

SPECTRUM BX II

FT-IR System



Introduction

The Spectrum™ BX II system is designed to meet the high validation standards set by QA/QC, method development and analytical service laboratories. It offers fast throughput and rapid access to reliable and dependable FT-IR results while harnessing the power of our renowned Spectrum software.

The right data and results - every time

The Spectrum BX is more than an intuitive and simple-to-use system. It carries out exhaustive integrity tests at three levels to ensure that it is working correctly,

and the data is both properly collected and accurate. This unique, three-level validation involves:

- Continuous examination and monitoring of critical components from start to finish.
- Scrutiny of every data point using the SURE-SCAN™ feature to guarantee that measurements are free from any distortion caused by vibration or movement.
- Assurance of reproducible results with the Automatic Precision Validator (APV™) accessory. The APV is a traceable, certified reference material to verify wave-number accuracy and an optical filter to confirm ordinate repeatability.

Key Features

- ▶ Built-in validation. Saves time and money
- ▶ Customizable software. Easy to use and reduces training time
- ▶ Accurate, dependable results
- ▶ High performance. Fast analysis of difficult samples
- ▶ Powerful data. Rapid identification processing and quantification of samples

Plus, every Spectrum process command has been validated against a protocol of fitness for purpose. Descriptions of fitness for purpose, as defined by PerkinElmer's senior scientists, are included in the optional validation package. This package also supplies descriptions of the core algorithms, test descriptions and results, and a full set of test data.

For quality assurance, the Spectrum COMPARE™ function uses a patented algorithm designed specifically for materials checking. It recognizes and highlights the minutest spectral differences between the sample being tested, and a library of reference materials. Unique filters diminish any anomalies, such as baseline variations or atmospheric absorption, to focus only on that information which is relevant and unique to the sample. Tests can be carried out routinely with a single keystroke.

Easy-to-use, powerful software

Spectrum software is designed to make instrument control and data collection easy – for any level of user. Spectrum takes full advantage of the customization, security, and user familiarity of Windows® software. Powerful algorithms for complex analysis of spectra are no longer tasks that can only be performed by experienced spectroscopists with extensive on-line tutorials and validated software for GLP.

• Built-in validation

Spectrum validated software is your assurance that commands are always fit for purpose. Data collection parameters and uneditable history files provide audit trails for GLP compliance. ASTM, plus validation testing software and built-in standards assure consistently reliable test results. An instrument performance validation kit for IQ and OQ provides calibration standards.

• Customizable and easy to use

Password-protected interface with custom menus, toolbars and toolboxes provide an intuitive, personal interface tuned to your needs and preferred way of working. Interactive tutorials and on-line help cut learning curves and costs, and ensure productive testing right from the start. Report templates simplify method development and result presentation. Experiment and accessory setup files set the instrument parameters for accessories or experiments quickly.

Applications included

Advanced spectral calculator – for calculations with spectra.

Beer's Law quantitative analysis software – automates peak height, area, and ratio measurements.

Spectral deconvolution – interpretation of complex spectra with overlapping bands.

Spectrum Learn method writing software – automates repetitive procedures.

Patented COMPARE function – vastly reduces the risk of errors due to factors beyond your control.

Performance by design

- Better than 0.8 cm⁻¹ spectral resolution isolates sharp absorbance bands.
- Patented Dynascan™ interferometer provides immunity to dynamic alignment errors.
- Variable OPD velocity, between 0.1 and 1.5 cm/s, delivers optimum performance for photoacoustic and other detectors.
- Sealed and desiccated optics protect moisture-sensitive components and reduce the effect of atmospheric absorption changes.

Outstanding performance

The Spectrum BX provides excellent signal to noise performance enabling it to easily address the majority of routine FT-IR applications – even those using sampling accessories such as ATR techniques. For academic teaching environments the combination of signal to noise and standard resolution of better than 0.8 cm⁻¹ enables both compound identification and basic gas phase experiments to be easily performed.

Warranty and service

Minimum one-year warranty, with optional service contract plans and full IQ and OQ from a qualified engineer.



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