The Insight™ LIBS System
High-Sensitivity Microanalysis

The Insight LIBS System is designed for the microanalysis of solid materials. The standard spectrometer within the Insight provides a broad spectral range (190-960 nm) and better than 0.1 nm resolution throughout the system.

Major and minor elements can be resolved and the 30,000+ points in a typical spectrum can be expanded to reveal lines separated by less than 0.2 nm in the UV range. The band of Ocean Optics spectrometers used in the Insight has excellent sensetivity to low-light levels enabling the spectral detection of trace elements.

LIBS-INSIGHT-150MJ
High-end LIBS platform with 150 mJ laser, video, computer controlled XYZ, Chromium operating software & addLIBS quantitative software packages

LIBS-INSIGHT-50MJ
High-end LIBS platform with 50 mJ laser, video, computer controlled XYZ, Chromium operating software & addLIBS quantitative software packages

Build to High-Fidelity Measurements
- Rugged Nd:YAG laser, sensitive spectrometer
- Built-in timing control circuit synchronizes laser and spectrometer
- Confocal video and laser planes ensure measurement repeatability
- Overall timing jitter with respect to external synch signal <= 10 ns
- Purged sample chamber
- Rotometer-regulated flexible "assist" gas nozzle for N2, He or Ar
- Class 1 safety enclosure

Configurable
- Adjustable, coaxial lighting of sample
- Variable laser energy
- Variable spectrometer delay
- Software-selectable spot size from sub-5 μm to 2 mm

Powerful, Easy to Use
- Sample interrogation and analysis software tools
- Laser energy measurement and display
- User-selectable repetition rate
- User-selectable spot size of the laser beam via software control
- Single-shot, burst and continuous firing modes
- Color video microscope displays live sample images
- Computer connection: USB 2.0, OS: Windows XP or Windows 7
- Computer-controlled x/y stage for sample holding

Beryllium Concentration (Relative) for Preloaded Optical Filters
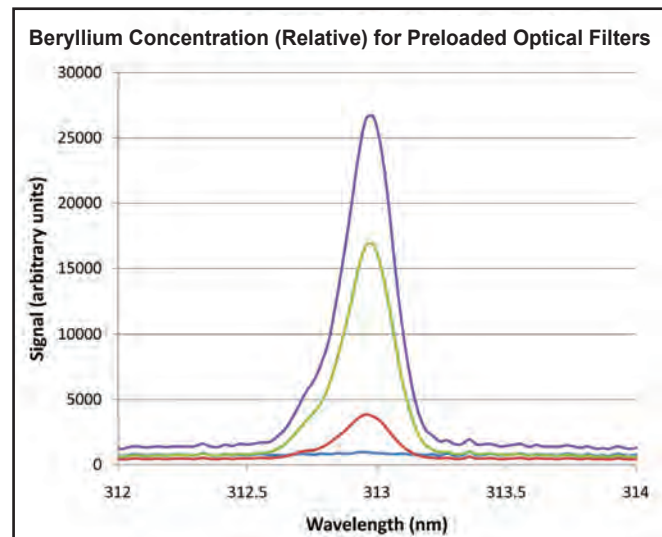
Software That Brings it All Together
The addLIBS™ Software included with Insight is designed to make plasma emission spectroscopy analysis easy. addLIBS allows you to explore spectra using partial NIST or in-house spectral libraries, annotate spectra, develop calibration methods using known samples and apply calibrations manually or automatically to unknown spectra.

Once a method is developed, it can be repeatedly applied without further analysis or it can be modified at will.

For more complicated data, chemometric methods such as PLS are being implemented, and data can also be exported to standard analysis software such as GRAMS® or Excel®. Spectra are automatically ported from the instrument control software to addLIBS™ as they are acquired.

Additional Software
Our SpecLine Software helps make the evaluation of spectra and identifying atomic lines simple and fast.