

SPECTRAL EVOLUTION

Discovering “New” Dolomite

Stromatolites are considered living fossils. Formed by the activity of ancient microbes, they are often composed of dolomite in areas along the Brazilian coast. Dolomite is a calcium and magnesium carbonate. First discovered in the Dolomite Mountains in Italy, dolomite is now known to be a common mineral formed throughout the earth's history. Modern dolomite precipitation is considered rare. At the Vermelha Lagoon in Brazil it was discovered that microbes from the lagoon induced dolomite precipitation. Using a PSR Series spectroradiometer from SPECTRAL EVOLUTION, researchers are looking to identify modern dolomite precipitation in the area.

Because it is fast and non-destructive, the PSR Series of spectroradiometers are well-suited for dolomite discovery. With EZ-ID sample identification software, including the Custom Library Builder module, researchers are able to build a library of dolomite samples that they can then use in exploring for the mineral in new areas. In addition, the PSR Series is being used for analyzing photosynthetic activity of the microbial mats in the area of the Vermelha Lagoon.

The PSR Series of spectroradiometers, including the new PSR+, offers the highest resolution and best signal-to-noise ratio available and includes our DARWin SP Data Acquisition software. DARWin SP provides pull-down menu access to 19 vegetation indices and saves all spectra and metadata as ASCII files for use with third party analysis programs, including the popular ENVI software.

A range of accessories including contact probe, pistol grip probe, benchtop reflectance probe with soil compactor, leaf clip, and more are available for use with the PSR Series. All PSR Series spectroradiometers are designed for field use—they're lightweight, compact, have a rugged anodized aluminum chassis and are engineered for efficient long term performance in a field environment. They can be used as standalone units with an LCD display and storage for up to 1,000 scans. A GETAC microcomputer adds a digital camera, voice recorder, GPS and altimeter functionality.

Our EZ-ID sample identification software allows researchers to identify samples by comparing them against an existing library of known samples. The Custom Library Builder module allows a researcher to build a specific library of samples that can then be matched to new targets. Different libraries can be quickly built and used for different applications or environments.



The PSR Series of field portable spectroradiometers is well-suited for scanning for dolomite.



EZ-ID screen with a scan of a mix of dolomite and calcite. EZ-ID matches the target scan against a known sample from an existing library or a custom library created with your own sample scans.

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