

SPECTRAL EVOLUTION

Zinc Exploration

The oreXpert, oreXplorer and oreXpress portable NIR spectrometers with EZ-ID mineral identification software can be used in the field by a geologist to identify sphalerite the primary ore for zinc. They are perfect for mineral mapping and identification to save on drill hole costs by eliminating unnecessary drill holes. They can also be used during core shack analysis to screen samples for assaying.



The oreXpert, oreXplorer and oreXpress mobile mineral analyzers are lightweight and easy to use and collect high resolution/low noise spectra with autoexposure and auto-dark correction. Equipped with EZ-ID mineral identification software, they match unknown mineral spectra against three libraries to provide a best match for mineral identification. For zinc exploration, the oreXpert, oreXplorer or oreXpress with EZ-ID has library spectra for sphalerite and the secondary minerals associated with zinc: willemite, smithsonite and hemimorphite. Zinc is an important non-ferrous metal used in galvanizing steel to protect it from rust. Zinc is also used in cosmetics, plastics, rubber, soaps, paints, fertilizers and batteries.

Sphalerite is the main ore for zinc.



A library spectrum of a known sphalerite sample.

For sphalerite, there are twenty samples in the libraries available with EZ-ID. The spectra all show broad absorption features between 400 and 600nm, 600 and 800nm, 1200 to 1800nm and 2000 to 2500nm. There are also three spectra for smithsonite. In addition to matching against library samples, EZ-ID allows geologists to build their own libraries while scanning samples and include all the metadata relevant to the sample such as location, operator, sample type, color, and other descriptive details. The result is a library of known samples from a specific project/region.



A sample of smithsonite from the libraries available with EZ-ID.

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

