

Qualitative Analysis of Yashada Bhasma

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Abstract

Yashada-Bhasma is the calyx obtained by processing raw Yashada (Zinc). Its medicinal properties have been well identified centuries ago and have been used for the benefit of mankind. Even today, Yashada-Bhasma stands as a promising medicine for several ailments and is being manufactured by several pharmaceutical companies. In order to bring about standardized quality assessment of such a widely used medicine, an effort has been made to analyze five market samples of Yashada-Bhasma through traditional methods of Bhasma-pareeksha and contemporary methods including Namburi Phased Spot Test (NPST). The study intends to stand helpful for similar analysis of Bhasmas to bring about a standardized method of qualitative assessment.

Keywords: Yashada; Yashada-Bhasma; Bhasma; NPST; Namburi Phased Spot Test; Bhasma Pareeksha

Ayurveda is an Indian traditional system of medicine with a history of about 5000 years. The branch "Rasashastra" deals with the study of various ores, minerals and metals used in therapeutics. Yashada-bhasma is one such therapeutic substance. Yashada (Zinc) has been in use extensively in Ayurveda since antiquity. Therapeutic application is possible after subjecting it to certain procedures to convert heavy and toxic metals that are unsuitable for use into medicinally compatible forms of "Bhasma" (calyx). In therapeutics, Yashada-bhasma (Calyx of Zinc) has shown efficacy in the management of various diseases such as diabetes mellitus, anemia, neuromuscular disorders, male infertility, ulcers, depression, ophthalmic problems, and so forth [1].

In the present era, various Ayurveda pharmaceutical industries are preparing and marketing Yashada-bhasma and is being widely prescribed by practitioners. It is therefore the need of the hour to evaluate and assess its quality by adopting certain established quality control parameters. Bhasma pareeksha is the term used for the classical assessment of Bhasmas. However newer analytical methods are also considered by Ayurveda professionals to substantiate and validate the quality of these bhasmas. The Namburi Phased Spot Test (NPST), is one such test based on chemical reactions and spotting. This methodology is now being used in analyzing various Bhasma samples.

The Namburi Phased Spot Test (NPST) is a qualitative test for Ayurvedic formulations based on the principle of chromatography. When a drop of clear solution of a substance under examination (Bhasma or Sindura) is placed on specially prepared chemically reacting papers, a spot appears which manifests a series of colour and pattern changes. In chemistry, techniques involving spot tests or chromatography are widely used. NPST involves observations of the spot and its colour, at three successive phases spread over three different time intervals. It thus has the advantage of measuring the sensitivity of reactions at different time intervals. In other words, it constitutes a method to study or detect continual chemical reactions taking place gradually between two chemical substances on static media, every second or even every fraction of a second. This technique was developed and standardized by Dr. Namburi Hanumantha Rao in 1970. It has been accepted by

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- 0.5 ml of 5N HNO₃ was then added to it dropo of 5N HN₀ , an

Discussion

Our classics prescribe Yashada-bhasma to be Kundenduhavala, i.e., as white as a “Kunda” flower or the moon [4]. However, among the samples collected, we may observe that only two samples (1 and 3) are white. Sample 2 was mild grey. Sample 4 was dark grey and sample 5 had a sandal tint. This directly suggests that there are some variations in the quality of the five samples. Further, we found that sample 2 did not pass Rekhapurnatwa, Varitaratwa and Unamatwa. Sample 3 did not pass Varitaratwa, Unamatwa and Nishchandratwa. Sample 4 did not pass Nishchandratwa and sample 5 did not pass Nishchandratwa and Nirdhumatwa.

According to NPST standards, the following observations are to be expected from a genuine sample of Yashada-bhasma. (Figure 1) (Table 3).

Among the five samples selected, only sample 1 passed all of the Bhasmapareekshas. However, we found that none of the samples comply with the standards prescribed by NPST. Previous studies clarify that NPST standards are met when the process of Marana is carried out using Parada.² However, the samples collected have been prepared following the reference of Rasatarangini, wherein Marana is carried out using Kumariswarasa as bhavana dravya, the same is adopted by API, wherein samanya-shodhana is first prescribed by Dhalana through Taila, takra, gomutra, aranala and kulathakwatha, seven times each [5]. No visheshashodhana method is prescribed by API. Further, Jarana using Apamarga-churna and Marana by preparing Chakrikas by triturating Jarita-yashada with Kumari swarasa are advised. Though the samples were from five different market sources, the reference (method) used to prepare the samples have been the same. Our Acharyas have also stated that it is best to perform Marana with the help of Parada [6].

Strictly going by the guidelines of API, there is no vishesha-shodhana prescribed, and Marana is prescribed using Kumariswarasasa. However, in samples that have followed the same, NPST standards have

not been met. However, in previous studies where visheshashodhana was done following samanyashodhana and Marana was done using Parada rather than any herbs, NPST standards were met [7]. Thus, it may be concluded that.