

Benchtop FTIR/FT-NIR Analyzer

AIT
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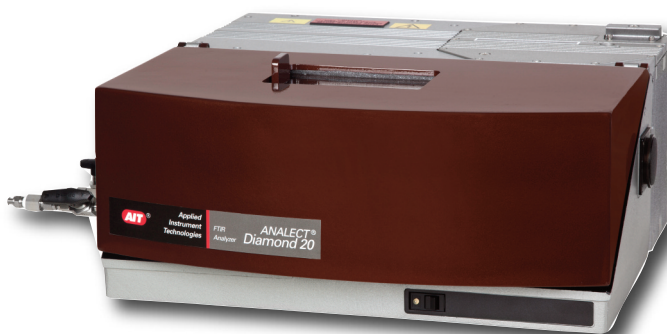
Schneider
Electric

The ANALECT® Diamond 20™ analyzer is an FTIR/FT-NIR system designed for operation in rugged at-line environments as well as the laboratory bench. The Diamond 20 analyzer is typically used for calibration and applications development in support of ANALECT's series of on-line continuous stream and batch process analyzers.

- Wide array of MIR and NIR sampling and detector options
- Hermetically sealed interferometer withstands moisture and protects against contamination
- Seamless calibration transfer between Diamond 20 and other ANALECT FTIR process analyzers
- Compact 18" footprint requires less bench space
- Full chemometric modeling capability including SpectraQuant™, Unscrambler®, MATLAB® and Pirouette®
- SpectraQ™ software is designed for collecting calibration spectra and performing routine analysis – the spectra can be sorted periodically into sets for model updates and creation
- ANALECT Optibus™ efficiently transports IR beam to any sampling peripheral

All New!

New data acquisition electronics platform and lab software



ANALECT® Transept™ Interferometer

- Process proven FT optical bench featuring Transept interferometer design and Optibus light conduit
- Superior analytical stability and accuracy
- Vibration tolerant wedges are used instead of vibration sensitive moving mirrors.
- Permanently aligned optics using Corner-Cube technology
- Core optical technology shared in all ANALECT FTIR products

New DCM 600 Data Collect Module

- Improved signal-to-noise across entire frequency range – up to 12X Performance Enhancement Factor
- Easily upgrade from prior generation DCM 400 – Same compact footprint



ANALECT[®] Diamond 20[™]



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SpectraQ[™] & SpectraStudio[™] Software powering your laboratory process development applications



SpectraQ enables the effective use of AIT's instruments and sampling accessories for routine laboratory analysis and instrument validation. It is designed to collect calibration spectra and perform routine quantitative analysis on samples. SpectraQ is unique in the fact that it is designed to integrate seamlessly with AIT's SpectraRTS[™] process spectroscopy software.



SpectraStudio is a Windows based data collection and analysis program designed to provide a high degree of flexibility to users operating in a lab environment.

Key Features Include

- Interactive data display for overlaying, stacking and superimposing display modes for visual comparison of spectra
- A powerful data handling engine that contains a full automatic audit trail to track and document all changes to data
- Contains every current spectral manipulation and data analysis tool for mid-infrared and Raman techniques

Specifications

Analyzer Performance

- Interferometer: Transept IV hermetically-sealed module with refractively scanned design. Precision cross-roller bearings with fixed Corner-Cube mirrors.
- Spectral range: Extended Mid-IR 7,400 to 450 cm⁻¹; Near-IR 12,000 to 1,200 cm⁻¹.
- Resolution: Keyboard-selectable to 1.5 cm⁻¹ (unapodized); 2 cm⁻¹ (apodized).
- Scanning Speed: Automatically optimized for detector type or software-selectable for specific applications. Adaptive digital servo drive uses laser quadrature for positive position reference.
- Apodization Functions: Choice of 14 keyboard-selectable. Standard functions.
- Infrared Source: Internal, air-cooled, high efficiency Reflex Sphere.
- Signal Conversion: Computer-selectable gain, high- and low-pass filters, and delay compensation. High-accuracy, true 18-bit ADC.
- Sampling Optics: Internal focused beam, external collimated beams.
- Cursor Readouts: Continuous, in cm⁻¹ or nanometers for abscissa, %T or absorbance units.

- Detector: Standard DTGS pyroelectric.

Detector Options

- Full line of external Optibus detectors, including DTGS, liquid nitrogen cooled MCT, thermo-electrically controlled DTGS, MCT, InAs, and InGaAs. Optical bench can accommodate two software-selectable detectors at one time. Optional signal multiplexers allow additional detectors.

Sampling Options

- Fiber optic devices
 - Diffuse reflectance
 - Fiber optic probes, launchers and multiplexers
- Probes
 - ATR for highly absorbing liquids
 - Diamond-tipped probes for harsh conditions
 - General reaction probes
- Sample cells
 - Short gas cells
 - Laminar flow long gas cells
 - White cells
 - Liquid transmission cells
 - Flow-through and open boat ATR



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