IP54 WATERPROOF | **LASER CLASS CLASS I** | **EYE SAFE LASER** | **NO RADIATION**

HANDHELD LIBS SPECTROMETER
CODE HLS-B410

test interface

- Widely used in metallurgy, casting, steel, non-ferrous metals and scrap metal recycling, etc.
- LIBS is a technique that uses laser light on the sample's surface to excite outer electrons and generate a plasma, analyzing its elemental composition
- Ability to quickly analyze the metal elements of materials for quantitative characterization and grade differentiation
- Ability to accurately analyse light elements such as Al, Si, Mg, etc.
- No radiation, faster, more accurate, eye-safe handheld spectrometer
- The instrument includes standard metal grade database, ability to create user-owned metal grade database
- Compact size, lightweight, replaceable batteries, long battery life
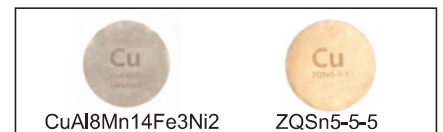- IP54 dust/waterproof

wavelength calibration foil
(included)

904L | MQTMn7

iron base calibration foils
(included)

7022 | AlSi5Cu8

aluminum base calibration foils
(included)

CuAl8Mn14Fe3Ni2 | ZQSn5-5-5

copper base calibration foils
(included)

STANDARD DELIVERY

Main unit	1 pc
Battery	2 pcs
Charger	1 pc
Sanding paper (HLS-B410-SP30)	20 pcs
Iron base calibration foil	2 pcs
Aluminum base calibration foil	2 pcs
Copper base calibration foil	2 pcs
Wavelength base calibration foil	1 pc

SPECIFICATION

Application	alloy analysis	can be used for almost all alloys, including scrap metal, high temperature alloys, alloy steel, stainless steel, tool steel, chromium molybdenum steel, aluminum alloys, nickel alloys, titanium alloys, cobalt alloys, cupric alloys, precious metals, zinc alloys, anomalous alloys, au-zirconium alloys, mixed alloys, etc.
	material properties identification (PMI)	can be used for quality control in the metal fabrication and processing industry to analyze material composition and identify alloy grades for a wide range of materials including critical missing pieces, raw materials, and welded seams

Operative system	android
Touch panel	5", 720×1280, Multi-Touch, adjustable brightness
Light source	pulsed laser
Wavelength	1535nm
Laser life	1 billion times
Laser class	class I
Detection limit	0.05%
Repeatability	major element RSD<1%, nonmajor element RSD<5%
Analysis time	<5s
Work distance	fit to probe plane
Analysis environment	no protective gas required, direct analysis in ambient air
View window material	sapphire
Memory	16G
Data export format	PDF, xlsx (photos available)
Data transmission	USB, flash drive (type C)
Protection class	IP54
Battery	3300mAh lithium battery
Work time	8h
Operation temperature	-10~40°C
Dimension (L×W×H)	290×300×90mm
Weight	1750g

STANDARD DATABASE

Alloy type	Elemental range
Iron Alloy	Fe, Cr, Ni, Mn, Cu, V, Mo, Si, Ti, Co, etc.
Aluminum Alloy	Al, Cr, Ni, Si, Mg, Ti, Fe, Cu, Sn, Pb, Zn, Zr, Be, Sr, Sc, etc.
Copper Alloy	Cu, Fe, Al, Mn, Sn, Pb, Zn, Ni, etc.

OPTIONAL DATABASE

Alloy type	Database number	Elemental range
Nickel Alloy	A1	Ni, Cr, Fe, Nb, Mo, Ti, Al, Mn, Cu, etc.
Titanium Alloy	A2	Ti, Al, V, Fe, Cr, Mo, Sn, Mn, Zr, Nb, Si, Cu, etc.
Magnesium Alloy	A3	Mg, Si, Cu, Mn, Zn, Zr, Al, Y, Be, Ni, Fe, etc.
Au	A4	Au, Ag, Zn, Ni, Pd, Cu, Co, In, etc.
Ag	A5	Ag, Cu, Zn, Cd, Ni, etc.
Pt	A6	Pt, Pd, Ag, Cu, Ni, Zn, Co, Ru, Pb, Cr, Au, etc.
Pd	A7	Pd, Cu, Ni, Zn, Fe, Co, Ag, As, Pb, Cr, etc.