



HANDHELD LIBS ANALYZERS

Handheld LIBS Analyzers | Laser-Based Elemental and Alloy Identification

A handheld LIBS analyzer identifies metal and mineral composition on the spot using laser-induced breakdown spectroscopy, giving recyclers, mills, and mining teams a lab-quality reading without sending a sample out. Because the technology reads light elements that X-ray fluorescence misses, from aluminum and lithium to carbon, it fills gaps that other portable analyzers cannot cover alone.

This range spans three configurations built on the same core platform: an aluminum and general alloy model for scrap sorting and PMI, a carbon model for steel and stainless verification, and a lithium model for mining and battery recycling work. Each shares a compact, one-trigger design, so operators move between applications without retraining.

Applications

Handheld LIBS analyzers support quality control, sorting, and field verification wherever a fast composition reading beats a lab turnaround.

- Scrap Metal Recycling and Sorting: identifies aluminum, copper, and stainless steel grades on-site to prevent mixed-grade contamination
- Positive Material Identification (PMI): verifies alloy grade on pipes, components, and structural parts in petrochemical and power generation facilities
- Steel and Stainless Steel Carbon Verification: measures carbon down to low parts-per-million levels to distinguish H-grade from L-grade stainless steel
- Lithium Ore Exploration and Mining: quantifies lithium content directly in ore samples for on-site grade control decisions
- Lithium-Ion Battery Recycling: measures recovered lithium in battery scrap and black mass to support material valuation
- Metal Trading and Procurement: gives buyers and sellers a shared, on-site method to confirm material composition before a sale closes

Handheld LIBS Analyzer Range

The lineup covers three configurations, each tuned to a different target material.

Handheld LIBS Analyzer - ToronLIBS™ V

A general alloy and aluminum-focused model built for scrap sorting, PMI, and metal trading. It identifies aluminum, copper, and stainless steel grades in about one second from a compact, 1.25 kg body, which suits high-volume yards and trading floors that need a fast grade match.

Handheld LIBS Analyzer - ToronLIBS™ P100 (Carbon)

A carbon-focused model for steel and stainless verification. Its dedicated high-resolution spectrometer and onboard argon purge measure carbon down to low parts-per-million levels, which lets inspectors separate H-grade from L-grade stainless steel and calculate carbon equivalency for weldability.

Handheld LIBS Analyzer - ToronLIBS™ P200 (Lithium)

A lithium-focused model for mining and battery recycling. It quantifies lithium directly in ore samples such as spodumene and petalite, or in recovered battery material, giving field teams a result without shipping samples to an outside lab.

How to Choose the Right Handheld LIBS Analyzer

- For scrap sorting and general alloy PMI: choose the ToronLIBS™ V for broad alloy coverage and strong aluminum performance.
- For low-carbon steel and stainless grade verification: choose the ToronLIBS™ P100 for its dedicated carbon channel and argon purge.
- For lithium ore or battery recycling work: choose the ToronLIBS™ P200 for direct lithium quantification.
- For teams avoiding X-ray licensing and shielding: any model in the range works, since all use non-ionizing laser technology instead of X-rays.

Why Choose Torontech for Your Handheld LIBS Analyzer

Torontech supplies testing and measurement equipment to laboratories and manufacturers across North America and worldwide, backed by responsive technical support and calibration service. The Handheld LIBS Analyzer range is built for reliable, standards-driven results, so you can standardize on one supplier as your testing needs grow. Our team helps you match the right configuration to your samples, applicable standards, and throughput, then supports you through installation and beyond.

Request a Quote

Tell us your target material, whether that is aluminum scrap, carbon steel, or lithium ore, and we will recommend the right handheld LIBS analyzer for your workflow. [Contact the Torontech team](#) for pricing and lead times.



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