



**Thermo Scientific Nicolet iS5**  
FT-IR Spectrometer

**Fast, reliable answers**  
for QA testing and material ID

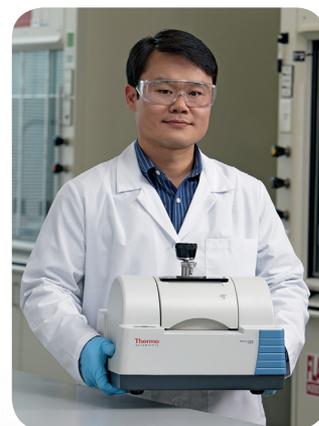


# The Nicolet iS5 FT-IR Spectrometer

*FT-IR you can trust*

The Thermo Scientific™ Nicolet™ iS™5 FT-IR spectrometer provides the ideal performance and fit for product assurance testing and material identification. This spectrometer delivers maximum confidence and reliability by implementing the same field-proven FT-IR technology found on other Thermo Scientific Nicolet FT-IR models. Driven by award-winning Thermo Scientific™ OMNIC™ software, the Nicolet iS5 spectrometer provides innovative FT-IR solutions and simplicity for businesses large and small.

The lightweight design and small footprint of the Nicolet iS5 FT-IR spectrometer enables you to bring the spectrometer where you need answers most: from your busy laboratory to the production floor or in the warehouse. Additionally, the spectrometer's form factor and low cost-of-ownership make it a perfect match for analytical laboratories seeking to deploy multiple units across manufacturing facilities worldwide.



Compact and lightweight



## Premier Performance In A Compact Size

Small and light, the Nicolet iS5 spectrometer features a footprint similar in size to a laptop computer.

- Rugged enough to move around the plant or across campus
- 10 kg (22 lb) weight makes it extremely transportable

## Durable Design

The Nicolet iS5 spectrometer is designed to provide trouble-free operation even in challenging environments.

- Field-proven optics encased in a sturdy magnesium-alloy frame
- A thermally-controlled diode laser provides many years of worry-free use
- User-accessible parts minimize service costs

## Easy Maintenance

Replacing the IR source or desiccant in your spectrometer does not require a service call, or even opening up the instrument. We provide easy access to the source from underneath the instrument.



Infrared source replacement



## READY TO HANDLE ANY ENVIRONMENT

The Nicolet iS5 spectrometer withstands a wider range of temperature and humidity conditions than those found in a typical laboratory. Vibration, electromagnetic interference (EMI), dust, and even tilt were all considered in the design of this instrument.

- Magnesium-alloy construction provides excellent mechanical characteristics for stiffness, thermal properties, vibrational dampening and reduced weight
- Tightly sealed and desiccated optical bench protects internal components from high humidity and aggressive chemicals
- Internal diagnostics with electronic humidity and heat sensors warn of excessive humidity or temperature
- Isolation of the interferometer and other optics protect against external sources of vibration
- User-replaceable IR source, power supply, desiccants and sample compartment windows can be quickly replaced without exposing internal components
- Optional non-hygroscopic ZnSe optics are available for extremely humid environments



Built tough – rugged magnesium-alloy construction

**Protect your brand and reputation**

# The Best Value for Your Budget

*From materials identification to final product testing, the Nicolet iS5 spectrometer is your reliable partner*

The Nicolet iS5 spectrometer delivers outstanding performance in raw materials inspection and in the identification of unknowns. From “sample-in” to “answer-out”, the spectrometer provides answers you can trust, while helping your business be successful.

- **High signal-to-noise for premium-quality results**
- **Intuitive user interface for fast productivity**
- **Tools for raw material inspection that provide maximum confidence**
- **Identification of contaminants and mixtures with no need for spectroscopy expertise**



## Raw Materials

Inspecting raw materials is a simple task, while obtaining reliable answers from your instrumentation can be a challenge. Natural materials and other raw ingredients can reveal small, yet still acceptable variations, while synthetic materials are highly consistent. Even a small variation, if not caught in time, may cause a product failure in your production. That's why the Nicolet iS5 FT-IR spectrometer includes a complete set of tools for reliable raw material inspection, giving you the highest confidence, no matter the nature of the sample.

- Normal sensitivity QCheck for high confidence PASS/FAIL material inspection of natural and other small variation products
- High sensitivity QCheck for high confidence PASS/FAIL material inspection of synthetic and other high consistency products

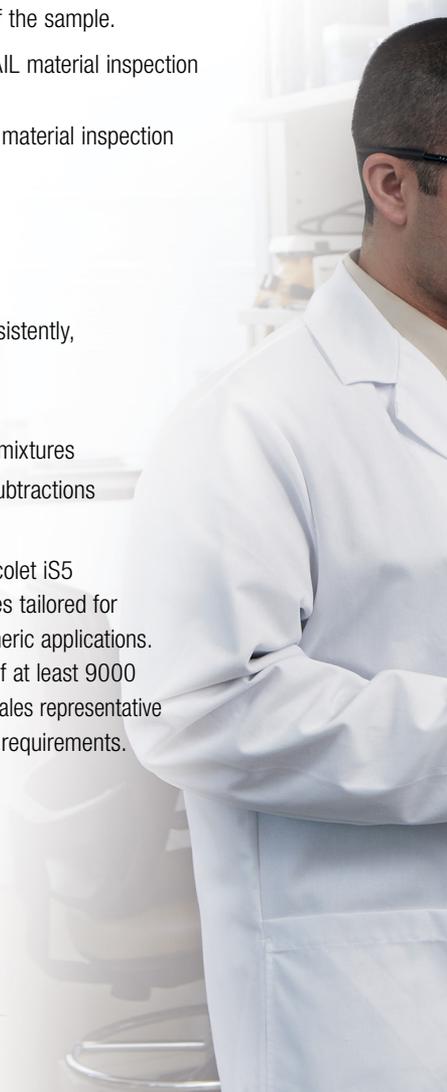
## Contaminants and Mixtures

When PASS/FAIL does not provide sufficient information and you need to further understand what failed to take the next action, or when the sample includes several ingredients, the Nicolet iS5 spectrometer is ready to assist. Our optional Thermo Scientific™ OMNIC Spectra™ software includes a patented algorithm that greatly improves the way FT-IR finds contaminants and identifies all compounds in a multiple-ingredient material. With OMNIC Spectra software there is no need for specialized spectroscopy skills or the manipulation of the spectral data most FT-IR software requires.

Our patented algorithm reliably, consistently, and simply:

- Identifies contaminants
- Identifies multiple components in mixtures
- Eliminates the need for spectral subtractions or manipulations

OMNIC Spectra software for your Nicolet iS5 spectrometer is available in packages tailored for polymers, forensics, or for more generic applications. Each package includes a collection of at least 9000 high-quality FT-IR spectra. Ask your sales representative about the version that best fits your requirements.

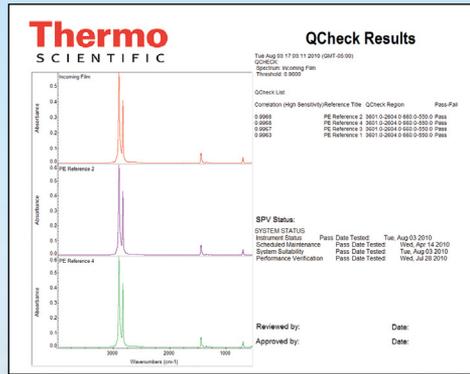




## Bring Your Instrument to the Sample

Sometimes solving a manufacturing failure from your laboratory can be difficult or inconvenient. The Nicolet iS5 spectrometer has the size, weight, and most importantly all the processing power you need to bring FT-IR performance and troubleshooting capabilities directly to the sample.

- Compact and lightweight
- All the performance you need, where you need it



## OMNIC SOFTWARE

The industry's leading software, no compromises

- Simplifies PASS/FAIL testing
- Standardizes operation for consistent results
- Identifies the unexpected
- Extracts quantitative data



**Nicolet iS5 FT-IR: Premium performance made affordable**

# The Perfect Match for Your Materials

*The open sampling compartment of the Nicolet iS5 FT-IR spectrometer provides the freedom to choose the accessory you need*

The family of iD sampling accessories offer optimized analysis of solids, liquids, and gases. Options include the iD1 Transmission module, the versatile iD5 ATR accessory, and the high performing iD7 ATR accessory. Both the iD5 and iD7 accessories offer diamond crystal options. And all iD accessories feature automatic accessory recognition which enables high productivity in busy laboratories.



## iD1 Transmission Accessory

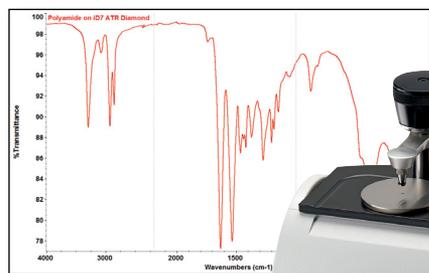
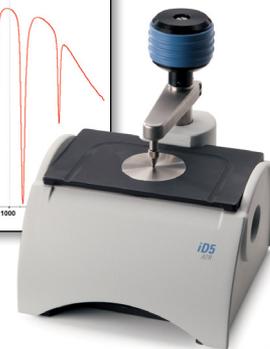
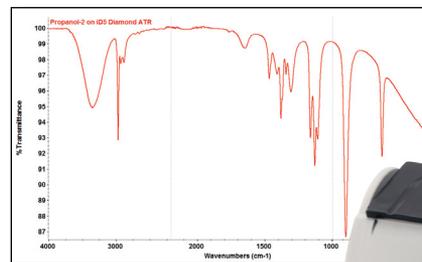
The iD1 transmission accessory is ideal when you need to make fast and accurate measurements of liquids, solids or gases that are mounted in cells or cell holders and mounts.

- Holds most liquid cells, pellet and film holders, gas cells and cuvettes
- Supports cells up to 10 cm long
- Disposable IR cards
- KBr pellet holders

## iD5 ATR Accessory

Attenuated Total Reflectance (ATR) for maximum versatility.

- High energy throughput diamond laminate for robust sampling
- Interchangeable crystal plates offer good sample analysis versatility
- Slip-clutch pressure tower provides reproducible results
- Heated and multi-bounce crystal plates address special applications
- Specular reflectance plate for deeper surface analysis needs



## iD7 ATR Accessory

Attenuated Total Reflectance (ATR) for best performance.

- High energy throughput all-reflective optics for high quality spectra
- Monolithic diamond crystal provides widest spectral range and best robustness
- Interchangeable crystal plates offer good sampling versatility
- Slip-clutch pressure device yields reproducible results



The iD Base and iD Foundation adapters take advantage of the open architecture of the Nicolet iS5 spectrometer sample compartment, providing maximum flexibility to use many commercially available accessories. Use standard sample compartment accessories that you already own or may purchase, including Foundation Series Swap-Top modules.

## Flexibility for Your Accessories

### iD Base and iD Foundation

With the Nicolet iS5 spectrometer you are not limited to what you can use to meet your sample analysis needs. The iD Base adapter fits slide-mounted accessories that cannot be accommodated in the iD1 Transmission accessory. It also allows you to use most full-size sampling accessories.

The iD Foundation adapter allows customers who own Foundation Swap-Top modules to use them with the Nicolet iS5 spectrometer. Any Foundation Swap-Top modules can be accommodated including multi-bounce ATR, diffuse reflectance, and the Performer or Thunderdome single-bounce ATR accessories.



## Handle Sample Changes Effortlessly

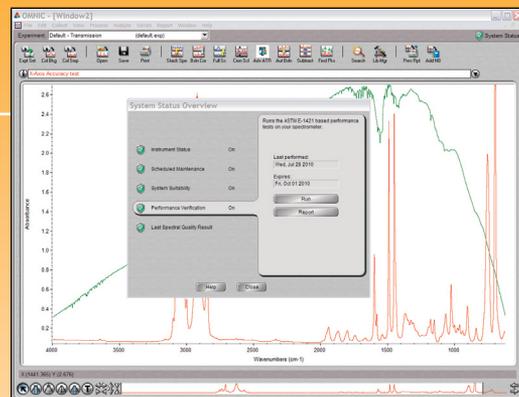
The Nicolet iS5 spectrometer lets you create pre-set analysis parameters so when accessories or operators are changed you are assured of consistent results. When swapping sampling accessories, the spectrometer recognizes the change and adjusts the sampling conditions appropriate to the accessory. This is done automatically with no user intervention that could introduce operator errors.

## COMPLETE SAMPLING ASSURANCE



System Performance Verification (SPV) monitors and provides status indications for the Nicolet iS5 spectrometer

- On-board diagnostics and ASTM E1421 based tests ensure the system is working properly
- Automatic accessory recognition guarantees consistent analysis conditions so you get the best possible data
- System suitability tests with user-defined QC samples verify complete system performance, giving you confidence in your results



System Performance Verification

**Nicolet iS5 FT-IR: Small footprint, flexible sampling**

# The Thermo Scientific Nicolet FT-IR Spectrometer Family



## Nicolet iS5 FT-IR Spectrometer

*No-compromise performance, fit and affordability*

The perfect fit for outstanding performance in the laboratory or anywhere you need to quickly analyze materials.

- Rugged, lightweight and sized to fit most spaces
- Affordable and easy to maintain
- Built-in performance verification
- Extensive sampling capabilities
- Award-winning OMNIC software
- Easy analysis of raw materials, contaminants and compound mixtures

## Nicolet iS10 FT-IR Spectrometer

*Workhorse FT-IR for regulated, fast-paced QC, and analytical support laboratories*

The ideal spectrometer where FT-IR is critical to monitoring product consistency, troubleshooting or reformulating complex materials. If your industry requires compliance to stringent regulations, the Nicolet iS10 is there for you at every step.

- Highest confidence for raw materials, impurities and compound identification
- Continuous performance verification
- Complete regulatory compliance tool set
- Electronic SOP authoring
- Expanded sampling capabilities (TGA/IR, Near-IR, microscopy)
- Award-winning OMNIC software

## Nicolet iS50 FT-IR Spectrometer

*Highest flexibility, productivity and performance for world-class analytical services and research laboratories*

One-touch simplicity, flexibility and integration in a compact, cost-effective workstation. Fully automated, the multi-spectral range iS50 FT-IR spectrometer system dramatically improves productivity in analytical laboratories focused on understanding complex materials.

- Touch Point operation simplifies instrument setup and operation
- ATR, Raman, TGA and NIR modules at the touch of button
- Integrated modules provide flexibility to analyze multiple sample types
- Automation allows unattended multi-range operation
- Powerful OMNIC software ideal for method development, analytical support, and research



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