

LIBS-Lab

LIBS-Lab Laboratory Elemental Spectroscopy

A configurable laser-induced breakdown spectroscopy platform combines sample excitation, collection optics, a Czerny-Turner spectrograph and time-gated detection for elemental emission analysis.

1. Laser ablation

2. Time-gated spectrum

3. Elemental analysis

Best suited to

Research into elemental spectra of solids, plants and other laboratory samples.

Configuration

Specify the elements, sample matrix and required line separation. Gate delay helps reject early broadband plasma emission; quantitative concentration analysis requires suitable reference samples and a calibration method.

Specifications

Published parameters	
Technique	Laser-induced breakdown spectroscopy
Excitation examples	532 or 1064 nm pulsed laser, configured separately
Spectrograph choices	200 / 320 / 500 / 750 mm C-T platforms
Published 750 mm slit resolution	0.03 nm with 1200 lines/mm
Detection	Configured gated IsCMOS / ICCD
Output	Element-specific emission spectra

Measurement features

- Fibre or free-space signal collection.
- Choice of focal length and grating.
- Synchronised camera acquisition after laser excitation.

Configuration note

The source introductory teaser incorrectly describes ultrafast fluorescence; this page follows its LIBS technical section. Laser specifications and detection limits are application dependent.

Full configuration: www.precisometer.com/spectroscopy/spectral-imaging/libs-lab