

FT-IR Spectroscopy

Key Features

- Exclusive high performance, high sensitivity MCT detector
- Latest development in the innovative range of Spotlight products
- Automated sample positioning, focus and sample apertures
- White light LED visible illumination
- Fully upgradeable to FT-IR imaging

Applications

- Product defect analysis
- Impurity identification
- Component distribution studies
- Forensics
- Academic research



Spotlight 200 FT-IR Microscopy System

Redefining IR Microscopy

The revolutionary Spotlight™ 200 FT-IR microscopy system from PerkinElmer® redefines infrared microscopy, taking it to new levels of performance, speed

and applications capability. The exclusive detector design easily outperforms other high performance microscopy systems – superior signal-to-noise and wide spectral range enable the most information to be obtained from challenging samples in the quickest time possible. The Spotlight 200 can be easily upgraded to provide full FT-IR imaging capabilities.

Faster analyses, faster results

The Spotlight 200 addresses the need in today's fast-paced laboratory environments to maintain productivity and achieve accurate answers rapidly. The extremely high signal-to-noise attainable with the Spotlight 200 allows laboratories to achieve the same performance of other commercially available FT-IR microscopes in significantly shorter analysis times. The automation built into the system also eliminates the time-consuming manual adjustments required to adjust focus, aperture and locate sample positions.

Spotlight's software is extremely intuitive and fully integrated to facilitate simple and quick operation. The Spotlight software package performs spectral collection, extraction and processing of the important data through to convenient display of the results.

Confidence by design

Unlike optical microscope-based designs, the Spotlight 200 system is designed for infrared microscopy and imaging. This simplifies the optical layout and provides optimum signal-to-noise and extremely high spatial resolution – critical factors for gaining trustworthy measurements on small samples. All key optics are permanently aligned and need no realignment before use, ensuring consistently high performance, day-in and day-out.

Dichroic mirrors in all Spotlight systems allow the infrared and visible light to share the same beam path, providing excellent geometric accuracy between the visible and infrared optics and eliminating any alignment problems. For high-quality visible images, Spotlight does not disappoint. New, white light LED illumination displays true color, while wide range brightness and contrast controls allow you to decide how you would like to view the samples.

'Show Structure' enhanced data processing

The 'Show Structure' software feature can be used to enhance the contrast in the IR images quickly and easily. By automatically analyzing all the spectra in the images and applying PerkinElmer's image analysis know-how, the true chemical variation within the sample are readily displayed (Figure 1). This level of image analysis is now accomplished in a matter of seconds using the new Spotlight 200 software.

Applications flexibility

The Spotlight 200 allows samples to be measured in transmission, reflectance or micro-ATR collection mode. For deep samples the lower cassegrain can be easily removed to provide a greater sample travel.

For thick, non-reflective samples, micro-attenuated total reflection (ATR) measurement is an ideal way to obtain high-quality surface spectra. The unique PerkinElmer micro-ATR design does not require a separate objective and therefore no realignment is required – simply lower the ATR objective onto the sample.

For high-speed, high-performance imaging, upgrade your Spotlight 200 to the market-leading Spotlight FT-IR imaging system.

The Spotlight 200 System includes the high-performance, high sensitivity Frontier FT-IR spectrometer. This provides an ideal basis for a range of macro FT-IR analyses using smart 'plug and scan' accessories including diamond ATR units, horizontal ATR accessories and diffuse reflectance options.

And you can see why it's from PerkinElmer

We provide products and services to more than 125 countries. Our reputation for supplying world-class support is well earned. And there are 65 years of infrared experience built into every IR product we make. The Spotlight 200 system is no exception. Its practical design, high degree of system integration and superb analytical performance brings a significant incremental contribution to your laboratory's materials understanding and problem solving capability.

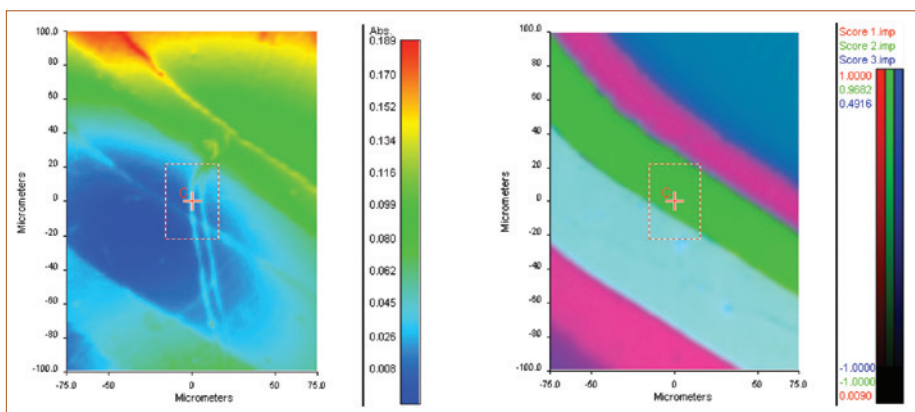


Figure 1. The initial IR Image shows variation in IR intensity which is not directly related to the chemical structure. Simply using the "Show Structure" command reveals the laminate structure of the sample. Each color represents a different component in the sample.

PerkinElmer, Inc.
940 Winter Street
Waltham, MA 02451 USA
P: (800) 762-4000 or
(+1) 203-925-4602
www.perkinelmer.com



For a complete listing of our global offices, visit www.perkinelmer.com/ContactUs

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Performance advantages

- Extremely high sensitivity – typically >40,000:1
- High stability with minimal spectral artifacts.
- Full automation for simplified set-up and data collection.
- Upgradeable to FT-IR Imaging
- Highest quality visible and IR Images