Spectrum Two Educational System

f   in   y

260.000,-   + MVA.

The high performance Spectrum Two™ IR spectrometer combined with the Educational Resource Pack provides a truly comprehensive solution for students and researchers alike.

Part Number   L160000U

Request More Information	Request A Quote

Detail Information

FT-IR for Everyone, Everywhere

For teachers and students of spectroscopy in academia, Spectrum Two helps develop an understanding of FT-IR sampling techniques and spectral analysis. The Educational Resource Pack facilitates the teaching of traditional synthetic chemistry analysis as well as more modern applications, such as recycling. This analysis system includes:

- FT-IR Educational Resource Pack
- Spectrum Two Instrument
- Spectrum 10™ Software

FT-IR Educational Resource Pack

The FT-IR Educational Resource Pack contains two CDs designed for use in the teaching of FT-IR Spectroscopy to students and new users of IR instruments. This kit contains 15 experiments that can be used as part of a curriculum or adapted to meet the individual needs of your institution. The experiments are designed to:

- Develop skills in sample preparation.
- Generate an understanding of the most appropriate sampling technique to use for a variety of sample types.
- Demonstrate the value of using FT-IR spectroscopy in identification and verification of materials.

Spectrum Two Instrument

The Spectrum Two spectrometer with KBr optics and a standard, high-performance room temperature $LiTaO_3$ (lithium tantalate) detector delivers a spectral scan range of 8,300 – 350 cm⁻¹ whilst offering 0.5 cm⁻¹ resolution and 9,300:1 peak-peak signal-to-noise ratio for a 5 second scan in a sleek, compact design.

Key features that allow for consistent performance of this system include:

- **Dynascan™ interferometer** – Fixed mirror-pair interferometer design does not require dynamic alignment to compensate for errors.
- **OpticsGuard™ technology** – Unique humidity shield design protects Spectrum Two from environmental effects, allowing it to be used in more challenging conditions. Our long-life desiccant ensures maximum instrument uptime, regardless of where your analysis takes place.
- **Atmospheric Vapor Compensation™ (AVC)** – Features an advanced digital filtering algorithm designed to compensate for CO2 and H2O absorptions in real time removing the need for instrument purging.
- **Sigma-Delta Conversion:** The use of Sigma-Delta converters in the digitization of the FT-IR interferogram improves the dynamic range, reduces spectral artifacts, and increases ordinate linearity to provide accurate, reproducible results.

Spectrum 10™ Software

Included in this system is the Spectrum 10™ software, which enables you to control the instrument and to manipulate the spectra that you collect. The spectrometers can operate in ratio, single-beam, or interferogram mode.

From material and contaminant identification to quantitative analysis, the comprehensive Spectrum 10 software suite allows you to focus on what matters most – results. Designed for busy academic laboratories, this comprehensive FT-IR software package facilitates data collection, processing, results generation, basic and advanced data manipulation, spectral calculations, COMPARE spectral comparison, PLS/PCR/Beer's Law predictions, Beer's Law Quant method development, spectral search with starter libraries, and built-in online tutorials. The software enables users without scientific training to generate infrared spectra from a sample and validate them against reference spectra in minutes, or even seconds.

Specifications

Depth	30.0 cm
Detector Type	LiTaO3
Height	21.0 cm
Operating Range	5 - 45 °C
Portable	Yes
Product Brand Name	Spectrum Two
Product Group	Application Pack
Technology Type	Infrared
Wave Length Range	8,300 – 350 cm-1
Weight	13.0 kg
Width	45.0 cm