

Handheld Molecular Spectrometer



Overview

Portable spectrometers / handheld spectrometers allow researchers to analyze samples on the go. Perfect for applications like field analysis of samples, identifying raw materials, and forensic analysis, these versatile instruments offer analysis capabilities similar to benchtop. The Agilent Resolve handheld spectrometer is a cutting-edge analytical instrument specifically engineered for applications beyond the confines of a traditional laboratory. This device leverages proprietary handheld spatially offset Raman spectroscopy (SORS) technology. If you're looking for the top USB pocket spectrometers for on-the-go analysis in 2025, I recommend checking out compact models like the Spectryx. AURA ® handheld NIR from ZEISS is a powerful portable spectroscopy solution. Measure where you want when you want with AURA ® handheld NIR. The small and powerful Epsilon 1 benchtop. Scientists from Zhenjiang, China recently tested different analysis methods of using portable near-infrared (NIR) spectroscopy to detect Bombyx mori nuclear polyhedrosis virus within silkworms.



Article Content

Hot

Portable Spectrometer / Handheld Spectrometer

Find, compare, and request a quote for portable spectrometers across leading suppliers at Labcompare; including access to product citations, related published figures, and first-hand reviews from our

Jun 14, 2026 Hot

14 Best USB Pocket Spectrometers for On-the-Go

Prepare to explore the top 14 USB pocket spectrometers of 2025, offering portable solutions for precise analysis—discover which one fits your

Jul 06, 2025 Hot

Observing and analyzing living plants using handheld and miniaturized ...

Raman spectroscopy, renowned for its molecular fingerprinting ability, has become an indispensable tool in plant detection. The miniaturization of Raman spectrometers further enhances

Nov 28, 2025 Hot

Molecular Spectroscopy

Agilent's best-in-class portfolio of molecular spectroscopy instruments have grown in breadth as well as capabilities. With leading innovations like the Cary 3500 UV-Vis and laser direct infrared (LDIR)

Apr 24, 2026 Hot

SCiO by Consumer Physics: Pocket-Sized Spectrometer

Utilising the latest optical, algorithmic and computer technologies, they miniaturised traditional NIR Spectrometers into SCiO—pocket-sized handheld

Feb 26, 2026 Hot

Miniaturized Spectroscopy: The Rise of Handheld Devices

Handheld devices now offer Raman, NIR, and LIBS capabilities, supporting applications in pharmaceuticals, forensics, agriculture, and

Mar 27, 2026 Hot

Portable and Handheld Spectroscopy

This article provides a convenient summary of portable and handheld spectroscopy techniques, outlining the most prominent types of compact instruments for both atomic and molecular

Nov 03, 2025 Hot

Portable NIR spectroscopy: the route to green analytical

Benchtop and handheld molecular spectrometers have been successfully applied in material identification. Compared to FT-MIR spectra, near

Dec 21, 2025 Hot

Handheld Chemical Detector, Hazmat ID, Resolve | Agilent

Agilent chemical detectors use SORS handheld Raman technology for explosives, narcotics and hazmat ID. Identify hazardous materials through opaque containers in customs, police, military and hazmat

Jul 08, 2025 Hot

A Brief Survey of Handheld and Portable Instruments

This article provides a convenient summary of portable and handheld spectroscopy techniques, outlining the most prominent types of compact

Feb 15, 2026 Hot

Handheld Spectrometer, Portable SORS Raman Technology | Agilent

The Agilent Resolve Raman handheld spectrometer is a cutting-edge analytical instrument, specifically engineered for applications beyond the confines of a traditional laboratory.

Apr 02, 2026 Hot

A handheld smartphone-controlled spectrophotometer based on hue

An improved design for a handheld smartphone-based spectrometer that works in both absorption and emission modes is proposed. The device, named Spectr

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AURA® handheld NIR | Versatile & portable

AURA® handheld NIR is a portable spectrometer system, which enables measurements to be taken directly on site, suitable for a variety of

Sep 30, 2025 Hot

Handheld Raman Spectrometers, Portable Raman | Agilent

What is Handheld Raman Spectroscopy? Handheld Raman spectrometers combine the long-established principles of Raman spectroscopy with miniaturized components, enabling users to take and use

Sep 15, 2025 Hot

Portable Spectrometer / Handheld Spectrometer

Portable spectrometers / handheld spectrometers allow researchers to analyze samples on the go. Perfect for applications like field analysis of samples, identifying raw materials, and forensic analysis,

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Portable and Handheld Spectroscopy

Portable and Handheld Spectroscopy | Topic | Spectroscopy connects analytical chemists with insights in molecular and atomic spectroscopy techniques, such as Raman, infrared (IR), ICP

Sep 25, 2025 Hot

This pocket-sized molecular spectrometer tells you the

Launching on Kickstarter today, Scio is a thumb-sized device that uses near-infrared spectroscopy to reveal the chemical makeup of foods, drinks,

Jul 01, 2025 Hot

Near-infrared spectroscopy

Near-infrared spectroscopy is based on molecular overtone and combination vibrations. Overtones and combinations exhibit lower intensity compared to

Aug 03, 2025 Hot

The Benefits of a High-Performance, Handheld Raman

In recent years, Raman Spectroscopy has gained a reputation in market segments that require the rapid identification of unknown compounds,

Sep 11, 2025 Hot

Handheld FTIR, Mobile Nondestructive Testing | Agilent

A handheld FTIR spectrometer for mobile non-destructive testing in the field and non-laboratory environments. Analyze FTIR reflectance of polymers, coatings,

Nov 29, 2025 Hot

Handheld spectrometer

Premium is a full-featured Handheld Spectrometer used by lighting professionals whose broad customer base presents a wide range of projects and lighting challenges.

Mar 01, 2026 Hot

Compact & Portable FTIR Systems, Mobile FTIR | Agilent

Agilent offers a comprehensive range of FTIR spectrometers, including flexible handheld FTIR systems and robust portable analyzers for field use, and reliable benchtop FTIR instruments for routine testing

Sep 15, 2025 Hot

SCiO molecular scanner: This is how a handheld spectrometer works

SCiO is a device which uses near-IR spectroscopy. The technology is not new, but spectrometers are normally bulky machines used mainly in laboratories.

Apr 30, 2026 Hot

AURA® handheld NIR | Versatile & portable spectrometer

Get reliable, lab-quality results with a portable, complex spectrometer that can even be handled by non-experts and offers low costs and high connectivity as an ethernet-ready computer.

Apr 07, 2026 Hot

Portable handheld spectrometers

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

Jun 20, 2026 Hot

Instant Material Analysis Solutions for

Discover SCiO's instant material analysis solutions for agriculture & food, enabling rapid, accurate quality and safety testing.

Apr 28, 2026 Hot

An open-source handheld spectrometer for colorimetric and

Herein, a wireless, cost-effective, open-source, and handheld spectrometer was designed and fabricated to realize the colorimetric and fluorescence analyses. It was built from off

Sep 09, 2025

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