

Spectrometer Handheld XRF Spectrometer



Article Overview

Handheld XRF spectrometers are portable devices that provide rapid, non-destructive elemental analysis of metals, minerals, soils, and other materials directly in the field or laboratory.

Overview

Handheld X-ray fluorescence (XRF) analyzers use X-ray fluorescence to identify and quantify elements from magnesium to uranium. They are compact, lightweight, and designed for portability, allowing users to perform fast, accurate elemental analysis without the need for laboratory testing (Bruker, Hitachi, SPECTRO) . XRF works by displacing electrons from atomic orbitals, causing the emission of characteristic energy bursts that are detected and analyzed to determine elemental composition .

Key Features

- **Portability and Design:** Most handheld XRF devices weigh between 1.5–7 kg and are ergonomically designed for field use. They are often dust, water, chemical, and shock-resistant, with some models meeting military-grade standards for robustness .
- **Detectors and X-ray Tubes:** Common detectors include Si-PIN diodes and SDD (Silicon Drift Detectors), paired with X-ray tubes up to 50 kV for precise measurements of metals and light elements .
- **Data Management:** Devices typically feature onboard storage (up to hundreds of thousands of spectra), USB or Bluetooth connectivity, GPS tagging, and software for...

Article Content

Mar 10, 2026

Handheld XRF Spectrometer LXRF-B10

Labtron Xray Fluorescence (XRF) Spectrometer offers an advanced range of

Feb 28, 2026

TITAN Handheld XRF Analyzer | Bruker

TITAN: Power Over the Elements This high-performance handheld X-ray Fluorescence (XRF) gun makes ultra-fast, highly-accurate

May 11, 2026

Handheld XRF analyzers

In 2024, Malvern Panalytical acquired SciAps Inc., a leading provider of handheld XRF, LIBS analyzers, and NIR spectrometers. This

Jun 30, 2026

Portable XRF Metal Analyzer

Meet your metal analysis needs anywhere with the JITA19201 Handheld XRF Analyzer. This rugged

May 20, 2026

How does handheld XRF work?

How does handheld X-ray fluorescence (XRF) technology work? XRF is an acronym for X-ray fluorescence spectroscopy. XRF is a

Nov 22, 2025

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

May 04, 2026

SPECTRO xSORT Handheld XRF Analyzer for Metal

The SPECTRO xSORT XHH04 handheld XRF gun is an elemental analyzer that's designed for high

Oct 21, 2025

XRF Spectrometers | Bruker

XRF analysis – one of the best analytical techniques to perform elemental analysis in all kinds of samples, no matter if liquids, solids

Dec 01, 2025

Explorer Handheld X-ray Fluorescence Spectrometer

Explorer Handheld X-ray Fluorescence Spectrometer Skyray Instruments 5th generation Explorer

Jan 24, 2026

Handheld XRF Spectrometer LXRF-B12 | Spectrometer Supplier

Labtron supplies precise Handheld XRF Spectrometer. Our LXRF-B12 uses Energy

May 30, 2026

Handheld XRF Spectrometers for Elemental Analysis | Bruker

Handheld/Mobile/Portable XRF Spectrometers Handheld / portable X-ray fluorescent (XRF) analyzers have the capability to non

Sep 23, 2025

X-Ray Fluorescence Spectrometer

An x-ray fluorescence spectrometer from Bruker is the elemental analysis instrument of choice for many industry, academic, and

Mar 01, 2026

Portable XRF Metal Analyzer

This rugged 245x250x90mm portable spectrometer delivers fast, precise elemental identification in the

Oct 10, 2025

SPECTRO xSORT XRF Handheld Analyzer for many

The new SPECTRO xSORT handheld XRF boasts numerous new features and designs aimed at

Jul 14, 2026

X-Ray Fluorescence Analyzers | Thermo Fisher Scientific

The Thermo Scientific™ ARL™ X900 XRF Spectrometer is a robust WDXRF analyzer with XRD capability

Apr 29, 2026

Hand-held XRF Analyzer Fluorescence Spectrometer for Ore

Cutting-Edge XRF Technology: Incorporates advanced X-Ray Fluorescence Spectrometry (XRF) technology, providing

Feb 14, 2026

Handheld XRF Spectrometer LXRF-B14

Labtron's Handheld XRF Spectrometer LXRF-B14 is designed for fast, accurate elemental analysis across

Oct 07, 2025

Mobile X-ray fluorescence spectrometer

Especially in metal analysis, mobile XRF spectrometers are well known and established over many years. These spectrometers have

Apr 07, 2026

Handheld XRF Spectrometer | Handheld Spectrometer

Labmate is supplier of Handheld XRF Spectrometer with non-destructive analysis and SDD detector for

Oct 24, 2025

Skyray Instruments USA

Skyray Instruments releases 5th generation model handheld for 2016 - EXPLORER Handheld XRF. With its user-friendly interface,

Apr 25, 2026

RFA-Handspektrometer | Bruker

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

Dec 13, 2025

Handheld X-Ray Fluorescence Spectrometer (XRF)

A handheld X-ray fluorescence spectrometer (XRF) is a portable, non-destructive, rapid elemental analysis

Aug 02, 2025

Handheld XRF Spectrometer

Handheld XRF spectrometers are a fast, accurate, and portable tool that can be used for a

Oct 16, 2025

Niton™ XL5 Plus Handheld XRF Analyzer

Get unprecedented performance in handheld XRF analysis, even for lightweight elements. The Niton XL5

Nov 25, 2025

XRF Analyzers | XRF Spectrometers | Malvern Panalytical

X-ray Fluorescence (XRF) spectrometers are powerful analytical instruments designed to unveil the elemental

Contact Us

For more information, pricing, or custom solutions, please contact us:

Website: <https://www.chromadecksigns-eastrand.co.za>

Email: sales@chromadecksigns-eastrand.co.za

Phone: +32 2 318 5792

Address: Avenue Louise 500, 1050 Brussels, Belgium

This document is for informational purposes only. Specifications subject to change without notice.

