



Golden Gate™ Supercritical Fluids Analyzer

A high temperature, high pressure, low volume FTIR accessory developed for the study of supercritical fluids and polymers.



Applications

- * Supercritical and Near Supercritical fluids.
- * Extreme condition analysis of polymers
- * insitu study of seals and 'O' rings (swelling and shrinkage)

The Supercritical Fluids Analyzer version of the Golden Gate™ Diamond ATR is designed for operation at extreme temperatures and pressures.

The diamond ATR element is high temperature metal bonded into a tungsten carbide disk, avoiding the use of adhesives or resins that may be dissolved or attacked by the chemical aggressiveness of supercritical fluids. The sample chamber has been specially constructed using stainless steel and is capable of withstanding pressures up to 6000 p.s.i. and temperatures up to 300°C.

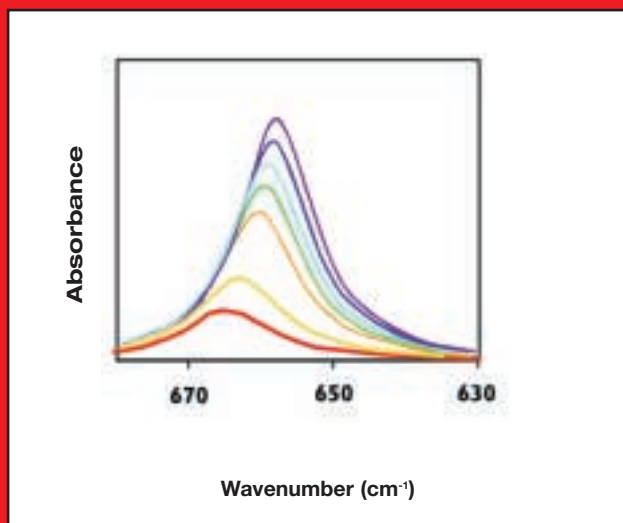
The high thermal conductivity of the diamond element is ideal for fast temperature equilibrium and accurate temperature measurement, reducing analysis time and increasing sample throughput.

The system is equipped with a thermal protection system to prevent thermal runaway and the controller can be password protected to avoid accidental alteration of heating parameters.

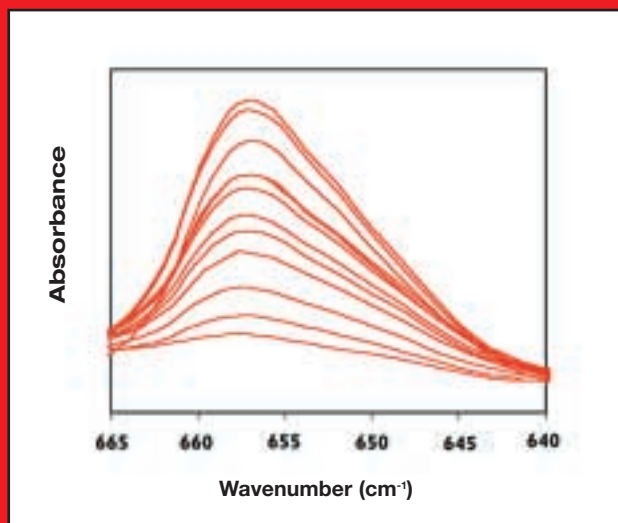
Specifications

- * Pressures up to 6000 p.s.i.
- * Temperature controlled to 300°C
- * Low volume stainless steel sample cell, 28ul
- * Standard 1/16th inch fittings
- * CE marked
- * Fits in standard FTIR instrument sample compartments

Spectra Samples



ATR spectra showing the effect of pressure of scCO_2 on the bending ν_2 mode of CO_2



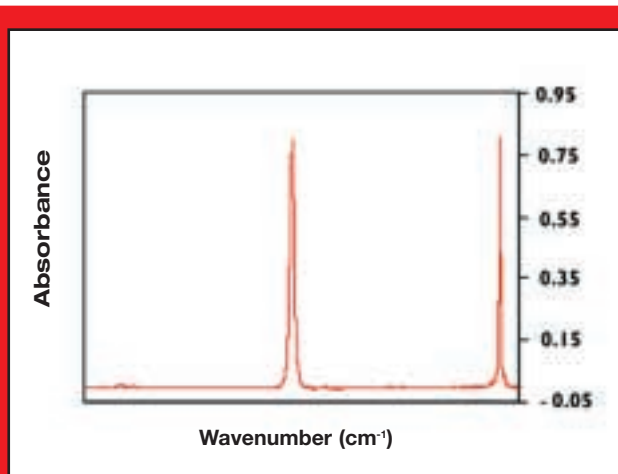
Time-resolved ATR spectra of diffusion of CO_2 into a syndiotactic polystyrene pellet subjected to scCO_2

Supercritical Fluids Analyzer Ordering Information

(Please specify instrument make and model)

10586 **Golden Gate™ supercritical fluids analyzer system.**
includes optics unit with Supercritical Fluids Analyzer diamond top plate, temperature controller, Benchmark™ Instrument Base-plate and purge bellows.

10585 **Golden Gate™ supercritical fluids top-plate.**
Includes Supercritical Fluids Analyzer diamond top plate and temperature controller.



Spares

10587 Graphite Gaskets (pkt of 10)
10504 Torque wrench

10588 2.5mm hexagonal head bit for torque wrench

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