## Nicolet FTIR Spectrometer Selection Guide

Choose the right Thermo Scientific™ Nicolet™ FTIR Spectrometer that fits your workload, user skill level and chemical identification needs. Whether you run a Quality Control lab, a cutting-edge Research lab or a supporting Analytical Services lab, trust the leader in infrared spectroscopy to give you reliable data. With our rapid-response support teams, we help keep your labs running anywhere in the world.

## Use Fourier transform infrared (FTIR) spectroscopy to:

- Identify unknown materials (e.g., Forensics, Art restoration, Counterfeit testing)
- Conduct contaminant analysis (e.g., Analytical Services, Gemology)
- Reverse engineer new products (e.g., Materials Science research)
- Verify chemical structure and mixture compositions (e.g., Quality Assurance)

## Industries where FTIR provides definitive answers:

- Polymers & Plastics
- Cement & Construction
- Pharmaceutical
- Forensics
- Automotive
- Paper & Paints

Nanomaterials

Food & Beverage

Energy Storage

- Art Restoration
- Cosmetics







	Nicolet Summit FTIR Spectrometer family	Nicolet iS20 FTIR Spectrometer	Nicolet iS50 FTIR Spectrometer	Nicolet iS50R FTIR Spectrometer	Nicolet iG50 FTIR Spectrometer	
Spectral range	Mid-IR	Mid-IR	Far-IR, Mid-IR, Near-IR, Visible	Far-IR, Mid-IR, Near-IR, Visible	Dedicated Far-, Mid-, or Near-IR	
Automated range changing	No	No	Yes (ABX option)	Yes (ABX option)	No	
Signal to Noise ‡	LITE 14,000:1; X 35,000:1; PRO 40,000:1	50,000:1	>55,000:1	>55,000:1	>55,000:1	
Spectral resolution (cm <sup>-1</sup> )	LITE, X 0.6; PRO 0.45	0.25	<0.09	<0.09	<0.09	
Scan modes	Linear	Linear	Linear, Dual Channel option	Linear, Dual Channel, Step-Scan, TRS	Linear	
Number of external ports	0	1	4	4	1	
Available accessories	<ul> <li>Everest ATR and iD series accessories</li> <li>Compatible with major third-party accessories</li> </ul>	<ul> <li>Smart         accessories</li> <li>Full-size sample         compartment</li> <li>Compatible with         major third-party         accessories</li> <li>Microscopy,         TGA-IR</li> </ul>	<ul> <li>Smart         accessories</li> <li>Full-size sample         compartment</li> <li>Compatible with         major third-party         accessories</li> <li>Microscopy,         TGA-IR, NIR</li> <li>Built-in ATR</li> </ul>	<ul> <li>Smart         accessories</li> <li>Full-size sample         compartment</li> <li>Compatible with         major third-party         accessories</li> <li>Microscopy,         GC-IR, TGA-IR,         NIR, PM-IRRS,         VCD, TRS*</li> <li>Built-in ATR</li> </ul>	On-line, in-line, at-line sampling	
Use environment	Portable and Laboratory	Laboratory	Laboratory	Laboratory	Manufacturing	
ASTM, EP/JP/ USP, 21CFR-P11 Compliance	Yes	Yes	Yes	Yes	Yes	
Microsampling (spatial resolution)	100 microns	10 microns	10 microns	10 microns and monolayer coatings	None	
Portable	Yes					
Dimensions (W x D x H mm)	Standard: 340 x 320 x 240 With touchscreen: 530 x 320 x 430	550 x 570 x 250	626 x 698 x 276	626 x 698 x 276	450 x 420 x 250 (customizable options)	
Ideal for						
Process Analysis					✓	
Materials Research			✓	✓		
Analytical Support & Forensics		✓	✓	✓		
Quality Control	✓	✓			✓	
Teaching	✓	✓				

Add an accessory to your Nicolet FTIR spectrometer and expand your capabilities as well as your sample knowledge.

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Accessories					
Diamond ATR	Everest Diamond ATR	Smart iTX Diamond ATR	Built-in Diamond ATR	Built-in Diamond ATR	Customizable
Microsampling	SurveyIR Microspectroscopy	Nicolet iN5 Microscope	Nicolet Continuµm Microscope	Nicolet Continuµm Microscope	Customizable
Gas Sampling	Yes	Yes	Yes	Yes	None
Near-IR capabilities	Nicolet iS5N FT-NIR spectrometer	Smart Integrating Sphere	NIR Integrating Sphere & Probe Module	NIR Integrating Sphere & Probe Module	No
TGA-IR capabilities	No	TGA-IR Module	TGA-IR Module	TGA-IR Module	No
Automated Beamsplitter Exchanger (ABX)	No	No	Yes	Yes	No
Raman Module	No	No	Yes	Yes	No
GC-IR Module	No	No	Yes	Yes	No
Advanced experiments				PM-IRRAS, VCD, Step-Scan, TRS*	

\*PM-IRRAS = Polarization modulation-infrared reflection-adsorption spectroscopy

VCD = Vibrational circular dichroism  $\mathsf{TRS} = \mathsf{Time}\text{-resolved spectroscopy}$ 

**‡** SNR in one minute, 4 cm<sup>-1</sup> resolution, Black-Harris Apodization















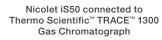




and its subsidiaries unless otherwise specified. FL52337\_E 12/22M

Nicolet iS50 with TGA module







Request expert advice, a quote or a demonstration at thermofisher.com/FTIR

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