

Product Summary - 2018

New Java-based Software

Recently released Java-based Master Software combines unprecedented hardware control flexibilities with unique mathematical algorithms and procedures not available from other sources. Our Master Software includes all method development and prep peak collection features made popular by our previous Delphi-based software during the last 15+ years.

(New) Look Inside Flowing Streams with Real-Time Composition/Concentration Monitor (CCM)

Software plots concentration of each component as liquid passes through flow cell, includes linearity compensation. Real Time Composition/Concentration Monitor (CCM) is useful in Reaction, Process, SMB/MCC, and Peak Purity applications. Detector can be a standard Agilent DAD for small scale or an in-line fiber optic spectrometer (FiberDAD) for large scale installations. Supports achiral SMB/MCC separations, eg impurity isolation, by showing internal concentration profiles in real-time without the need to extract samples and analyze off-line making method optimization quick and easy.

(New) Methods with Cycles

Methods are composed of one or more cycles and cycles can have different eluent compositions, flow rates, etc. This feature is especially useful for stacked injections in HPLC prep and in CCC/CPC applications by including Fill, Equilibrate, Load, and Extrude cycles in a single method.

Recalculate Runs to evaluate different Peak Detect/Collect Settings

A test run can be Recalculated (replotted) multiple times with different settings to show peak detection and collection results without making more injections.

Flexibility to change Settings during a Run

During multiple-injection prep runs settings can be changed to achieve and maintain optimization of collections and productivity.

Multiple Peak Detection/Collection modes

Real-time peak detection/collection can be based on slope, level, time, min/max peak width, optical activity, ee, and combinations for each peak separately; also includes filtering of data and derivatives to help with noisy data.

Method Screening

Method Screening features include gradient control of 20 solvent and 24 column positions as well as easy writing, editing, and running of large method screening sequences.

Data Processing Tool

Data Processing Tool filters chromatograms based on peak parameters to show only useful chromatograms, saving significant time in evaluating results.

Chromatographic User Interface

Chromatographic User Interface is not hardware dependent so methods can be easily transferred to other systems running different hardware. Training and retraining is reduced since User Interface is always the same.

24/7 Unattended Operation

Our software products have always been designed and built for unattended 24/7 operation, for more than 15 years.

Hardware

See below for standard Hardware, we offer many custom Hardware Modules.

10 or 20 Bottle Eluent Mixer

Mix gradient or isocratic eluents from 10 or 20 bottles automatically with no limitations. Eluent Mixer is similar to 4-channel mixer in gradient pumps, but with 10 or 20 channels. Internal computer generates accurate gradients without concern for controlling PC workload.

12 or 24 Position Column Selector with Heating and Cooling

Compact Column Selector accommodates all sizes of analytical columns and is available with 12 or 24 valve positions; includes full heating and cooling temperature control.

Intelligent Injector/Collector Module

Intelligent Injector/Collector Module includes syringe pump, injection valve, loop, and collection valve. Syringe, loop, injection valve, and collection valve are available in different sizes to accommodate small and large scale installations. Syringe pump includes 8 inlet channels to automate multiple samples, rinsing, sandwiching, and injecting sample dissolved in different solvents to reduce equilibrium upset during injections in, for example, CCC/CPC systems. Collection valve outputs via tubings to accommodate small collection bottles and large collection vessels.

FiberDAD

FiberDAD is a fiber optic spectrometer system (diode array detector) that includes an in-line flow cell, light source, and spectrometer all connected by fiber optics. In-line flow cells are available for all sizes of tubing. Fiber optic cables accommodate explosion proof installations. FiberDAD was developed for use with our Composition Monitor software, but can be installed for any application requiring a spectrum detector and can cover UV, visible, and/or IR wavelengths.

Advanced Laser Polarimeter (ALP), the Preferred Optical Activity Detector

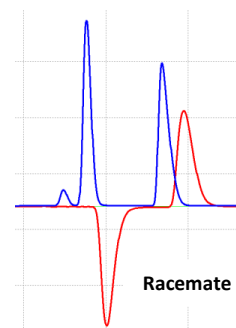
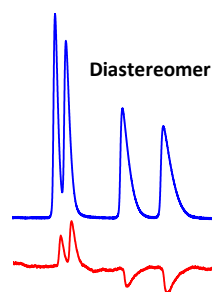
ALP is used in analysis, method development, prep purification, SMB/MCC, process, and chiral deconvolution applications; is patented internationally; and has been in production for 20+ years. ALP measures the rotation of a plane-polarized 635 nanometer laser beam passing through a flow cell to microdegree accuracy/resolution – without absorbance anomalies or interferences, no chromophore required.

ALP advantages include:

- Universal Optical Activity Detector
- No Chromophore or Absorbance Required
- Pharmaceuticals, Antibiotics, Pesticides, Proteins, Foods/Flavors/Fragrances, etc.
- Sensitive, Robust, Large Dynamic Range
- Fully Automatic, No User Adjustments or Stop Flow Scans
- Consistent Assignment (+/-) for Enantiomers
- Real-Time Data – Multiple Scans Not Required
- Two Internally Generated Calibration Peaks
- Available for Analytical, Prep, and Process Scale Applications
- Confirm Enantiomeric Separation in Method Development
- Control Fraction/Peak Collection in Prep Purification
- Deconvolve overlapping enantiomers
- Long Lifetime: 10 Years @ 24/7 Operation



100 - 240 VAC @ 50/60 Hz, 20 watts
635 nm / 10 udegrees
12.75" w x 22" d x 6"h, 35/16 lbs/kg
CE, UL, CSA, TUV



Services

- Lab planning, consulting, instrument installations, applications training
- On-site and remote support via SOIP (support over internet protocol)
- HPLC/UHPLC, SFC, SMB/MCC, CCC/CPC, Process Monitoring; chiral and achiral
- Custom instrument and software design, delivery, and support
- Purifications up to 1 Kg

Common System Configurations

Our Hardware and Software can be installed and configured for a variety of applications. Some application examples are listed below, many other applications are available.

AutoMDS: Automated Method Development Systems for HPLC/UHPLC

Typical system includes:

- 10 or 20 Bottle Eluent Mixer (PDR)
- Isocratic Pump (multi-vendor)
- Autosampler (multi-vendor)
- 12 or 24 Position Column Selector with Heating/Cooling (PDR)
- Columns (multi-vendor)
- UV/DAD Detector (multi-vendor)
- Computer and Monitor (multi-vendor)
- AutoMDS Software including Methods and Sequences (PDR)

AutoPrep: Automated Prep Peak Collection for HPLC

Typical system includes:

- 2 Prep Pumps (multi-vendor)
- Injector/Collector Module (PDR)
- Column (multi-vendor)
- UV/DAD Detector (multi-vendor)
- Computer and Monitor (multi-vendor)
- AutoPrep software (PDR)

AutoMDS & AutoPrep for DE Spectrum® dual winding CCC

Typical system includes:

- 10 or 20 Bottle Eluent Mixer (PDR)
- Two Isocratic Pumps (multi-vendor)
- Analytical/Prep and NP/RP Automated Valve Switching Module for dual-winding systems (PDR)
- Injector/Collector Module (PDR)
- Spectrum CCC (DE)
- UV/DAD Detector (multi-vendor)
- Computer and Monitor (multi-vendor)
- AutoMDS/Prep Software including Methods and Sequences (PDR)

AutoPrep: Automated Prep Peak Collection for CCC/CPC

Typical system includes:

- 2 Prep Pumps (multi-vendor)
- Injector/Collector Module (PDR)
- CCC/CPC (multi-vendor)
- UV/DAD Detector (multi-vendor)
- Computer and Monitor (multi-vendor)
- AutoPrep software (PDR)

Composition/Concentration Monitor (CCM)

Typical system includes:

- DAD (multi-vendor) or FiberDAD (PDR)
- Computer and Monitor (multi-vendor)
- Composition Monitor software (PDR)