + 2ml of distilled water	10% pot iodide paper	Phase 1	Slight brick red in the centre, Brown ring slowly fades towards the periphery.
			Phase 2	Brown ring slightly extended to the periphery.
			Phase 3	Brick red at the centre, Brown ring completely fades towards the periphery with great extent.

DISCUSSION:

Rasaushadhi are used to treat a variety of diseases due to its fast action and recommended in smaller therapeutic doses. Rasapushpa is one of the kupipakwa rasayana which is extensively used by ayurveda practitioners. Drugs must pass various qualitative tests prior to being marketed. In this work, we choose NPST analysis as a major test to assess its quality. The Central Council for Research in Ayurvedic Science (CCRAS) recognised this as one of the fundamental measures in ensuring the quality of Rasaushadhi. NPST is a simple, economic,

rapid test which can be performed in a basic laboratory setup without requiring skilled person. This test is based on a chemical reaction between chemical responding paper and a drug solution generated in various reagents. The classical tests cannot differentiate between bhasmas chemically but in NPST, as the test is chemical reaction-based, specific bhasmas are denoted even chemically[6]. This technique is very helpful for quality assessment of Bhasma as per the standards of Rasashastra.

The above test involves observations of the spot and its slight colour change at three successive phases spread over three different time intervals. It thus has the advantage of measuring sensitivity of reactions at different time intervals. This test shows the method to study or detect, every second or even fraction of a second, continual chemical reactions taking place gradually between two chemical substances on static media.

CONCLUSION:

Rasapushpa showed positive results in the present study when compared to the standards.

REFERENCES:

1. Siddhinandan Mishra, Ayurvedia Rasashastra (Revised edition), Parada prakarana. Varanasi, Chaukamba Orientalia. p. 247.
2. Bhojashettar S, Poornima BT, Jadar PG. Evaluation of market samples of 'Yashada bhasma' using 'Namburi Phased Spot Test'. J Ayurveda Integr Med. 2011 Apr;2(2):69-71. doi: 10.4103/0975-9476.82524. PMID: 21760691; PMCID: PMC3131774.
3. Ibid 6th chapter, version 20,107pp
4. CCRAS (2010) Ministry Of Health And FW Government Of India, New Delhi, Application of Standardized Namburi Phased Spot Test in identification of Bhasma and Sindura Preparations of Ayurveda. pp: 53.
5. Nambhudri RH Application of Standarsised Namburi Phased Spot Test. Project work submitted to CCRAS, New Delhi.
6. Bhojashettar S, Poornima BT, Jadar PG. Evaluation of market samples of 'Yashada bhasma' using 'Namburi Phased Spot Test'. J Ayurveda Integr Med. 2011 Apr;2(2):69-71. doi: 10.4103/0975-9476.82524. PMID: 21760691; PMCID: PMC3131774.