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Crystallinty and PIXE Analysis of Stem of *Ichnocarpus frutescens*

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Abstract. The stem of *Ichnocarpus frutescens(IF)* is considered to be an important drug in indigenous system of medicine and also well known as a ayurvedic plant.. It is considered as an important medicinal plant that belongs to the family of Apocyanaceae. The aim of present study is to identify the multi elements present in the stem through the Proton Induced X-ray emission (PIXE) and crystallinity property through XRD . The medicinally important various metal and non-metal elements of the *IF* stem are investigated using PIXE technique. The result shows that the stem contains multi elements like Si, S, P, Cl, K, Ca, Ti, V, Mn, Fe, Cu and Zn , where each element or mineral plays a number of different functions and generally non toxic in nature. The findings shows that stem of *IF* can be used for the treatments of various diseases such as cholera, cough, fever, skin trouble, jaundice, measles, and headaches, loss of sensation, demulcent, syphilis and purification of bloods. .So far as our knowledge is concerned, there is no report of PIXE and XRD of stem of *IF* plants. Therefore, the study is important, encouraging and confirming the possibilities of *IF* as an ayurvedic plant for treatment of various diseases because of the presence of various pharmaceutical complexes. These complexes are condensed system of various elements present in the *IF* stem.

Keywords: XRD, PIXE, *Ichnnocarpus frutecens.*Medicinal plants..

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[Full Paper]