



# ChemDetect™ Liquid Analyzer

## MID-IR LIQUID CHROMATOGRAPHY IS FINALLY HERE

It's time to reconsider Mid-IR for high-sensitivity liquid analysis. Unlike traditional FT-IR based instruments, which are limited to short path length (< 10  $\mu\text{m}$ ) ATR measurements, ChemDetect™ Liquid Analyzer leverages high-brightness quantum cascade laser technology.

This allows ChemDetect to operate in the more preferred direct transmission measurement mode at long path lengths (>100  $\mu\text{m}$ ) for both aqueous and solvent-based solutions. The ChemDetect is a compact, intelligent and easy-to-use infrared spectrometer specifically designed for detection of low-concentration (ppm) analytes in standard HPLC liquid columns. The longer path length, combined with broad source tunability and a proprietary balanced detection architecture enables unprecedented sensitivity, selectivity, and speed for measurement of mixtures and separated flows.

The ChemDetect is an excellent tool for R&D scientists or manufacturing process engineers. With a click of the mouse, delivers raw spectral data or model calibrated analyte concentration outputs. The ChemDetect is also equipped with an advanced software development kit (SDK), which enables easy integration of ChemDetect into complex laboratory or process control systems.

### HIGHLIGHTS

- High-sensitivity measurements (ppm)
- Fast update rates (1 s)
- Small sample volume (1  $\mu\text{L}$ )
- Configurable for standard HPLC systems
- Autoclavable components
- Flexible sample compartment
- Easy-to-use software
- SDK for system developers
- Spectra or analyte concentration outputs
- Multiple output file formats available

# LIQUID SPECTROSCOPY TAKEN TO THE NEXT LEVEL

## APPLICATIONS

- Liquid chromatography
- Chemical reactor monitoring
- Bioreactor monitoring
- Process development
- Protein analysis
  - Secondary structure
  - Aggregation
  - Glycosylation
  - PEGylation

## SPECIFICATIONS

### SAMPLE REQUIRMENTS

Non-flammable, low-viscous liquids

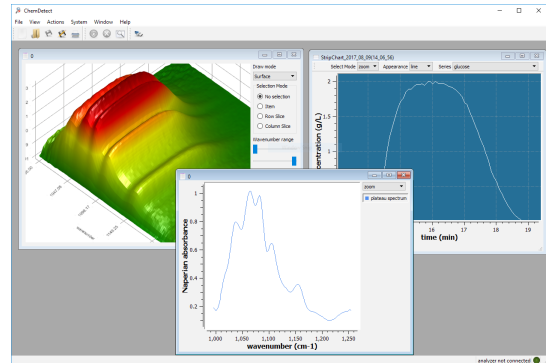
### FLOW CELL

Flow Cell Volume	1 $\mu$ L
Spacers Available	25.4, 50.8, 76.2, 101.6, 127 $\mu$ m
Autoclavable	Yes
Flow Rate	0.1 - 0.5 mL/min

### OPERATING PARAMETERS

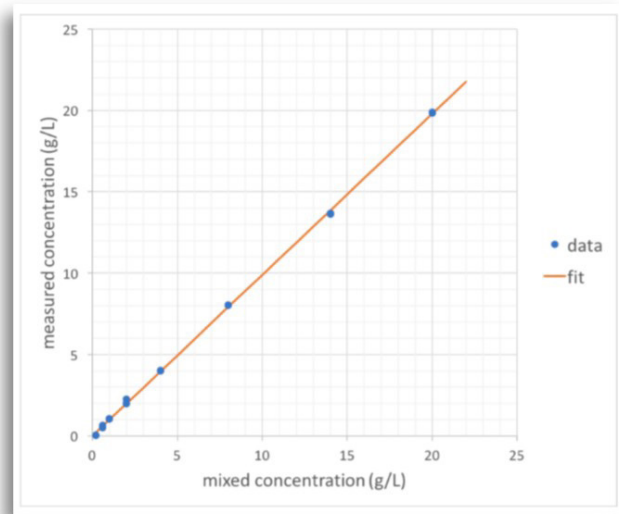
Power Requirement	90-240 vac
USB Connection	Mini-B 5 pin
Fluid Connection	F130 IDEX
Operating Temp	15-30 $^{\circ}$ C
Storage Temp	5-50 $^{\circ}$ C
Tubing	IDEX 1/16" od 0.8 mm ID ETFE Tubing
Operating System	Windows 10
Cooling	Liquid Chiller, Set at 20 $^{\circ}$ C

## USER-FRIENDLY SOFTWARE



The ChemDetect Software is user-friendly and enables users to view raw spectra or calibrated analyte concentrations in real-time. SDK is available to integrate ChemDetect into complex laboratory or process control systems.

## EXCELLENT LINEARITY



Excellent linearity of glucose in aqueous solution with 90 second update rate.

INVISIBLE LASER RADIATION  
AVOID EXPOSURE TO THE BEAM  
CLASS 3B LASER PRODUCT



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COMPLIES WITH 21 CFR 1040.10 AND 1040.11 EXCEPT FOR DEVIATIONS  
PURSUANT TO LASER NOTICE NO. 50, DATED JUNE 24, 2007. COMPLIES WITH  
IEC 60825-01

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