HANDHELD & PORTABLE XRF

Mudlogging and Geosteering

Elemental analysis for exploration, production, and research

On-site elemental analysis with lab-quality precision

Elemental data returned in near-real time at the drill site has revolutionized oil and gas drilling programs. By targeting cuttings using handheld and portable XRF, a valuable direct measurement of formation physical and chemical properties can be made that provides a rapid and cost-effective alternative to support high-resolution chemostratigraphy. Combining Bruker's portable XRF with matrix matched calibrations designed for mudrock operations provides mudlogging tools that are both easy to use and scalable.

Calibrations tailored to mudrock analysis

- Empirical calibrations built specifically for mudrock characterization using standards that match expected in clastic sedimentary compositions
- Two phase analysis for optimal fluorescence and sensitivity of light and heavy elements
- Elemental range down to Na (for TRACER 5 with He purge) including all key elements used for down-hole lithological identification and stratigraphic correlation
- Limits of detection at low parts-per-million levels allowing accurate trace element quantification

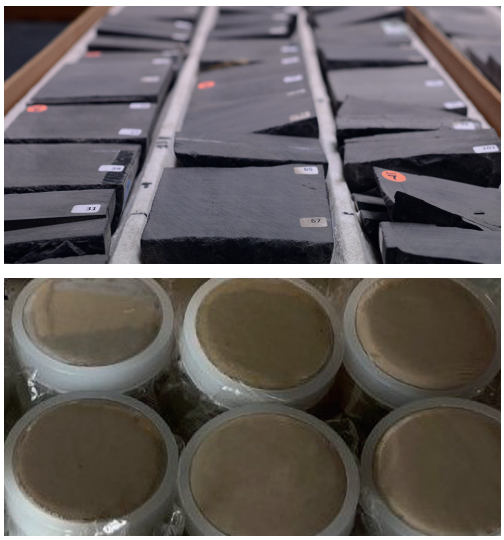

Figure 1

Direct measurement on drill core allows detailed chemostratigraphic characterization for research and production applications, while cleaned and dried cuttings, easily prepared in sample cups or pressed pellets, provide laboratory-quality geochemical analysis in near real time.

CTX Portable XRF Spectrometer

The CounterTop X-ray fluorescence (CTX) is a small-footprint, lightweight elemental analyzer designed for highly efficient and safe operation in an on-site laboratory environment.

- 50 kV - 4 W Rh target X-ray source with SharpBeam™ collimator
- Large-area graphene window silicon drift dectector for high sensitivity of major and trace elements
- Patented DetectorShield™ for long term detector protection
- Consistent sample presentation with index markings for systematized operation by multiple users improving overall data quality
- Elemental range from Mg to U at ppm-level limits of detection
- Robust, splash and dust proof stainless steel construction
- Dual safety interlocked for improved radiation safety in busy multi-use laboratories or drill-site characterization facilities

TRACER 5 Handheld XRF Analyzer

The reference tool for direct elemental characterization of drill core for upstream research, and the only handheld XRF spectrometer that provides helium purge for improved sensitivity of light elements including Na.

- 50 kV - 4 W Rh target X-ray source with large area graphene window SD Detector
- 3 mm or 8 mm selectable measurement spot size with interchangeable collimators
- 5 position automatic primary beam filter changer, with option for manual filters and secondary targets
- Interactive touch-screen display for untethered measurements or PC connectivity via Wi-Fi and USB for enhanced data evaluation
- Internal sample camera to record location of measurements
- Optional EasyCal software package to develop and install empirical calibrations customized to user-specific needs

All configurations and specifications are subject to change without notice.
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