

# Thermo Scientific Nicolet iS5N FT-NIR Spectrometer

Near-infrared for today's laboratory

The Thermo Scientific™ Nicolet™ iS™5N FT-NIR spectrometer provides superior performance in a compact size at an affordable price. Combining flexible sample handling and leading Thermo™ Scientific™ OMNIC™ software, the Nicolet iS5N spectrometer sets the benchmark in its class of FT-NIR instrumentation.



*iD1H Heated  
Transmission  
Optional Accessory*



Based on the popular Thermo Scientific Nicolet iS5 mid-infrared spectrometer, the Nicolet iS5N FT-NIR spectrometer integrates high-performance optics into a small, rugged package. The spectrometer is perfect for use in a wide range of settings, from small industrial facilities to global manufacturing sites.

The Nicolet iS5N spectrometer withstands hot, humid environments while its user-serviceable components greatly reduce service visits and lower maintenance costs.

## The Nicolet iS5N FT-NIR Spectrometer

- Affordable price
- Superior performance
- Small footprint
- Flexible sampling

## Unique Optical System

The sealed and desiccated optical unit protects the instrument from humidity and solvent vapors. A self-compensating, dynamically aligned interferometer removes any tilt and shear scanning error, automatically tunes the instrument for best throughput and provides analysis speed for real time survey or screening. Pinned-in-place adjustment-free optics guarantee consistent system performance with minimum maintenance.

**Thermo**  
SCIENTIFIC

## Performance

- **Spectral range:** 11,000–3800  $\text{cm}^{-1}$  optimized,  $\text{CaF}_2$  beamsplitter
- **Signal-to-noise:** 10  $\mu\text{ABS}$  RMS in less than a minute
- **Spectral resolution:** Better than 4  $\text{cm}^{-1}$
- **Wavelength precision:** 0.01  $\text{cm}^{-1}$  at 5300  $\text{cm}^{-1}$
- **Linearity:** Slope  $1 \pm 0.05$



Easy, user-accessible source replacement

## Optics

- **Detector:** Extended range indium gallium arsenide (InGaAs)
- **Source:** High intensity halogen NIR; user replaceable from bottom plate
- **Beamsplitter:**  $\text{CaF}_2$  near-infrared
- **Laser:** Temperature stabilized solid-state Near-IR diode laser

## Electronics

- USB 2.0 high-speed bidirectional communication to PC

## Dimensions

- **Size:** 35 cm W  $\times$  28 cm D  $\times$  26 cm H (13.5" W  $\times$  10.9" D  $\times$  10.2" H)
- **Weight:** 10 kg (22 lbs)

## Regulatory

- **Regulatory approvals:** CE, ETL

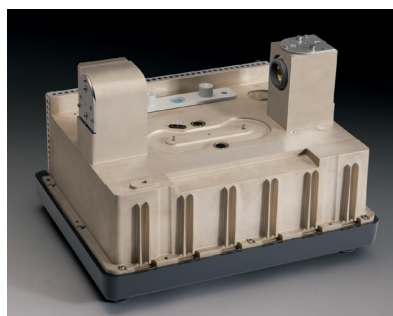
## Performance Verification

- Automated performance verification to meet customer ISO/GLP requirements
- External 0.8 mm polystyrene film
- Automatic accessory detection and performance verification
- System Suitability tests for complete system performance assurance



## Humidity and Vapor Protection

- Tightly sealed and desiccated optical bench with protective Quartz windows
- Rechargeable desiccant cartridges with humidity indicator
- Internal diagnostics with electronic humidity and heat sensors



High performance optics in a rugged, lightweight package

## Diagnostics

- Automatic accessory recognition
- Temperature
- Humidity

## Serviceability

- User-replaceable components (without opening cover):
  - Source
  - Desiccant
  - Power supply
  - Sample compartment windows

## OMNIC Software

OMNIC software for the Nicolet iS5N spectrometer includes these standard features:

- Complete collection of spectral processing and analysis tools
- QCheck correlation for material verification
- Live display of data collection and spectral data preview
- Customizable toolbar and menu options
- User logins and password protection
- Peak analysis tools: peak area, peak height
- Data processing, conversions and corrections
- Spectral Search and Library Manager
- Infrared spectral interpretation with online interpretation guide
- Automatic atmospheric suppression
- Full-featured report generator
- Quant prediction for PLS, PCR, Beer's Law, CLS, peak ratio, and Discriminant Analysis
- Windows® 7 (32 or 64 bit) and Windows 8 (64 bit) compatible

## Minimum PC Requirements

Microsoft® Windows 7 or 8 OS, 2 GB RAM, 3 GHz processor, 160 GB HDD, USB 2.0 or 3.0, 800  $\times$  600 CRT/LCD display, DVD drive

## [www.thermofisher.com/iS5N](http://www.thermofisher.com/iS5N)

©2016 Thermo Fisher Scientific Inc. All rights reserved. Microsoft and Windows are registered trademarks of Microsoft Corporation. ISO is a trademark of the International Standards Organization. All other trademarks are the property of Thermo Fisher Scientific and its subsidiaries. Specifications, terms and pricing are subject to change. Not all products are available in all countries. Please consult your local sales representative for details.

**Africa** +43 1 333 50 34 0  
**Australia** +61 3 9757 4300  
**Austria** +43 810 282 206  
**Belgium** +32 53 73 42 41  
**Canada** +1 800 530 8447  
**China** +86 21 6865 4588

**Denmark** +45 70 23 62 60  
**Europe-Other** +43 1 333 50 34 0  
**Finland/Norway/Sweden**  
 +46 8 556 468 00  
**France** +33 1 60 92 48 00  
**Germany** +49 6103 408 1014

**India** +91 22 6742 9494  
**Italy** +39 02 950 591  
**Japan** +81 45 453 9100  
**Latin America** +1 561 688 8700  
**Middle East** +43 1 333 50 34 0  
**Netherlands** +31 76 579 55 55

**New Zealand** +64 9 980 6700  
**Russia/CIS** +43 1 333 50 34 0  
**Spain** +34 914 845 965  
**Switzerland** +41 61 716 77 00  
**UK** +44 1442 233555  
**USA** +1 800 532 4752



**Thermo**  
SCIENTIFIC

A Thermo Fisher Scientific Brand