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Comparison between XRF, PIXE and ICP-OES Techniques Applied For Analysis of Some Medicinal Plants Elzain,A.H. 1,Ebrahim,A M.1, Ali Eltoum, M. S2 1Sudan Atomic Energy Commission, Khartoum, Sudan1 2Chemistry Department, College of Science, Sudan University of Science and Technology2

Comparison of ICP-OES and ICP-MS for Trace Element Analysis

ICP-MS differs from ICP-OES in that it builds upon the principles of ICP-OES and utilizes ICP to dissociate atoms from a sample and then sends those atoms into a mass spectrometer (MS) system to separate the atoms or ions based on their mass-to-charge ratios. Therefore, it provides an extra set of data: valuable isotopic information.

Particularly entry level ICP-OES compare well to the flame atomic absorption technique. While a number of elements show a comparable performance, flame atomic absorption provides a higher sensitivity for the group I alkali elements, while the refractory elements, the metals, can be analyzed with higher sensitivity using ICP-OES.

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ICP / AAS Comparison - SlideShare

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