

FTIR Analyzer

The **Analect™ ChemEye** analyzer is an FTIR system specifically designed for real-time dynamic monitoring of reaction chemistries.

- Wide spectral range provides for Mid-IR and NIR regions.
- Interchangeable sampling options.
- Choice of Diamond, ZnSe, and Silicon Probes.
- Flow-through ATR and transmission accessories .
- High throughput light pipes and fiber-optic configurations.
- Compact size of unit enables easy placement inside fume hood.
- Installs in all automated reactors and reaction calorimeters wide pH range tolerance-strong acid to strong bases.
- Grams/AI™ software provides fast and flexible data management and processing with an extensive library of applications.
- Full chemometric modeling capability including SpectraQuant,™ Unscrambler®, MATLAB® and Pirouette®.
- The ChemEye's versatility is demonstrated by its range of applications:
 - End Point determinations
 - Reaction kinetics
 - Grignard formations
 - Organic synthesis

- Fermentation
- Polymer reactions
- Urethanes
- Isocyanates
- Acrylates

Benefits of Characterizing Your Process and Products with Analect FTIR

- Improves process scale-up and time to market
- Determine optimum reaction time and conditions
- Increase yield and improve product quality
- Calibration transfer between the ChemEye and our on-line process PCM™ analyzers
- Reduce reaction cycle times and raw material consumption



Specifications

Analyzer Performance

- Interferometer: Transept™ IV hermetically-sealed module with refractive scanned design
- Spectral range: Extended Mid-IR 7,400 to 450 cm^{-1} ; NIR 12,000 to 1,200 cm^{-1}
- Resolution: 1.5 cm^{-1} (unapodized)
- Detector: broadband high-sensitivity liquid N_2 -MCT detector
- Dewar: 12-hour (standard) and 24-hour (optional)
- Calibration transferability: models transferable among all other **Analect FTIR** units with the same configuration
- Sample probe: standard: Diamond ATR probe, optional: ATR probes with other IR crystals including ZnSe, ZnS, Ge, AMTIR, and Si
- Probe operation condition: $\leq 250^\circ\text{C}$ and 500 psi (280°C and 1450 psi optional)

Area Classification

- Standard system: General Purpose Environments

Physical Dimensions

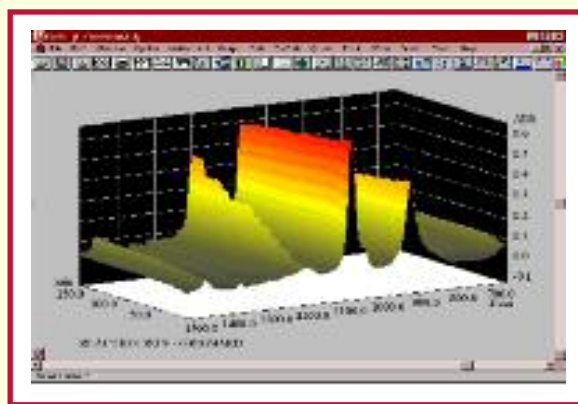
- Size: 27H x 46W x 32D cm (10.5H x 18W x 12.5D inches) w/12hr. dewar
- Size: 45H x 46W x 32D cm (17.7H x 18W x 12.5D inches) w/24hr. dewar
- Weight: 54.4 kg (120 lb.)
- Benchtop or wall mount configurations available
- Above dimensions do not include the remote electronics module

Analect RovIR™
Transportable system for pilot scale reaction monitoring in hazardous areas



The Power of **FX 90™** Software

- **FX 90** features exceptional workstation graphics flexibility
- Customized for reaction monitoring
- Provides the user advanced capabilities to quantitatively and qualitatively characterize the reaction
- Built-in wizard for auto-pilot guidance of setups and reaction run
- Built-in "simulator mode" allows you to replay your previously acquired data "off line"
- Built-in chemometric tools – PLS, MLR
- Up to 50 different windows on your process reaction
- FTIR datastation included



Grignard reaction run

Contact us to learn more about our Analect on-line systems:

- RovIR™
- Diamond MX™
- PCM 1000™
- PCM 5000™

Contact our Marketing Dept. **AIT Applied Instrument Technologies** 2121 Aviation Drive, Upland, CA 91786

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