

Environmental Monitoring and Geochemical Exploration with a Portable EDXRF Spectrometer

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Abstract

The portable rugged EDXRF analyzer SPECTROSCOUT, in combination with an optimized application package, provides precise and accurate analytical results for traces, minor and major elements in soil and sewage sludge prepared as loose dried powder in disposable XRF sample cups. The SPECTROSCOUT in this version is equipped with a sample spinner and a small vacuum pump to analyze all relevant elements in the range from Na-U in-situ.

X-ray fluorescence spectrometry is a well-established analytical technique widely used for environmental monitoring. Energy Dispersive X-ray Fluorescence spectrometry (EDXRF) is a powerful analytical tool to satisfy the needs of precision and detection limits for onsite analysis. Samples prepared as loose dried powder easily can be analyzed in XRF sample cups without loss of precision or accuracy in comparison to the pressed powder technology typically used in a laboratory.