

ICP-MS – The Analytical Tool for the Geochemist

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This presentation will focus on the progression of the analytical techniques as it pertains to analyzing geochemical samples for metals. From the days of Inductively Coupled Plasma Optical Emission Spectroscopy (ICP-OES) there has been a constant migration to Inductively Coupled Plasma Mass Spectrometry (ICP-MS) for such types of samples. With the inherent sensitivity of ICP-MS, low concentration levels can be accurately determined and better detection limits can be achieved. Yet its limitation is well known; high concentrated elements levels traditionally observed in such samples cannot be measured due to detector saturation without first performing a physical dilution. That is why today's geochemists utilize both the ICP-OES (radial view, axial view or both) technique and the ICP-MS technique to meet their analytical requirements.

Various strategies will be visited on how to measure both trace level elements and high concentration elements, if possible in one analytical run. An overview of running the current ICP-OES/ICP-MS approach right thru to a novel, unique and powerful signal attenuation capability will be discussed.