

## LAMPS

LAMPS (Laser Assisted Microwave Plasma Spectroscopy), developed in conjunction with innovators at Envimentrics and Photon Machines, represent a huge leap forward in LIBS technology. LAMPS features a specially designed microwave cavity to enhance plasma discharge, thereby increasing sensitivity for most potential analytes. Also enhanced are emission line stability and reproducibility, leading to better quantification results. Applications for a variety of diverse analytes requiring greater sensitivity and less ablative sample imprint are now made possible with LAMPS.

## Applications

- » Biomedical analysis
- » Food measurement
- » Environmental analysis
- » Authentication measurements
- » Gemstone qualification
- » Semiconductor analysis
- » Archeological Research
- » Forensics detection

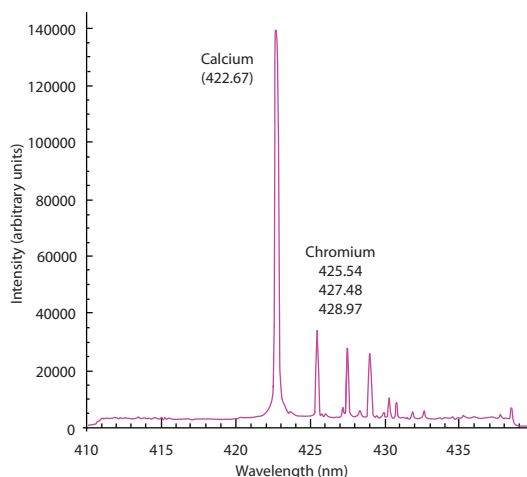
## Advantages

- » High sensitivity
- » Stable and repeatable
- » Broadband simultaneous
- » Excellent resolution
- » Fast sampling time
- » No sample preparation
- » Chemometrics methods implemented

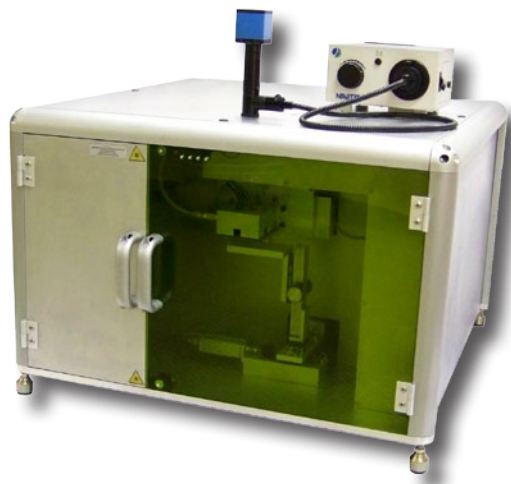
# Specifications

## LAMPS

SPECTROSCOPIC	
Wavelength range	200-980 nm (channel dependent)
Optical Resolution	~ 0.1nm FWHM
DETECTOR	
Type	Linear silicon CCD Detector
TRIGGER	
Trigger delay	Programmable in software
Trigger jitter	20 nanoseconds
Trigger level	+5V TTL
ELECTRONICS	
Frame rate	2 per second (with microwave on)
Microwave frequency	2.45 GHz
Microwave power	1 KW @ 2.5 ms
COMPUTER	
Operating systems	Windows XP/Vista on desktop or notebook PCs
Computer interfaces	USB 2.0
Software	addLIBS



LAMPS spectrum of CCA-treated Wood



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