

**Analysis of Geological Samples using a Polarised-Beam Benchtop XRF Spectrometer.**  
***Malcolm Haigh, Spectro.***

This paper discusses the use of a polarized beam EDXRF spectrometer for the analysis of geological samples.

It explains the principals of the polarization technique as opposed to the traditional direct excitation technique, as well as discussing the advances in solid state detector technology over traditional liquid nitrogen cooled Si(Li) and GE detectors, especially regarding improvements in throughput countrates. Also discussed are the advances in spectral evaluation techniques, e.g. improvements in spectral artifact reduction, before discussing in detail the precision and accuracy that can be expected when analyzing geological samples by this technique.