

H500-Handheld XRF Alloy Metal Analyzer

Positive Material Identification (PMI)

Instant results for Metal ID Scanner and Alloy Grade Verification

Non-destructive element analysis with fast, simple reporting and certificate generation

Robust industrial design

Real-time and precise alloy identification for all classes of metals including Titanium alloys, Stainless steels, Low alloy steels, Tool steels, Cobalt alloys, Nickel alloys, Copper alloys, brasses and bronzes, Zinc alloys, Tin Alloys and Precious Metals

Features:

Powerful software

Point-and-Shoot for sample analysis

Minimal sample preparation required

Light weight and compact design for use in harsh environments

Extensive, editable onboard library for accurate alloy identification



Technical specifications

Analytical Method	Energy Dispersive X-ray fluorescence
PDA with Touch screen	CPU: 2G, System memory: 8G
Intelligent Analysis	Automatic select test mode based on sample matrix
Excitation Source	50KV/200µA – Ag/Rh/W end window integrated miniature X-ray tube and high voltage power supply
Collimator & Filter	Multiple Collimator and filters with automatic switching functions
Detector	High Resolution Silicon Detector
Sample States	Solids, liquids, powders
Detection Limit	5– 500ppm, depending on element and sample matrix
Analysis Time	3-60 seconds
Simultaneous Analysis	Displays up to 40 elements at a time
Display Range	ppm – 99.99%
Safety	Automatic shutdown of X-ray tube, Pb-lined instrument frame, radiation levels within international safety standards
Power Supply	Rechargeable Li battery, standard 6800mAh, provides up to 12 hours operation on a single charge; 110/220V universal adapter for charging
Temperature	-20°C to 50°C
Size	235 mm x 82 mm x 260 mm
Weight	Instrument without battery : 1.35 kg, Instrument with battery: 1.49 kg

Typical Applications:

Fast Non-destructive Positive Material Identification (PMI)
Scrap Metal Sorting and Verifying
Alloy Grade Verification
Gold Testing : Purity, Carat (Karat), Gold in Alloys
Aerospace Alloys QA/QC
Dental Alloys Composition

Extended application include:

Chlorine & RoHS: Cr, Hg, Pb, Br and Cd compliance
Analysis of Pt, Pd and Rh in catalytic converters
Analysis of lube oils
Ore and minerals
Heavy Metals in soil

Test Performance of SS-316

Instrument model : H-500 Handheld XRF Analyzer					Sample:	Stainless Steel 316	
Test Time:	30 seconds						
No. of Reading	Calibration Curve	Cr %	Mn %	Fe %	Ni %	Cu %	Mo %
1	High Alloy steel	16.648	0.878	69.346	10.121	0.309	1.987
2	High Alloy steel	16.688	0.849	69.356	10.100	0.325	1.983
3	High Alloy steel	16.642	0.872	69.435	10.061	0.315	1.991
4	High Alloy steel	16.679	0.918	69.276	10.102	0.311	1.975
5	High Alloy steel	16.611	0.899	69.266	10.196	0.305	1.984
6	High Alloy steel	16.652	0.888	69.422	10.021	0.304	1.996
7	High Alloy steel	16.722	0.865	69.305	10.098	0.318	1.975
8	High Alloy steel	16.702	0.836	69.438	10.037	0.313	1.988
9	High Alloy steel	16.629	0.876	69.382	10.076	0.312	1.963
10	High Alloy steel	16.642	0.864	69.388	10.117	0.302	1.974
Ranges		0.111	0.082	0.172	0.175	0.023	0.032
Average		16.662	0.874	69.361	10.093	0.311	1.982
Standard Deviation Sn		0.0349	0.0236	0.0633	0.0492	0.0071	0.0096
RSD		0.209%	2.694%	0.091%	0.488%	2.276%	0.486%