



LIBS2500+

Laser-induced breakdown spectroscopy is a non-invasive technique for real-time, qualitative and semi-quantitative spectral analysis of elements in solids, solutions and gases. The LIBS2500+ is a broadband (200-980 nm), high resolution detection system with an optical resolution of ~0.1 nm (FWHM). Sensitivity to parts-per-billion and picogram levels is possible.

Applications

- » Environmental: soil, particulates, sediments
- » Materials analysis: metals, slag, plastics, glass
- » Forensics & biomedical: teeth, bones
- » Metrology: silicon wafers, semiconductor materials
- » Bioresearch: plants, grains
- » Safety & military: explosives, chemical and biological warfare agents
- » Art restoration & conservation: pigments, paints
- » Gemmology : beryllium detection, gemstones fingerprint
- » And many more...

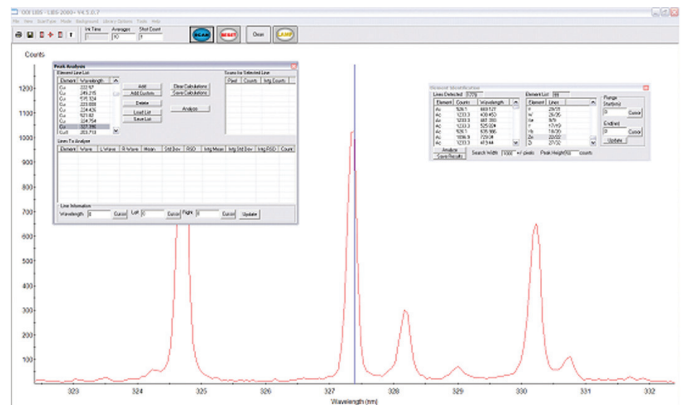
Advantages

- » Broadband spectral analysis
- » High resolution
- » Instant results / fast sampling times
- » No sample preparation
- » Compact design
- » Affordable
- » Flexible sampling tools / set-up

Specifications

LIBS2500+

SAMPLE CHAMBER	
Dimensions	17.8 x 26.7 x 22.8 cm
Weight	5 kg
SPECTROMETER SYSTEM	
Dimensions	33.4 x 15.0 x 14.0 cm maximum
Weight	6.4 kg
SPECTROSCOPIC	
Wavelength range	200-980 nm (channel dependent)
Optical Resolution	~ 0.1 nm FWHM
Integration time	1 ms; variable in free-run mode
DETECTOR	
Type	Linear silicon CCD Detector
Pixels	Total of 14,336 pixels
TRIGGER	
Trigger delay	-121 μ s to +135 μ s in 500 ns steps (user-configured)
Trigger jitter	~20 nanoseconds
Trigger level	TTL not to exceed 5.5 volts
ELECTRONICS	
Power requirements	5 volts @ <1 amp, power supply included
Frame rate	1 kHz capability (PC-controlled)
COMPUTER	
Operating systems	Windows 98/Me/2000/XP on desktop or notebook PCs
Computer interfaces	USB 1.1 or USB 2.0
Software	OOILIBS



LIBS spectrum of copper in scrap metal

OEM spectrometers or complete systems are available. Systems include an active Q-switch laser and laser imaging module, a fibre bundle for plasma light guiding, a sample chamber in an eyeware-safe enclosure with manually controlled X, Y, Z stage and operating software.



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