



PRESS RELEASE

Rapid, accurate identification of plastics using NIR spectroscopy.

SPECTRAL EVOLUTION's portable SM-3500 spectrometer can identify different polymer characteristics at the point of inspection.

Lawrence, MA – July 15, 2013 – Using the SM-3500 portable UV/VIS/NIR spectrometer, plastics can be accurately identified in-, on-, or at-line with no sample prep, no shipments to the lab, and no effect on the sample.

The SM-3500 spectrometer can be used to:

- Accurately identify plastics for recycling with no cross contamination that might cause processing problems
- Sort polymer resins
- Sort and identify raw materials
- Measure raw material purity
- Analyze moisture content

The SM-3500 delivers the following benefits for industrial and research applications:

- Rapid, reliable and non-invasive measurement
- Cost-effective analysis
- Portability – bring the analyzer to the application
- Speed and convenience with no sample preparation
- Easy to use DARWin SP data Acquisition software that saves spectra as ASCII files for use with third party chemometrics software without pre-processing

The absorbance and reflectance of light across the 350-2500nm spectral range results in the vibration of polymer resin molecules, NIR spectra can be attributed to specific polymer resins, including:

- Polyethylene terephthalate (PET)

- High density polyethylene (HDPE)
- Polyvinyl chloride (PVC)
- Polypropylene (PP)
- Polystyrene (PS)

Working with spectra collected by the SM-3500 and chemometrics software, analysis can include quantitative information to further identify the physical and chemical characteristics of the polymer resins. Analysis of physical attributes can include density, viscosity, molecular weight, tacticity, and melting point. Chemical analysis can include quantifying the constituent parts of polymers, measuring and identifying additives, measuring water content, and determining the OHN number in different polymers.

For more information on NIR spectroscopy and plastic/polymer identification, visit:
<http://www.spectralevolution.com/spectrometers.html>

For more information on the SM-3500, please visit:
<http://www.spectralevolution.com/spectrometers.html>

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About SPECTRAL EVOLUTION

Established in 2004, SPECTRAL EVOLUTION is a leading manufacturer of laboratory and handheld portable spectrometers, spectroradiometers and spectrophotometers. SPECTRAL EVOLUTION spectrometers are used worldwide for many mission-critical lab and field applications in mining, remote sensing, vegetative studies, ground truthing, environmental and climate studies, developing satellite calibrations, and more, due to their reliable, robust, rugged design and user-friendly one-touch features.

SPECTRAL EVOLUTION maintains a facility in Lawrence, Massachusetts which houses design, prototyping, manufacturing and service facilities for the instruments that it markets and sells worldwide, either through direct sales, OEM sales or through distributor agents.

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