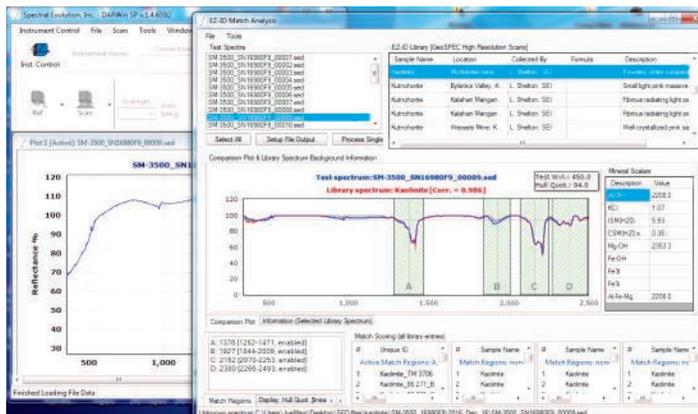


SPECTRAL EVOLUTION

oreXpress™ Field Portable Mineral Analyzers



oreXpress Field Spectrometer Advantages

- ◆ Fast, full-spectrum UV/VIS/NIR measurements (350-2500nm) with just one scan
- ◆ High spectral resolution (FWHM):
 - 3.0nm (350-1000nm)
 - 8.0nm @ 1500nm
 - 6.0nm @ 2100nm
- ◆ Lightweight less than 7.3 lbs.
- ◆ Auto-shutter, auto-exposure, and auto-dark correction before each new scan—no manual optimization needed
- ◆ Superior field reliability with no moving parts to break down
- ◆ Compact— 8.5" x 11.5" x 3.5"
- ◆ Small, lightweight, rechargeable Li-ion batteries for up to 4 hours of field operation per battery
- ◆ Two mineral contact probes are lightweight and easy to use—designed for all day operation at outcrops, pits, benches, or in a core shack - fit in a chip tray 10mm and 3mm spot sizes
- ◆ Best in class NER (Low Noise Equivalent Radiance)
- ◆ Rugged optional tablet provides sunlight readable screen and stores spectra, digital photos, audio notes, and GPS data for each scan
- ◆ Operates with mobile devices via Bluetooth (Class I) for operation without cables
- ◆ Optional EZ-ID sample identification software with Custom Library Builder module—perform mineral ID in the field in seconds using a tablet or laptop running EZ-ID
- ◆ EZ-ID comes with the USGS spectral library, the SpecMIN library and the GeoSPEC library with more than 1100 minerals are also available
- ◆ DARWin SP Data Acquisition software included with every spectrometer—saves spectra and meta data as ASCII files for use with third party software without pre-processing



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oreXpress (NIR) vs XRF

- ◆ oreXpress is an NIR field spectrometer that identifies minerals—XRF identifies elements
- ◆ oreXpress includes no sample preparation
- ◆ ore4Xpress is non-destructive and non-invasive
- ◆ oreXpress has the fastest measurement time
- ◆ oreXpress with pour contact probe measures a larger area—larger spot size
- ◆ oreXpress more accurate and reliable than XRF for clay identification
- ◆ oreXpress is a qualitative technique—can be used to provide quantitative measurements with chemometrics software
- ◆ oreXpress can discriminate minerals of similar chemical composition while XRF cannot
- ◆ NIR and XRF are typically complementary analysis techniques with NIR spectroscopy used in exploration and mineral mapping and XRF used for elemental analysis



oreXpress (NIR) vs XRD

- ◆ No sample prep for oreXpress while XRD usually requires grinding or crushing
- ◆ oreXpress is used without affecting crystallinity of mineral structures—unlike XRD
- ◆ oreXpress is designed for field work—lightweight, no moving parts for the ultimate in reliability and ruggedness while XRD is still more of a laboratory technology
- ◆ oreXpress is better suited to measurement and identification of clays than XRD
- ◆



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