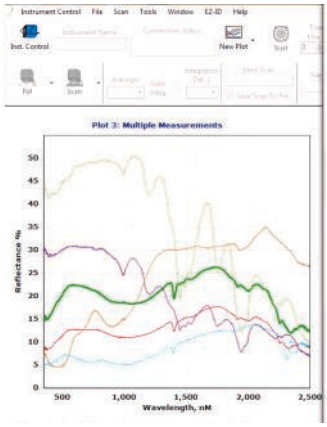
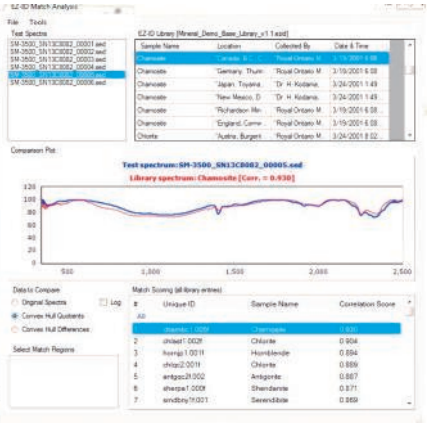
SPECTRAL EVOLUTION

oreXpress™ Field Portable Mineral Analyzers





oreXpress Field Spectrometer Advantages

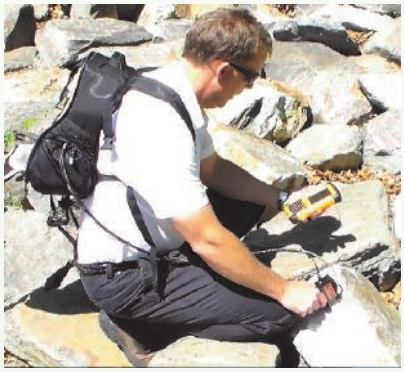
- Fast, full-spectrum UV/VIS/NIR measurements (350-2500nm) with just one scan
- High spectral resolution (FWHM):
  3.0nm (350-1000nm)
  8.0nm @ 1500nm
  6.0nm @ 2100nm
- Lightweight less than 7.3 lbs.
- Auto-shutter, auto-exposure, and auto-dark correction before each new scan—no manual optimization 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
- Mineral contact probe is lightweight and easy to use—designed for all day operation at outcrops, pits, benches, or in a core shack - fits in a chip tray
- Best in class NER (Low Noise Equivalent Radiance)
- Rugged optional handheld PDA provides sunlight readable screen and stores spectra, digital photos, audio notes, GPS and altitude 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 and the SpecMIN library with almost 4,000 spectra is also available
- DARWin SP Data Acquisition software included with every spectrometer—saves spectra and meta data as ASCI files for use with third party software without pre-processing

SPECTRAL EVOLUTION

26 Parkridge Road ◊ Suite 104
Haverhill, MA 01835 USA
Tel: 978 687-1833 ◊ Fax: 978 945-0372
Email: sales@spectralevolution.com
www.spectralevolution.com

SPECTRAL EVOLUTION

oreXpress™ Field Portable Mineral Analyzers



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 ruggednessnwhile XRD is still more of a laboratory technology
- oreXpress is better suited to measurement and identification of clays than XRD
-

SPECTRAL EVOLUTION

1 Canal Street ◊ Unit B1
Lawrence, MA 01840 USA
Tel: 978 687-1833 ◊ Fax: 978 945-0372
Email: sales@spectralevolution.com
www.spectralevolution.com