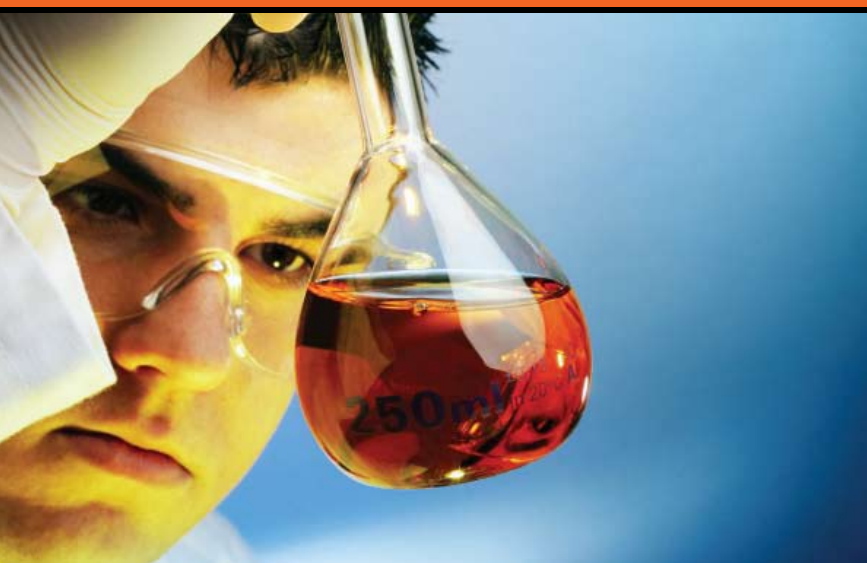


Effective solutions for complex analytical challenges

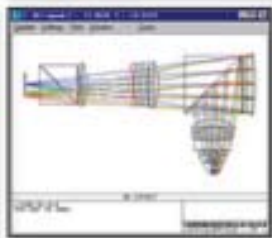


Laboratory and Analytical Services/Method Development

Middleton Research provides consulting and technical services for a wide range of applications. We work with customers to develop instrument systems, software solutions and analytical methods, or perform feasibility measurements that address specific challenges.

Our laboratory is equipped with sophisticated analytical equipment including high performance near-infrared Fourier transform instrument with fiber optics, integrating sphere diffuse reflectance, heated and temperature controlled transmission cells, mid-infrared (FTIR) with ATR, photoacoustic and microscopic measurements. Our experienced scientists can help you create infrared and near-infrared analytical methods for use in your laboratory setting, or we can perform the actual laboratory measurements and data analysis for you in our laboratory.

Instrument Development/Custom Engineering



Middleton Research scientists and project managers collaborate with you and your engineering resources to develop product innovations in the areas of optical and analytical instrumentation and process analytical technologies (PAT).

Drawing on our extensive spectroscopic and industrial process analytical experience, Middleton Research provides contract engineering services to augment your in-house

expertise. Our engineering staff can design new products or modify existing devices to optimally address your specific applications.

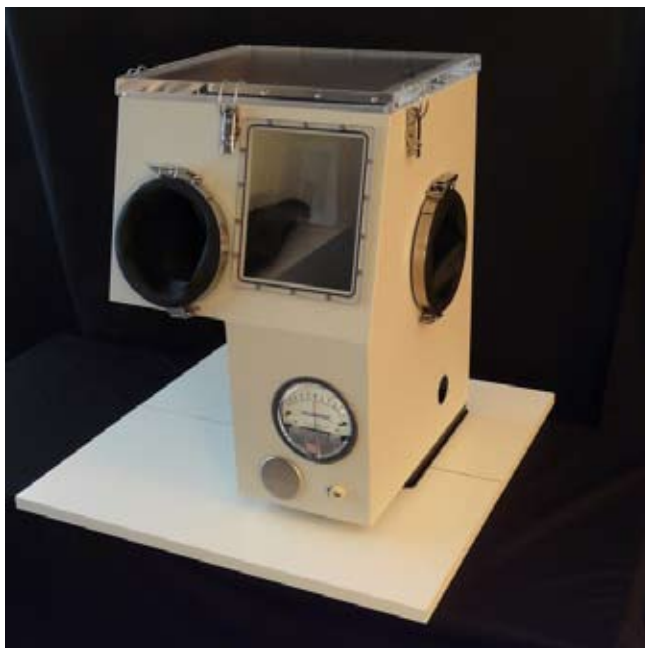
Our experienced staff is equipped with a variety of software tools, including SolidWorks for full 3-D modeling, Zemax for designing custom optical components, and numerous spectroscopy and data analysis software programs. We are experienced in algorithm and user interface development for special software projects.

Optical Standards & Recertifications



Middleton Research offers a wide variety of optical standards to meet your spectroscopy needs. The optical standards available for purchase include an extended range near infrared wavelength standard, diffuse and absolute specular reflectance standards, and ATR validation standards. Middleton Research also offers recertification services for all of these standards as well as for NIR and IR linearity standards and IR wavelength standards.

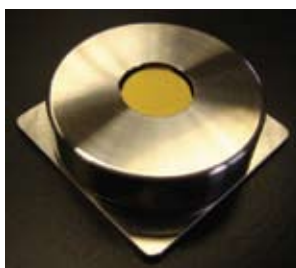
Spectroscopy Accessories



Glovebox

The IsolatIR™ Spectroscopy Glovebox was designed to allow for challenging samples to be measured in a sealed, unchanging environment. Many of the most common FTIR sampling accessories can be mounted inside the Glovebox, and the entire unit can be placed directly into the sample compartment of an existing FTIR spectrometer bench.

Sampling Devices for Viscous Liquids



Middleton Research has developed both a Transreflectance Liquid Cell and Paste Cell for easy sampling of viscous liquids on near infrared analyzers. Both cells offer reproducible optical pathlengths and quick application and cleanup.

Photoacoustic Accessories

Middleton Research distributes patented photoacoustic gas, liquid and solid measurement systems developed by Gasera Ltd of Turku, Finland and provides related applications and engineering services.

