MONTROSE
AIR QUALITY SERVICES

Global Headquarters
1 Park Plaza
Suite 1000
Irvine, CA 92614

T: 949.988.3500
F: 949.988.3514
sales@montrose-env.com
www.montrose-env.com

Fourier Transform Infrared Spectroscopy (FTIR) Services

FTIR Capabilities

- Process Optimization - FTIR measures on a continuous basis, reporting results in real time. This is effective when monitoring processes with rapidly changing or variable emissions.
- Benchmarking and/or optimizing pollution control technologies.
- Engineering emissions evaluations - FTIR detects virtually all gas-phase pollutants, including criteria pollutants, volatile organic compounds, and hazardous air pollutants.
- Determining concentrations of multiple compounds - FTIR can measure multiple analytes simultaneously. The cost of FTIR can be offset by eliminating the need for other traditional methods, with savings tied to the number of compounds being measured.
- Meets EPA 40CFR60 PS-15, Methods 318, 320 and 321, plus some NIOSH methods.

FTIR Benefits

- Instant "real-time" feedback
- Catch spikes in concentrations that can diagnose process problems
- Precise measurement method with internal calibration
- Eliminate costly calibration gases
- Simultaneous analysis of compounds
- Measures a variety of organic and inorganic volatile compounds
- Sensitivity from parts per billion (ppb) to high percent levels
- Efficiently measures complex gas streams

Voyager© Services

Montrose Air Quality Services uses Voyager© to offer FTIR measurement in a cost-effective and efficient package. Voyager's ease of setup, and its remote operation and self-diagnostic capabilities allow remote monitoring of the combustion process for longer periods of time. The benefits include better tuning, diagnostics, compliance data, or data collection for ICR, SIP or consent decree implementation. Voyager was engineered with accessibility and safety in mind, enabling remote command while operating 24/7.

The major components of the Voyager system - FTIR analyzer, CPU, smart sample pump module, particulate filter with self-purge, calibration & heater modules - fit in a climate-controlled 19-inch mobile rack. An FID, hot/wet O_2 analyzer or an additional data logger can be added easily via a 4U slot. The integrated PLC includes a 5x5 color touchscreen. We use this to monitor and control seven heated zones, five of which are available for external heating devices, and an eight-port calibration module. The integrated calibration cells and mass flow controller allow for dynamic spiking. Minimal on-site interaction is needed after setup, thanks to an easily accessible particulate filter and a failsafe nitrogen purge system that protects the process in the event of power loss or heated zone failure. Remote monitoring and control can be accomplished through a web browser or a Verizon Wireless Cellular with static IP address.