

Handheld Spectrometer Handheld X-ray Spectrometer



AI Overview

Handheld X-ray spectrometers (XRF analyzers) are portable devices that provide rapid, non-destructive elemental analysis of materials in the field or laboratory.

Overview

Handheld X-ray fluorescence (XRF) spectrometers are designed to identify and quantify elements from magnesium to uranium without destroying the sample. They operate by emitting X-rays that displace electrons from atomic orbitals, causing the atoms to release energy characteristic of each element. This energy is detected and analyzed to determine the elemental composition of the material being tested .

Key Features

- **Portability and Durability:** Most handheld XRF devices are lightweight (around 1.5 kg) and compact, with rugged casings resistant to dust, water, chemicals, and shocks, making them suitable for fieldwork .
- **Detectors:** High-sensitivity detectors such as silicon drift detectors (SDD) or Si-PIN diodes allow precise measurement of metals, alloys, soils, and minerals .
- **Power and Cooling:** Devices often feature X-ray tubes up to 80 kV and Peltier cooling systems to maintain detector performance in varying environmental conditions .
- **Data Management:** Onboard storage, USB, Bluetooth, and GPS connectivity enable efficient data collection, storage, and export for analysis .

Article Content

Portable handheld spectrometers

Malvern Panalytical offers a range of portable spectrometers and a portable XRF analyzer alternative to a XRF handheld or XRF gun.

Angstrom handheld XRF | NDT-Service

AA XRF HANDHELD PORTABLE X-RAY FLUORESCENCE SPECTROMETER The AA Handheld XRF comes in various Models. it

Handheld XRF Spectrometer LXRF-B13 | Portable XRF

Our Handheld XRF Spectrometer LXRF-B13 is designed for quick and non-destructive analysis of metals,

Handheld XRF Spectrometers for Elemental Analysis | Bruker

Handheld / portable X-ray fluorescent (XRF) analyzers have the capability to non-destructively quantify or qualify nearly any element

Portable XRF Spectrometer 5000 – Handheld Alloy

The AELAB Portable XRF Spectrometer 5000 is a powerful handheld analyzer tailored for quick, accurate

Portable XRF Metal Analyzer

This rugged 245x250x90mm portable spectrometer delivers fast, precise elemental identification in the field. The 50kV X-ray tube and

TRACER 5 pXRF spectrometer | Bruker

TRACER 5 is the high value in-situ pXRF performer synchronizing power, function, precision and accuracy

Handheld XRF Spectrometers for Elemental Analysis | Bruker

Handheld X-Ray Fluorescence (XRF) analyzers have the capability to quantify or qualify nearly any element - from Magnesium to

Bruker TRACER 5i Handheld XRF Analyzer

The Bruker TRACER 5i XRF is a handheld, portable spectrometer ideal for elemental analysis in the field

A review of the handheld X-ray fluorescence spectrometer as a tool for ...

X-ray fluorescence (XRF) spectroscopy is a well-established and commonly used technique in obtaining diagnostic

Handheld XRF Spectrometer | Manufactures

Labtro X-ray Fluorescence (XRF) Spectrometer offers portable and tabletop models for solid, liquid, or powdered sample analysis,

Niton XL2 | Handheld XRF spectrometer for metals & alloys

Niton XL2, portable X-ray fluorescence analyzer analyzes the chemical composition of metals and alloys instantly and non-destructively.

Handheld XRF Spectrometer - 1-500 ppm | XRF Spectrometer

Labtro Handheld XRF Spectrometer LT-XRF201 with 50 kV X-ray tube enables rapid elemental detection across 40 metals and

Skyray Instruments USA

Skyray Instruments specializes in the R& D, manufacturing and sales of analytical and measuring instruments in Spectroscopy,

X-Ray Fluorescence Analyzers

X-Ray Fluorescence Analyzers Instruments, devices, and accessories designed to facilitate accurate elemental analysis via x-ray

Handheld XRF Spectrometer | Mining & Ore Analyzer - H500B

Handheld Spectrometer XRF H500B The H500B Handheld Spectrometer uses X-Ray Fluorescence for precise elemental analysis in

Niton Portable Analyzer Selection Guide

Use this guide to compare technologies, analytical capabilities, and key features to determine which Niton analyzer best meets your

Handheld XRF Spectrometer LXRF-B14 | Portable XRF Spectrometer

Labtron Xray Fluorescence (XRF) Spectrometer offers an advanced range of tabletop and portable spectrometer for solid, liquid, or

Contact Us

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