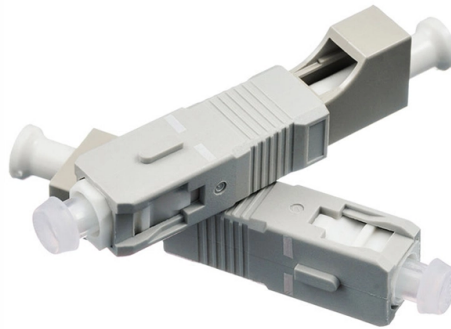


Metal Spectrometer XRF



Article Overview

XRF metal analyzers use X-ray fluorescence to provide rapid, non-destructive elemental analysis of metals and alloys, available in handheld and benchtop formats for field or laboratory use.

Overview of XRF Technology

XRF (X-ray fluorescence) analyzers work by exciting atoms in a sample with X-rays, causing them to emit secondary X-rays that are characteristic of each element. This allows the device to identify and quantify the elemental composition of metals, alloys, and other materials quickly and accurately without destroying the sample . XRF is widely used for metal verification, alloy identification, precious metal testing, scrap sorting, and regulatory compliance such as RoHS screening .

Types of XRF Analyzers

- Handheld XRF Analyzers
 - Portable and lightweight, ideal for onsite testing in scrapyards, factories, or fieldwork .
 - Examples include the SPECTRO xSORT XHH04, which can analyze 46 elements in 16 metal matrices and identify alloys in seconds .
 - Features often include ergonomic design, high-definition displays, automated calibration, and minimal sample preparation .
 - Limitations: Cannot detect elements with atomic number $Z < 11$, such as carbon in steel .
- Benchtop XRF Spectrometers...

Article Content

Mar 14, 2026

Metals Analysis by X-ray Fluorescence

Purpose The purpose of this unit is to introduce the fundamental principles of x-ray fluorescence spectroscopy (XRF), apply this

Nov 12, 2025

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

Nov 19, 2025

X-Ray Fluorescence Spectrometer (XRF)

Laboratory XRF Spectrometer Introduction The Laboratory XRF Spectrometer is a powerful analytical instrument used for precise,

Mar 03, 2026

Portable Metal Analyzer

The SPECTROPORT portable arc spark spectrometer is ideal for many applications in the metal

Apr 02, 2026

X-Ray Fluorescence Analyzers | Thermo Fisher Scientific

When you need nondestructive testing with results in seconds for metal analysis, mining and exploration,

Jun 21, 2026

RFA-Spektrometer | Bruker

Die WDRFA Spektrometer von Bruker sind für ihre unübertroffene Genauigkeit, Präzision und Zuverlässigkeit bekannt. Basierend auf

Jan 01, 2026

X-Ray Fluorescence Spectroscopy

X-Ray Fluorescence Spectrometry X-ray fluorescence spectroscopy (XRF) is based on the excitation of atoms of the material under

Jul 17, 2026

X-Ray Fluorescence | XRF | Thermo Fisher Scientific

Today, X-ray fluorescence (XRF) technology is well known to provide accurate, nondestructive elemental analysis. Using XRF,

Aug 08, 2025

Handheld X-ray Fluorescence (XRF) Spectroscopy Learning Center

Explore how handheld XRF works and how it is used in various metals, mining, and industrial operations XRF is an analytical

Aug 25, 2025

Niton™ XL2 Schnelle, mobile Metallanalysen

Metall-Recycling und Qualitätssicherung Das Metallprüfgerät XL2 classic wird im Metall-Recycling zur

Apr 23, 2026

Niton™ XL2 XRF Analyzer

Niton™ XL2 XRF Analyzer Instantly identify materials on the spot, whatever your analytical requirement,

Jun 14, 2026

XRF Analyzers | X-Ray Fluorescence Analyzers

We offer a wide range of X-ray fluorescence (XRF) instruments designed to meet the needs of every

Dec 30, 2025

XRF Analyzers | XRF Spectrometers | Malvern Panalytical

Malvern Panalytical offers a versatile range of X-ray fluorescence spectrometers and

Jul 06, 2026

RFA-Handspektrometer | Bruker

Bruker's portable XRF solutions offer multi-element analysis with off-the-shelf or customized methods to

Oct 14, 2025

Röntgenfluoreszenz (RFA/XRF) Spektrometer

Röntgenfluoreszenz-Spektrometer SPECTRO, ein weltweit führender Hersteller energiedispersiver Röntgenfluoreszenz

Jun 29, 2026

XRF Analyzers | X-Ray Fluorescence Analyzers

Fast, reliable elemental analysis—in the lab and field We offer a wide range of X-ray fluorescence (XRF) instruments designed to

Apr 05, 2026

How does XRF Work?

X-Ray Fluorescence (XRF) Spectrometry The XRF technologies provide elemental analysis of a huge variety of materials including

Jul 28, 2025

X-ray fluorescence

Conventional X-ray generators, based on electron bombardment of a heavy metal (i.e. tungsten or

Oct 08, 2025

SPECTRO MIDEX XRF Spectrometer

SPECTRO MIDEX Small spot energy dispersive X-ray fluorescence (ED-XRF) spectrometer optimized for

Jun 25, 2026

X-Ray Fluorescence Spectrometers / XRF Analyzers

X-Ray Fluorescence Spectrometer (XRF Analyzer) X-ray fluorescence spectrometers use high-energy X-rays (or gamma rays) to

Jun 13, 2026

X-Ray Fluorescence Analyzers | Thermo Fisher Scientific

Instruments, devices, and accessories designed to facilitate accurate elemental analysis via x-ray fluorescence. Products are

Jan 28, 2026

Metal Testing & Analysis

SPECTRO XRF spectrometers are also well suited to many other metals analysis tasks, such as for coatings, the automatic

Dec 20, 2025

XRF Spectrometers | Bruker

Bruker XRF spectrometers are combining highest accuracy and precision with simple and fast sample

Jun 27, 2026

Handheld XRF Spectrometers for Elemental Analysis

Bruker's portable XRF solutions offer multi-element analysis with off-the-shelf or customized methods to

Jan 09, 2026

Our X-ray fluorescence measuring instruments | Helmut Fischer

Measure coating thicknesses and analyze materials non-destructively and non-contact with our wide range of XRF measuring

Jan 18, 2026

Portable XRF Metal Analyzer

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

Jan 29, 2026

SPECTRO xSORT XRF Handheld Analyzer for many

Fast on-site elemental analysis: The SPECTRO xSORT handheld XRF is the ideal analyzer for compliance

Contact Us

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