

FTIR/FT-NIR Analyzer

The **ANALECT®PCM™** Series FTIR/FT-NIR process analyzers measure physical, chemical and compositional properties of liquids, solids and gases.

- On-line, in-situ, and at-line monitoring of batch and continuous processes.
- Displays up to 15 properties at once and measures up to 30 properties per stream.
- Optical multiplexing capabilities provide analysis of up to 16 process streams using fiber optic or extractive stream switching.
- Utilizes process-proven ANALECT Diamond 20 Transept™ optical head:
 - Vibration tolerant optical system allows placement of analyzer in hostile industrial environments.
 - Absolute optical alignment of components provides for repeatable spectra, allowing calibrations to remain stable indefinitely.
- SpectraRTS™ software engineered exclusively for on-line monitoring, allowing use by engineers, maintenance personnel, and chemists.



Full chemometric modeling capability including SpectraQuant™, MATLAB® Unscrambler®, & Pirouette®

- Communication options including OPC®, Modbus® as well as analog protocols.
- The PCM monitors versatility allows for a wide range of applications including:
 - Chemicals
 - Petrochemicals
 - Polymers
 - General manufacturing
 - Pharmaceuticals
 - Gas analysis

SAMPLING FLEXIBILITY

	Mid IR	NearIR
Liquids		
Transmission Probes	■	■
ATR Probes	■	
Cross-line Probes	■	■
Slip-stream Probes	■	■
Gases		
Gas Cells	■	
Solids		
Diffuse Reflectance		■

Specifications

Spectrometer

Interferometer:

- Transept IV[™] hermetically sealed module with refractively scanned design
- Optical range: 7000–450 cm⁻¹ Mid-IR; 12000–1200 cm⁻¹ NIR
- Detector options: DTGS Pyroelectric; InAs; InGaAs; MCT

Analysis Time

- 30–60 sec. for multiple property predictions

Ambient Environment Conditions

- 0–38°C standard ambient temperature
- -20–50°C with optional heating and A/C system

Area Classification

- ATEX/CENELEC Zone 1 & 2
- NFPA Class I, Division 1 & 2

Process Control Interface

- Modbus, OPC and analog protocols
- Fiber optic Ethernet and serial communications options

Utility Requirements—Analyzer and Cell Enclosure

- Main power 115/230 VAC 50/60Hz single phase 1500 watts

Instrument Dimensions: Optical Head and Sample Box

- 220cm H x 97cm W x 46cm D (87 H x 38 W x 18 D)
- Weight: 270kg (600lb)

**SpectraRTS[™] Software
Drives Your Process**



**Automate many aspects
of your process**

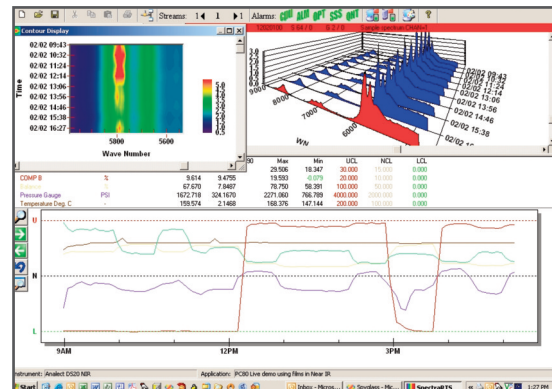
- Control I/O to switch valves and monitor a variety of sample system conditions.
- Collect spectra and apply quantitative analysis routines.
- Transmit product properties, instrument QC data, and alarms via versatile communications protocols.
- **Implement calibration tools and programming flexibility**
- Apply a wide variety of quantitative analysis routines including: SpectraQuant[™], MATLAB[®] and Pirouette[®]
- Utilizes Visual Basic for Applications (VBA) compatible scripting language to achieve total programming flexibility
- Operate the system remotely by using pcANYWHERE[™] or Timbuktu[®] software.
- Multi-level password access.
- **Validate and diagnose your system**
- Implement on-line validation methods, such as ASTM D6122.
- Automatically monitor and trend the system's "health" with Remote R_x software for preventative maintenance scheduling.
- Access the on-line help system for quick reference.

The ANALECT[®] Diamond 20[™] analyzer supports on-line systems with process development utilizing the same optical bench as the ANALECT PCM for instrument to instrument calibration data transfer. SpectraStudio[™] a Windows[®] based data collection and analysis

program is designed to provide a high degree of flexibility to users operating in a laboratory environment.

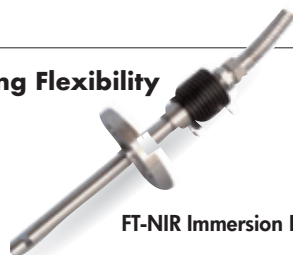


ANALECT Diamond 20

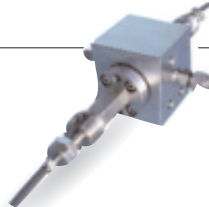


3D Spectral Display contour plots with property trendlines

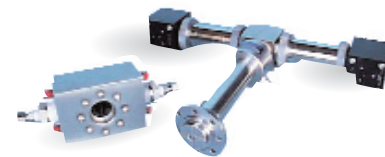
PCM Sampling Flexibility



FT-NIR Immersion Probe



FT-NIR Cross-Line Probe



Mid-IR ATR Diamond Probe

