SPECTROSCOPIC ANALYSIS OF ‘YASADA BHASMA’ (ZINC SALT)

S. N. THAKUR*, C. SRINIVAS, AND P.J. DESHPANDE**

* Department of Spectroscopy (Physics), Banaras Hindu University, Varanasi – 221 005, India.
** Department of Salya Salakya, Institute of Medical Sciences, Banaras Hindu University, Varanasi – 221 005, India.
Department of Ophthalmology, Govt. Nizamia General Hospital, Hyderabad – 500 002, India.

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ABSTRACT: ‘Yasada Bhasma (A compound metallic preparation) a well known Ayurvedic compound medicine studied spectrscopically and found persisting Zinc lines in the analysis’

INTRODUCTION

Ayurveda has mentioned innumerable drugs and their analytical studies but some drugs were left without proper description. “YASADA (Zinc)” is one among them. Yasada is a metallic compound known to Indian Physicians since the beginning of medicine. It is being known by the name of “YASADA” since 14th century (Sharma). Sufficient description is available in ancient text books about its usage in many diseases. It has been widely used in Ophthalmic diseases like visual disorders, conjunctivitis etc. (Rasajalanidhi). It is also widely used in Spermatorrhoea, Gonorrhoea, Jaundice, wound healing, Diabetes (Deshpande 1958, 1962), Kochsabdomine.

Recently, Bhargava 1979, 80 reported 2 cases of Acrodermatitis enteropathica which is Zn deficiency syndrome where he found Yasada was of excellent results. In a scientific study Srinivas 1979, 81, 82 used Yasada in refractive errors and found astonishing results of arresting of progressive simple myopia. The same was supported by Nema in 1983, Danbolt 1979 says Zinc can be given even for 6 years in Acrodermatitis enteropathica without any contraindications and fear. A good number of papers, about 600 – 800 have appeared about Zn in recent times.

All these facts and results provoked us to study yasada spectroscopically to find out the trace element in it which is causative for its fascinating results in a number of diseases.

Spectroscopic Analysis

The spectrum of the sample was photographed on a higher small quartz spectrographed on a higher small quartz spectrograph using copper electrodes. The D. C. arc was operated at 60V and 2 amps. An exposure for 1 minute through a slit 40
micron wide was sufficient to record the emission spectrum on Forte 160 ASA film. The spectrum of copper arc was also recorded on the same position of the film using a Hartman Diaphragm. The wave length scale was also photographed with each spectrum of the sample as shown in the figure.

The wave length scale was printed as the film was calibrated using the standard lines of copper spectrum and the connection at different wave lengths as given Table I and plotted in Fig. I. The wave lengths of the unknown lines were read from the printed scale in juxta position with the spectrum and were connected with the help of calibration curve as given in the column of table.
A qualitative spectro chemical analysis was carried out using the spectrum lines of different elements as given in “Chemical Spectroscopy” by Brode. The most probable element giving rise to the emission spectrum was found to be Zn within an error limit of ± 5Å of the four observed lines of Zn the one at 3300 Å being one of its persistent lines. Thus the qualitative spectro chemical analysis indicates that the most probable metallic emitter in the sample excited in copper is Zinc.

**Summary**

Spectroscopic study of Yasada bhasma showed persisting Zn lines.

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