

# A research FTIR microscope

The Thermo Scientific™ Nicolet™ RaptIR™ FTIR Microscope is designed to provide precision and agility with absolute simplicity of operation. Diffraction-limited objectives provide outstanding visual and infrared performance and the new Thermo Scientific™ OMNIC™ Paradigm Software enables users of various skill levels to obtain quality results. Focus on target, acquire infrared data, and get your results and report faster than ever.

When coupled with the Thermo Scientific™ Nicolet™ iS50 FTIR Spectrometer, the system becomes the ultimate analytical workstation with FT-Raman, TGA-IR, built-in ATR, and multi-range analysis all in one.

## Measure productivity in microns and minutes

Take full advantage of the innovative features of the Nicolet RaptIR FTIR Microscope:

- **Open access, heavy-duty stage with a large working distance**—allows your lab to explore new applications involving large, heavy samples like artworks or books
- **1-micron resolution via the camera or eyepieces (a new standard in optical quality)**—see the smallest details clearly
- **Onboard visual assists**—find the area of interest quickly
- **More than 10 spectra per second at spatial resolutions better than 5 microns**—cover a lot of ground, fast, and still get high quality, high-resolution spectra of your sample
- **Clear guidance from intuitive software**—extract all the information needed about the target, from point and area collections to ATR operation and automated analysis of particles on full filters



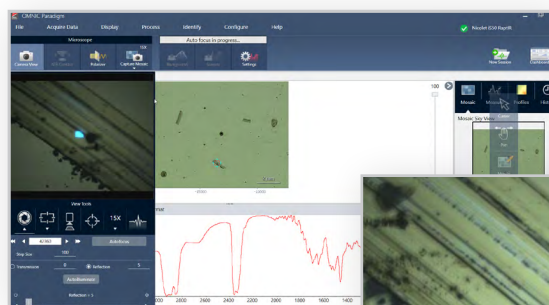
Nicolet iS50 FTIR Spectrometer

Nicolet RaptIR FTIR Microscope

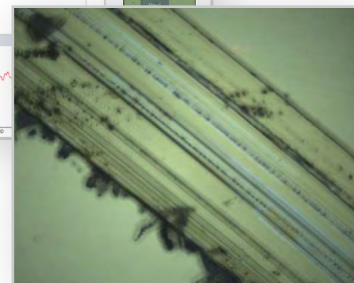
## More powerful together


Combining the leading research Nicolet iS50 FTIR Spectrometer with the newest technology in the Nicolet RaptIR FTIR Microscope will give you the most versatile FTIR platform possible. In addition, the analysis workflow is fully integrated with the 64-bit OMNIC Paradigm Software, so there are no limits to your data collection and analysis.

The entire system is designed to furnish novices with helpful support and experts with the tools they expect.



Sharp image, perfectly defined aperture and simultaneous spectral collection



	Specification	Benefit
<b>Sample viewing</b>	TruView™ optics	No obscuration due to aperture; full view of sample during data collection, mosaic views, image capture
	Viewing options	Monocular (camera only) or trinocular (camera and eyepieces)
	Illumination	Bright, LED illumination for reflection or transmission, and aperture image on sample
	Video camera	5 megapixel
	Visible polarizers	Automated insertion and rotation of polarizer and analyzer in transmission and reflection modes
	Contrast enhancement	Differential interference contrast (Wollaston prism)
	Spatial resolution	<5 microns
<b>Microscope optics</b>	Aluminum machined optics	Front surface mirrors
	Objectives	15X standard diffraction-limited diamond turned objective and condenser with automated condenser parking in reflection, ATR modes. Automated optimization for transmission operation. Autofocusing
	Optional Objectives	32X objective and condenser
		Grazing angle objective
		Ge-tip ATR (350 micron)
	Aperture	Fully automated, four blade aperture with rotation
	Infrared polarizers	Automated insertion and rotation, useable in transmission and reflection modes (including ATR)
<b>Microscope detector</b>	LN2 MCT-A high sensitivity	Hold time greater than 16 hours
<b>Stage</b>	Automated	40 mm sample thickness capacity, 5 kg loading
	Scan rate	Up to 10 spectra/second
<b>Validation and performance qualification</b>	ASTM	Factory Qualification tests to establish performance
	Pharmacopeia	Ph Eur, JP, CP, USP Qualifications workflows with Certified Standards Plate
<b>Performance features</b>	Signal-to-noise	15,000:1 minimum, 20,000:1 average (100 x 100 micron aperture, transmission mode)
	Spectral range	7,800 – 650 cm <sup>-1</sup> with standard MCTA
<b>Microscopy software</b>	OMNIC Paradigm Software	Clean user interface, database security, floating tool bar, 64-bit, easily generated workflows for automating data collection and analysis sequences
	Automatic mosaic	1 cm square sample view in under 20 seconds
	Intuitive graphical interface	Clean, context sensitive graphical user interface
	Immediate feedback	Camera view with live video during set up and data collection
	Smooth workflow experience	OMNIC Paradigm workflows for qualification and operation
	Real-time preview and search	Move through your sample, analyzing on the fly
<b>Other</b>	Power requirements	130 W, 100-240 VAC, 47-63 HZ
	Regulatory approvals	CE  UK
	Dimensions	W – 450mm D – 717mm H – 495mm
	Weight	70.3kg
	Warranty	1 year



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