

Nicolet Continuum Infrared Microscope

A research-quality, infrared micro-sampling system

The Thermo Scientific™ Nicolet™ Continuum™ Infrared Microscope sets the industry standard in microspectroscopy when combined with a Thermo Scientific™ FTIR Spectrometer to bring you the sampling performance of a contrast enhanced, light microscope. This microscope provides you with the tools necessary to perform fast, accurate, and complete micro-sample analysis.

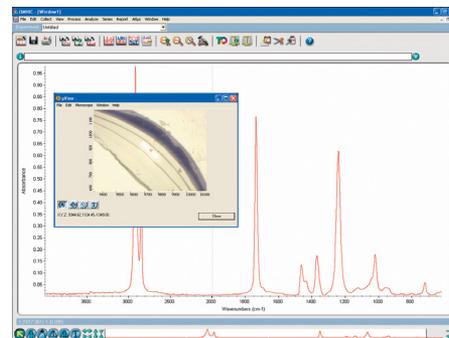
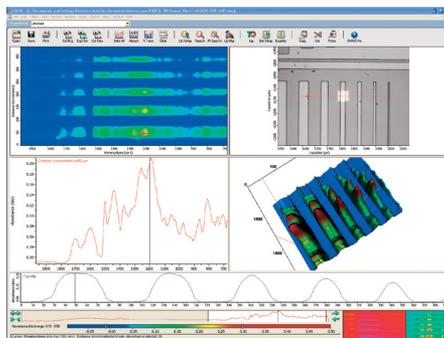
For decades, our innovative products have been chosen by labs to solve challenging problems. Our high-performance microscopes, combined with our powerful software and comprehensive sample preparation offerings, provide you with complete microscopy solutions. All of this, packaged with the support and the experience you expect from a world-class leader, offers you the ideal infrared (IR) microscope for your needs.



Powerful sampling technology

Take full advantage of the Nicolet Continuum Microscope's easy-to-use features:

- Eliminate sampling errors by observing the sample during data collection with Thermo Scientific™ TruView™ Optics
- Observe excellent visual images produced by infinity-corrected optics
- Locate low-contrast sample features using techniques such as darkfield, polarized light, and differential interference contrast (DIC)
- Unique Reflex aperture yields diffraction-limited spectra via dual remote image masking which provides exceptional spectral purity
- Annotate and save images using Microview video-imaging software to create crystal clear pictures of your analyzed sample
- Analyze large areas of your sample with Thermo Scientific™ OMNIC™ Atlas™ Imaging Software to get chemical and physical information



Sharp image, perfectly defined aperture and simultaneous spectral collection

Uniquely configurable

Nicolet Continuum Microscopes offer unlimited micro-sampling options and maximum flexibility. A four-place turret provides a full complement of the following objectives:

- Infrared
- Attenuated total reflectance (ATR)
- Grazing angle
- Visible
- Side port reflectance
- Five detector choices allow you to take full advantage of the spectral range and sensitivity inherent to your spectrometer
- Multiple ATR crystal materials provide the flexibility to optimize sensitivity and minimize crystal damage from hard samples
- Reflachromat objectives and condensers provide spherical aberration compensation for crystal clear viewing when using substrates or support materials
- 32x magnification and 50 µm detector provide the highest spatial resolution below 10 µm sample size

Sample Viewing	Specification	Benefit
Sample View	TruView – simultaneous view of sample while collecting data Full view of the sample area with aperture positioned Better than 1.0 µm visible image resolution	Error-free sampling Observe the sample and spectrum in real time Saves time and eliminates sample positioning errors Highest image quality to see microscopic sample features
Video Image	High quality 1/3 inch CCD digital camera USB2 with 1024 × 768 pixel array	Document sample image, collect video-integrated sample maps and mosaics of large areas
Sample Illumination	Aperture and field irises in illumination optics 50 Watt Köhler illumination Illumination infrared aperture	Optimize sample contrast and resolution illumination in the field of view Bright, even illumination in the field of view Highlight region of interest
Contrast Enhancement Options	Brightfield, darkfield, polarized light, DIC and fluorescence	Enhances sample contrast and barriers by imparting vivid color images on colorless samples

Microscope Optics

Microscope Platform	Purpose built, cast aluminum Infinity corrected optical design Trinocular viewer	Mounts to right or left side of spectrometer Highest image quality, undisturbed by optical filters Video capture plus binocular view of sample
Aperture	Fully automated Dual remote, pre- and post-sample masking from a single aperture	Easy, fast operation Highest IR spatial resolution Perfect match of pre- and post-aperture dimension
Infrared Objectives	15x, with compensation, N.A. 0.58 32x, with compensation, N.A. 0.65 Grazing angle, N.A. 0.99 ATR 25x, sample/contact view capability	Optimize magnification and resolution of the sample Offers precise sample positioning
Visible Objectives	Standard Olympus® style refractive 4x, 10x, 20x and 40x	Uses widely available visible objectives Excellent range of total magnification 40–400x
Sampling Modes	Transmission, reflection, grazing and ATR	Maximum sampling efficiency
ATR Options	Dedicated objective with ZnSe, Si, Ge and Diamond Slide-On for 15x objective – Si and Ge or Ge tip Integrated pressure sensor Optional external quantitative pressure sensor	Controls depth of penetration, easily interchangeable Easy-to-use, low-cost ATR with great performance Crystal protection and automated operation Reproducible pressure
Condenser	15x with compensation, N.A. 0.58 32x with compensation, N.A. 0.65	Performance matched to chosen objective

Microscope Detectors

Dual Detector Bay	Software selectable	Allows multiple detectors to use full spectral range capability of spectrometer
Detector Design	Stainless steel dewar	18-hour LN2 hold time eliminates need to cool detector frequently
Detector Options	Narrow-band MCT-A Narrow-band MCT-A (50 µm element) Medium-band MCT-A Wide-band MCT-B InGaAs (TE Cooled)	High performance, 11700–750 cm ⁻¹ Samples smaller than 20 µm, 11700–700 cm ⁻¹ Recommended, 11700–600 cm ⁻¹ Widest spectral range, 11700–450 cm ⁻¹ NIR Applications, 12000–3800 cm ⁻¹

Automation Options

Sample Stage	2" x 5" automated X, Y stage, 1.0 µm step precision	Automatically analyze large regions of the sample with points, lines and area maps Speeds sample positioning and data collection
Sample Focus	Fully integrated autofocus and auto-ATR contact	Optimize sample image and IR data collection

Performance Features

Signal-to-noise Ratio (SNR)	Less than 7.2×10^{-5} Abs. Peak-to-peak noise 100 µm dual remote aperture, 2 minute, 4 cm ⁻¹ resolution	Faster data collection, high-quality results
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Other

Power Requirements	100–130 VAC 60 Hz or 220–240 VAC 50 Hz	Worldwide operation
Regulatory Approvals	  	Worldwide operation
Dimensions	43 cm wide, 76 cm deep, 53 cm high	Minimize bench space
Warranty	12-month, full warranty, opt 2, 3 and 4 years available	Minimize operation costs

Find out more at thermofisher.com/continuum