

Thermo Scientific Nicolet iS5 FT-IR spectrometer iD accessories include a wide range of simple, practical, and affordable techniques to quickly and easily analyze samples.

Thermo Scientific Nicolet iS5 FT-IR Spectrometer iD Accessories

Simple, practical, affordable sampling for excellent and reliable performance



The iD accessories for the Thermo Scientific Nicolet iS5 FT-IR spectrometer are designed for ease of use. They integrate smoothly with the spectrometer and software, creating an excellent user experience.

When an iD accessory is snapped into place, the system automatically recognizes its presence, verifies performance, and sets experimental parameters. There is no need for alignment, nor is there a need to constantly adjust parameters every time an accessory is changed. The Nicolet™ iS™5 spectrometer, iD accessory, and Thermo Scientific OMNIC software work together to ensure everything is set up so you are free to concentrate on getting the answers you need.

Sampling Flexibility with iD Accessories

High Performance and Value

To simplify sample preparation and provide reproducible analysis, we offer a wide array of sampling accessories for liquid, film, powder, gas, and other samples.

- **Automatic Detection** provides integrated operation for fast, simple interchange of accessories
- **Automated Experiment Setup** optimizes performance and ensures reproducible results
- **Permanently aligned optics** ensure reliable performance and maximum sensitivity
- **Automated Diagnostics** conduct performance verification tests to give you confidence in your results
- **Traceable Audit Trail** documents accessory performance and sampling conditions for complete assurance

INTEGRATED FT-IR ACCESSORIES

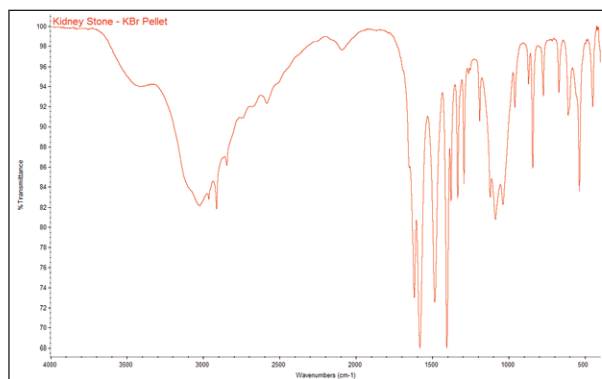
iD1 Transmission Accessory

Basic Infrared Analysis

The Thermo Scientific iD1 Transmission accessory is ideal when you need fast and accurate measurements of liquids, solids or gases in a wide variety of transmission cells and holders.

Example Transmission Sample Holders

- Liquid sealed or demountable cells
- Gas cells up to 10 cm
- Cuvettes up to 100 mm
- Disposable IR cards
- KBr pellet holders
- Hot melt polymer films



Ground kidney stone pressed into KBr pellet



Unique Features

The iD1 Transmission accessory features one step, snap-in-place installation with automatic accessory recognition. The accessory is chemically resistant and protects the instrument from contamination and spillage. Multiple sample positions accommodate a wide variety of transmission devices and allows you to optimize the infrared beam focus through your sample. The enclosed compartment protects the user from chemical exposure and stabilizes sample environment to minimize the presence of atmospheric interferences in your spectra. Like all of the integrated iD accessories, the iD1 can be purged to eliminate atmospheric water vapor and carbon dioxide interference and reduce the length of time between sample analyses.



System Performance Verification (SPV)

SPV monitors and provides status indications for all iD accessories so you know the system is working properly and is ready for use. Automatic accessory recognition and experiment set up ensures you get the best possible data.

Recommended iD Accessory

Sample Type	iD1 Transmission	iD3 ATR	iD5 ATR
Single layer polymer film 30 – 80 microns	✓ (Film holder)	✓ (ZnSe)	✓ (ZnSe or Diamond)
Thick polymer film	✗	✓ (ZnSe)	✓ (ZnSe or Diamond)
Multi-layer polymer	✗	✓ (ZnSe)	✓ (ZnSe or Diamond)
Carbon filled polymers	✗	✓ (Ge)	✓ (Ge)
Rigid, large, thick sample	✗	✓ (ZnSe)	✓ (ZnSe or Diamond)
Fiber or rigid sample smaller than crystal	✗	✗	✓ (Diamond)
Soft, fine powders	✓ (KBr pellet)	✓ (ZnSe)	✓ (ZnSe or Diamond)
Hard, coarse powders	✗	✗	✓ (Diamond)
Liquid, gel, or paste	✓ (Cell or cards)	✓ (ZnSe)	✓ (ZnSe or Diamond)
Strong acid or alkaline	✓ (With suitable cell)	✓ (Ge)	✓ (Diamond or Ge)
Gases	✓ (With suitable cell)	✗	✗
Surface coating or film on metal	✗	✓ (Ge or Specular)	✓ (Ge or Specular)

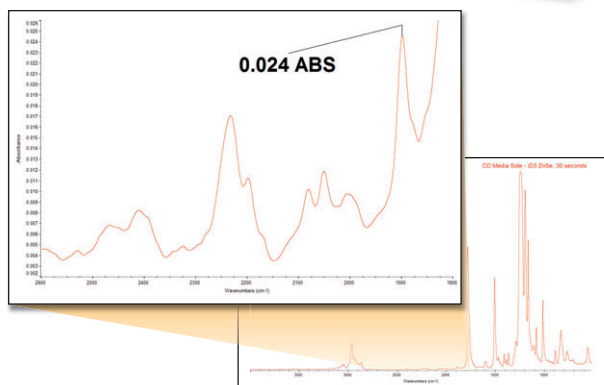
Consult your sales representative for additional sample analysis information and expertise.

✓ = Yes ✗ = No

iD3 ATR

Value-Priced ATR

The Thermo Scientific iD3 ATR accessory is a high-sensitivity horizontal accessory designed for use with a single-bounce crystal. It handles a wide variety of sample types and offers excellent performance at an attractive price for budget-minded laboratories.



iD3 ATR Accessory produces excellent quality spectra in only 30 seconds

Unique Features

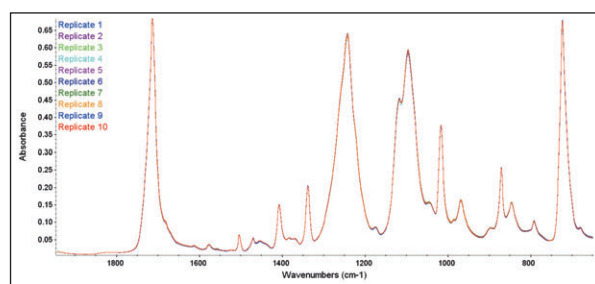
The iD3 ATR accessory is ideal for many samples including solids, liquids, pastes, and gels. It is very simple to operate for material identification or QC analysis. Two crystal types are available including zinc selenide (ZnSe) and germanium (Ge). Crystal plates are available in a flat configuration for solid samples like films, powders, pastes and gels, or trough configuration for low viscosity liquids. Each crystal is designed for maximum infrared throughput and spectroscopic performance.

The sampling surface is wide open providing good access for sample analysis. The calibrated pressure tower uses a slip-clutch, which delivers consistent pressure for reproducible sample contact while reducing the risk of damage to the crystal. Two pressure tips and a volatile sample cover are included to address a wide variety of sample types. The 7 mm crystal is sealed into the chemically resistant crystal plate which can be easily removed for clean-up. An optional specular reflectance plate provides added flexibility for analyzing coatings on reflective materials.

iD5 ATR

Ultra-High Performance ATR

The Thermo Scientific iD5 ATR accessory offers high performance, versatile sampling. Its unique optical design provides exceptional IR energy throughput and high-sensitivity, enabling high quality spectra in a very short period of time. Many sampling options are available including a durable diamond single-reflection crystal boasting a 5-year warranty.



Ten replicated PET spectra collected from different locations on the same sample using a Nicolet iS5 spectrometer with iD5 ATR accessory

Unique Features

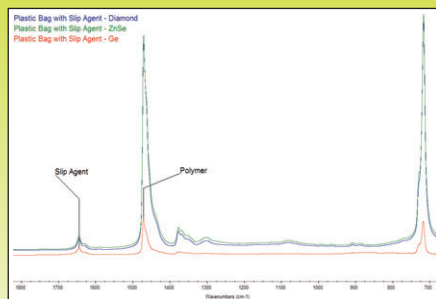
The iD5 ATR accessory is ideal for the analysis of almost any sample. Multiple crystal materials are available for different sampling needs. Crystals include Diamond, Zinc Selenide (ZnSe), Germanium (Ge), Silicon (Si), and AMTIR. Crystal plates are easily switched with no alignment required. Single reflection 2 mm crystals address most general purpose material identification or QC needs, and provide good quality results for relatively small samples. The iD5 ATR accessory's high pressure clamp is calibrated to deliver very reproducible pressure to the crystal plate.

A wide variety of options are offered including three reflection ATR for analysis of minor components, heated crystal plates, and a specular reflectance plate for analyzing coatings on reflective materials. Other pressure devices are also available.

Clean up on the iD5 accessory is simple, thanks to a removable crystal plate. Precision machining and a chemically-resistant gasket provide a tight interface between the tray and the crystal plate, so spills are not a problem.

Attenuated Total Reflectance (ATR) is the primary sampling accessory of choice for infrared spectroscopy, with key advantages including:

- Rapid analysis of a wide variety of sample types, including solids, films, liquids, rubber, polymers, and oils
- Little or no sample preparation
- High energy throughput for excellent sensitivity
- Reproducible pathlength and depth of penetration into the sample, for good sampling reproducibility
- Multiple crystal options to optimize the analysis of major or minor components



For most samples ZnSe or Diamond ATR crystals offer excellent spectral quality and speed of analysis. Ge yields smaller peaks due to shallower depth of penetration. This enhances the analysis of surface coatings and provides better spectral quality for highly scattering samples like carbon-filled polymers.

iD Adapter Baseplates

iD Foundation Adapter

The Thermo Scientific iD Foundation adapter is designed to support all Foundation Swap-Top modules. For customers who already own Foundation Swap-Top modules, it allows the re-use of your existing accessories at an attractive price.

Foundation Series FT-IR accessories provide flexible, cost-effective sampling options. The iD Foundation adapter mounts easily in the Nicolet iS5 FT-IR spectrometer's sampling compartment. Simply placing one of several permanently aligned Swap-Top accessory modules onto the base turns the module into a dedicated accessory.

Advantages

- Reuse existing Foundation Swap-Top modules in the Nicolet iS5
- Share Swap-Top modules with your existing spectrometer
- Save money on your accessory budget

Compatible Swap-Top Modules

- Multi-bounce ATR
- Diffuse reflectance
- Performer ATR
- Thunderdome ATR



The iD Foundation adapter allows you to use new or existing Foundation Swap-Top modules.



iD Base Adapter

The Thermo Scientific iD Base adapter accommodates most third-party accessories you may already own or may need for specific applications. In addition, an adapter plate is available so you can share any integrated iD accessory you purchase with other Thermo Scientific spectrometers, such as the Nicolet iS10 or Nicolet 6700 FT-IR spectrometers. Consult your sales representative for information about accessory compatibility.

EXPERTISE WHEN YOU NEED IT



Multimedia tutorials in our OMNIC™ software help you choose the right accessory for your application. They also show you how to use and care for your accessory, and how to prepare samples. OMNIC software monitors your spectra as you collect them using spectral quality checks which provide helpful tips that sharpen your skills and improve your results.

The Nicolet iS5 spectrometer offers affordable FT-IR power with exceptional performance in a compact, rugged spectrometer with total sampling flexibility.

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