

# Highest Performance LIBS Analyzers

Features Unique Dual-Burn Technology

Air-burn for fast material sorting and screening

Argon-purge for precision and superior limits of detection



SciAps

Elemental Analysis

Alloys – Mining – Environmental – Forensics – General Analytical Analysis





# The Z-900 Series

**A nicely loaded LIBS system designed for usability, durability, and safety**

Full range of applications, from basic material sorting and screening to exacting elemental analysis.

## Z-901

### Alloy Analysis

SciAps offers the only LIBS-based alloy analyzer operable in a “dual burn” test setup.

### QuickSort

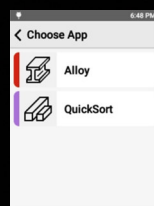
Air-Burn for rapid material sorting or grade identification.

### Alloy

Argon-Purge for high precision and improved detection limits. Many customers use argon-purge to analyze and sell mill-ready aluminum scrap. Quantify low ppm levels of beryllium, boron and lithium.\*

	0.494%	0.044%	0.45
Mg	0.494%	0.044%	0.45
Al	98.68%	0.290%	94.8
Si	0.439%	0.065%	0.20
Ti	0.024%	0.006%	0.00
Cr	0.021%	0.006%	0.00
Mn	0.062%	0.016%	0.00

In 1-2 seconds, Z-901 provides alloy chemistry, grade, and specification data



Choose Alloy or QuickSort

**High-resolution display**  
rear-facing display for easy viewing



**Intuitive Android**  
operating system, with app based software



## Mining, Exploration, and Environmental Applications

LIBS complements handheld XRF because it is especially good at measuring low atomic number elements — including those too light for handheld XRF.

- Lithium** • in ores and brines.
- Light elements** • full suite of light elements in soils and ores including Li, Be, B, C, F and Na.
- Organic carbon** • total organic carbon in agricultural applications.
- Beryllium** • in soil or other materials as an environmental contaminant.

## More Applications Forensics, Quality Control, Research, Education

The Z-900 Series features our desktop/tablet ProfileBuilder software package to add elements, create calibrations and apply advanced spectral processing.

- Develop** • test methods for unique analytical or quality control needs.
- Academic** • tool for researchers and students alike – LIBS does not use X-ray radiation or its accompanying regulations.
- Forensics** • Small spot analysis (100 um) and ProfileBuilder yield a powerful, highly versatile field analytical technique.

**Be**  
Beryllium  
The Z is currently used at multiple government facilities for beryllium screening and clean-up



### LIBS sensor



Advanced spectrometer design for high resolution and wide range.

- Internal camera**  
precise targeting of analysis location.
- Macro camera**  
photo documentation of samples, reading barcodes and QR codes.
- Report generation**  
full-featured, with available cloud data management and reporting.
- Narrow snout**  
tapered for welds or difficult-to-access test locations.
- Laser safety sensor**  
patented sample sensor allows Class 1 operation, subject to LSO approval.
- Rugged metal body**  
Maximum durability and minimal service costs.

## Z-900 Series Models

Model	Spectrometers	Range	Elements Analyzed <sup>1,2</sup>
Z-901	1 spectrometer	200 – 420 nm	Factory calibrated with suites of 15-20 elements, app dependent. For some elements, model 902 or 903 is required.
Z-901 CSi	1 spectrometer	190 – 240 nm	Analyzes carbon and silicon only. The perfect complement to your XRF.
Z-902	2 spectrometers	190 – 625 nm	Adds emissions for Li, Na
Z-903	3 spectrometers	190 – 950 nm	Adds emissions for H, F, N, O, Br, Cl, Rb, Cs and S

<sup>1</sup> Every element is not necessarily factory-calibrated. Factory calibrations are provided for a set 15-20 elements depending on the application.

<sup>2</sup> "All elements" excludes unstable and radioactive elements. Detection limits vary greatly by element and sample type.

### One Box

Pair any Z Series with our industry-leading XRF unit and get optimal analysis across every element in the periodic table and every sample type!

### XRF

Great for transition and heavy metals. Easy to use especially on bulk, soil, and ore type materials.

### LIBS

Analyze elements XRF can't test: Li, Be, B, C, F, Na and more  
Improved performance on Mg, Ca, K compared to XRF  
Microanalysis capability with 100 um laser spot size.



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