

SPECTRAL EVOLUTION

Plant Species Identification

Species identification is key part of many vegetation, environmental, and forest studies. Management, conservation, land use, health—all require species identification as a starting point. For fast and non-destructive species identification, researchers are using both hyperspectral imaging (satellites and flyovers) and in the field, remote sensing and ground truthing using portable spectroradiometers.

NIR spectroscopy is a popular technology for reliably scanning and identifying different vegetation species because it is fast and non-destructive. In forest studies, detailed information not readily extracted from hyperspectral or multispectral measurements can be gained in the field by mapping a forest area using a full range, 350-2500nm spectroradiometer, like the SPECTRAL EVOLUTION PSR+ 3500. Using reflectance measurements, researchers can discriminate between species by examining distinctive absorption features in the full spectrum, such as moisture content, color variation, lignin/cellulose values and others.

The PSR+ Series of spectroradiometers offers the highest resolution and best signal-to-noise ratio available and includes our easy-to-use 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. The PSR+ is designed for field use—it's lightweight, compact, has a rugged anodized aluminum chassis and is engineered for improved cooling and long term performance in a field environment. It can be used as a standalone unit with an LCD display and storage for up to 1,000 scans. An ALGIZ 8X rugged tablet adds a digital camera, voice recorder, and GPS.

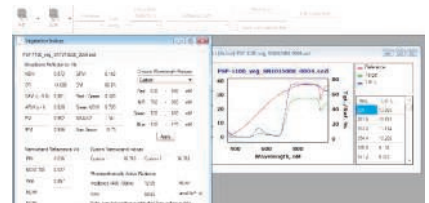
Our EZ-ID sample identification software allows researchers to identify samples by comparing them against an existing library of known samples. The Custom Library Builder module allows a researcher to build a specific library of vegetation samples that can then be matched to new targets. Different libraries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



The PSR+ is well-suited for species identification in the field.



The leaf clip includes a tungsten halogen light source and internal reference standard for ease-of-use and accurate measurement without affecting the sample.



A pull down menu within our DARWin SP Data Acquisition software provides immediate access to 19 vegetation indices.

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