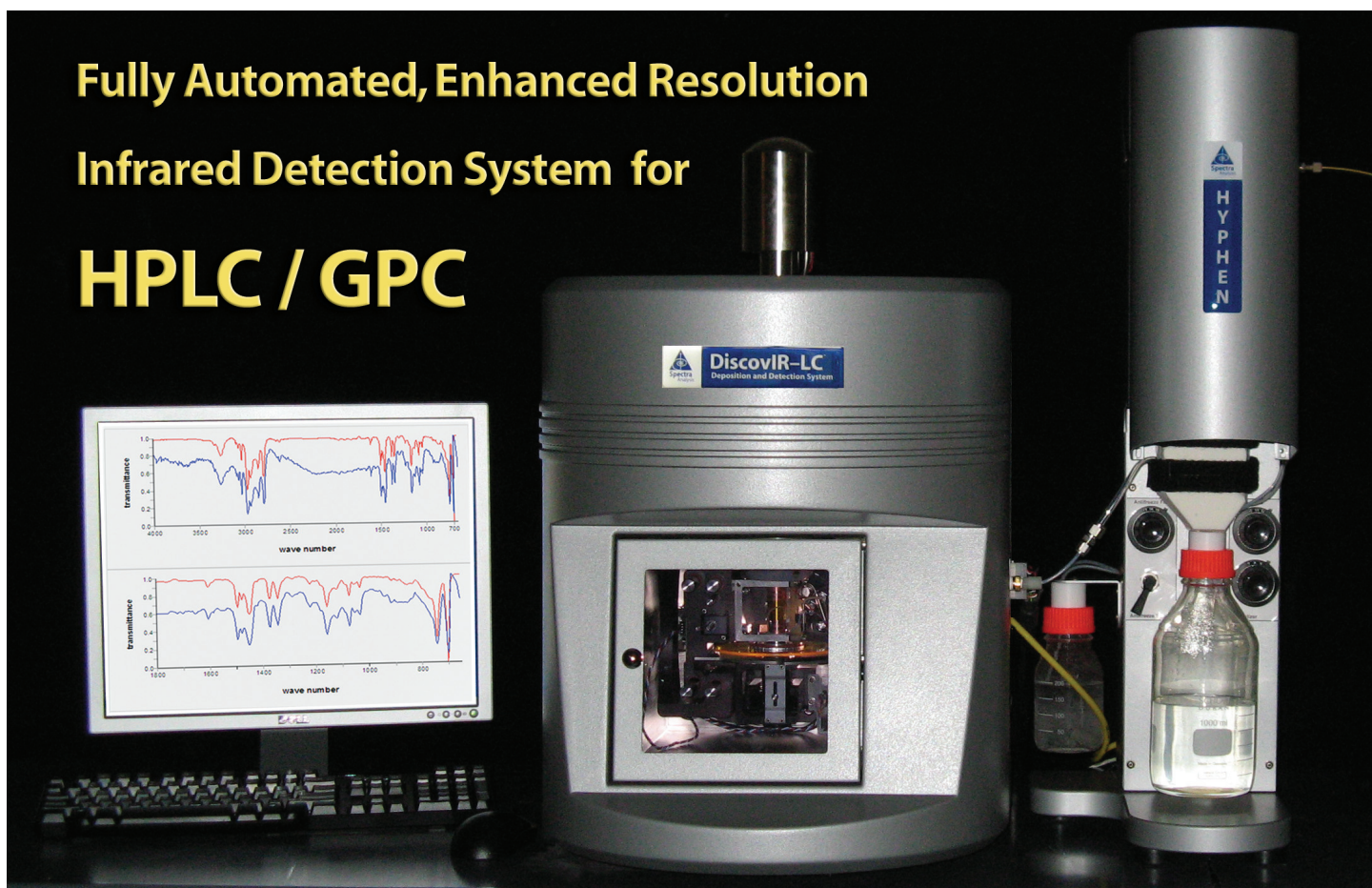


## Fully Automated, Enhanced Resolution Infrared Detection System for HPLC / GPC



- **Micro-Deposition on Cryogenically-Cooled IR-transparent disc**
- **Unique, Proprietary LC interface removes solvent interference**
- **Collects real-time IR spectrum automatically**
- **On-line Analysis -  
*No Sample Handling!***

### Applications:

- **Deformulation**
- **Co-polymer Compositional Drift**
- **Extractables & Leachables**
- **Minor Component Identification**
- **Chemical Troubleshooting**
- **Degradation/Failure Analysis**



[www.spectra-analysis.com](http://www.spectra-analysis.com)

## IR Detection System

### Enhanced Resolution Infrared Detection System for HPLC and GPC

#### Micro-Deposition Improves Analysis

DiscovIR's unique temperature controlled, vacuum deposition method ensures that results are accurate and reproducible. Eluted peaks are first deposited in a film onto a rotating IR transparent disc. Next, an infrared beam passes through each concentrated spot and the detector automatically collects spectral data.

#### Concentrates Analytes in Minimal Area

Cryogenic temperature control of the Sample Disc minimizes the area of the deposited analyte. This results in a thicker sample layer and therefore Higher Sensitivity of the absorbance spectrum.

#### Immobilizes Entire Run

Since the entire chromatographic run is applied to the Sample Disc, the resolution of the separation is not lost as in some collection systems.

Additionally, the entire run is available to be scanned again to investigate subtle features or improve signal-to-noise. The speed of the rotating Sample Disc can be adjusted to match concentration of the deposited sample.

#### System Overview

<b>Operating Principle</b>	Direct deposition of column eluent on moving ZnSe sample disc
<b>IR Spectrometer</b>	Built-in FTIR
<b>IR Detector</b>	0.1 mm MCT
<b>Wavenumber Range</b>	4000–650 cm <sup>-1</sup>
<b>Data Collection</b>	Real-time, with post-run analysis available
<b>Spectrum Type</b>	Transmittance through disc and solid-phase sample
<b>Window Capacity</b>	12-24 hours of chromatography
<b>Window Temperature</b>	-100°C to +50°C

#### Data Station

<b>Platform</b>	Windows XP
<b>Spectroscopy Package</b>	Grams32
<b>Standard Features</b>	<ul style="list-style-type: none"><li>• Real-time and post-run data collect</li><li>• Chromatographic / spectral workup</li><li>• Band chromatograms for chemical classes</li><li>• Ratio chromatograms for profiling trends</li></ul>
<b>Library Search</b>	Library Search Software included Spectra compatible with all solid phase FTIR Libraries

#### DiscovIR-LC Configuration

<b>Sample Delivery</b>	Multi-Step Desolvation Interface
<b>Flow Rates Accepted</b>	0.25 to 1.5 mL/min
<b>Compatible Solvents</b>	Water, ACN, Methanol, THF, Chloroform
<b>Compatible Additives</b>	Volatile buffers (ammonium carbonates, acetates, formates), trifluoroacetic acid (TFA), triethylamine (TEA)
<b>Sensitivity</b>	Typically 1ug per component
<b>Chromatograph</b>	Any Liquid Chromatograph System (supplied by user)

