

Handheld Alloy Spectrometer



AI Overview

Handheld alloy spectrometers are portable X-ray fluorescence (XRF) devices that provide rapid, non-destructive elemental analysis of metals and alloys in the field or laboratory. Overview Handheld alloy spectrometers use X-ray fluorescence (XRF) technology to identify and quantify elements in metals and alloys quickly and accurately. They are designed for on-site analysis, eliminating the need for sample preparation and laboratory testing. These devices are widely used in metal recycling, mining, manufacturing, aerospace, and quality control applications. Key Features Portability and Ergonomics: Most handheld spectrometers weigh between 1.3–1.8 kg and feature compact, ergonomic designs for easy one-handed operation. Rapid Analysis: Devices can deliver results in 1–7 seconds, depending on the alloy and element range. Elemental Range: Capable of detecting elements from Magnesium (Mg) to Uranium (U), including light elements like Al, Si, and Mg in advanced models. Detectors: High-sensitivity Si-PIN or Silicon Drift Detectors (SDD) provide precise measurements and low detection limits, often down to 1–500 ppm. Data Management: Onboard memory, USB, Bluetooth, Wi-Fi, and GPS connectivity allow storage and export of thousands of data entries for traceability and reporting. Safety Features: Multiple safety protections, including automatic X-ray shutoff and radiation shielding, ensure compliance with international safety standards. Durability: Rugged construction with waterproof and shockproof designs allows use in harsh environments. Applications Metal and Alloy Identification: Stainless steel, tool steel, chromium/molybdenum steel, nickel/cobalt alloys, titanium, aluminum, copper alloys, and precious metals like gold, silver, and platinum. Quality Control: Ensures correct alloy composition in manufacturing, aerospace, shipbuilding, and high-pressure equipment. Recycling and Scrap Sorting: Rapid classification of scrap metals and verification of precious metal content. Mining and Exploration: On-site ore analysis...

Article Content

X-Ray Fluorescence Analyzers | Thermo Fisher Scientific

Confidently perform elemental analysis with the Thermo Scientific™ Niton™ XL5 Plus handheld XRF analyzer; it delivers unprecedented performance even for

Handheld/Portable XRF Analyzers for Precise Elemental Analysis

SPECTRO handheld and portable XRF analyzers are rugged, easy-to-use instruments designed for fast, accurate elemental analysis directly at your testing location. They deliver reliable results within

Handheld/Portable XRF Analyzers for Precise Elemental Analysis

Ideal for applications such as alloy grade identification, elemental composition verification, and multi-material analysis, these handheld XRF analyzers are used across industries including

Analytical Solutions | Industrial Applications | Materials Analysis ...

Looking for materials analysis solutions? Browse Hitachi High-Tech's product range, for diverse industrial applications

Portable XRF Metal Analyzer

Meet your metal analysis needs anywhere with the JITA19201 Handheld XRF Analyzer. This rugged 245x250x90mm portable spectrometer delivers fast,

Portable XRF Spectrometer 5000 – Handheld Alloy

Discover the AELAB Portable XRF Spectrometer 5000 – a handheld, high-precision analyzer for alloys and precious metals. Fast results, rugged design, and lab

SPECTRO xSORT Handheld XRF Analyzer for Metal Analysis

The SPECTRO xSORT XHH04 handheld XRF gun is an elemental analyzer that's designed for high-throughput analysis of metals and

2025 Handheld XRF Tier List

2025 Alloy Geek Handheld XRF Overall Rating - This guide uses Alloy Geek's more than a decade in the field to rank every handheld XRF based on performance,

EVDENT XRF-Port Handheld Energy Dispersive X-Ray Fluorescence Spectrometer

Overview The EVDENT XRF-Port is a field-deployable, handheld energy dispersive X-ray fluorescence (ED-XRF) spectrometer engineered for rapid, non-destructive elemental analysis of solid and

Handheld Metal Alloy Tester Portable XRF Gold

The handheld X-ray fluorescence alloy composition analyzer is a high-performance and portable analytical device widely used for the analysis of

Evident Vanta Element Handheld Energy Dispersive X-Ray

The Evident Vanta Element is a rugged, handheld energy dispersive X-ray fluorescence (EDXRF) spectrometer engineered for rapid, non-destructive elemental analysis and alloy grade identification

AJR XRF3500 Handheld XRF Spectrometer

AJR NDT: XRF3500 Handheld XRF Analyzer for Alloy Introduction With the development of the technology of X-Ray, the cost of the hardware is going down while the performance is getting better.

Handheld XRF Gun Analyzer | X-ray Fluorescence | X-MET8000 | Hitachi ...

With handheld X-ray fluorescence (HHXRF), you can carry out rapid incoming inspection of alloy materials at delivery, and verify the

EXPEC MiX5 Pro Handheld Energy Dispersive X-Ray Fluorescence

Overview The EXPEC MiX5 Pro is a handheld energy dispersive X-ray fluorescence (ED-XRF) spectrometer engineered for rapid, non-destructive elemental analysis in field and industrial

Handheld XRF Spectrometers for Elemental Analysis | Bruker

PMI & Alloy Analysis using Handheld XRF Alloy verification is fast and seamless using Bruker's handheld XRF analyzers. Alloy-specific calibrations and a state-of-the-art XRF engine support rapid confident

Portable Metal Analyzer

The SPECTROPORT portable arc spark spectrometer is ideal for many applications in the metal producing, processing, and recycling industries. Find out more.

EVDENT Vanta Handheld Energy Dispersive X-Ray Fluorescence

The EVDENT Vanta Handheld Energy Dispersive X-Ray Fluorescence (ED-XRF) Spectrometer is an engineered solution for non-destructive elemental analysis in archaeological fieldwork, museum

Evident (formerly Olympus) Vanta Handheld Energy Dispersive X-Ray ...

Overview The Evident (formerly Olympus) Vanta handheld energy dispersive X-ray fluorescence (ED-XRF) spectrometer is an industrial-grade, field-deployable elemental analyzer engineered for rapid,

Mobile Metal Analyzer

For onsite metal analysis, SPECTRO offers a complete range of mobile metal analyzer products, from handheld XRF to portable Arc Spark OES spectrometers.

Applications Of Terras XRF Analyzer In The Alloy Field

Conclusion Handheld XRF spectrometers are powerful, portable, and effective tools for testing metal alloys. Their ability to provide fast, accurate, non-destructive analysis makes them an

Portable and Handheld XRF Analyzers | Evident Scientific

Vanta handheld XRF analyzers for precious metals provide fast, accurate alloy chemistry and karat classification for identifying gold, platinum, silver, and

Handheld XRF Alloy Analyzer

ATX3100A is a handheld alloy analyzer using X-ray fluorescence spectroscopy technology. With the continuous promotion of X-ray fluorescence spectrometry analysis technology, the use of X-ray

Contact Us

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