Purely Better Efficient and Flexible

Agilent SD-1 Purification System

Agilent SD-1 Purification System

Flexible and efficient

Dual Path
325-UV Dual
Wavelength
Detector

SD-1 Solvent
Delivery Modules
1 -800 mL/min
Exchangeable
Pump Heads

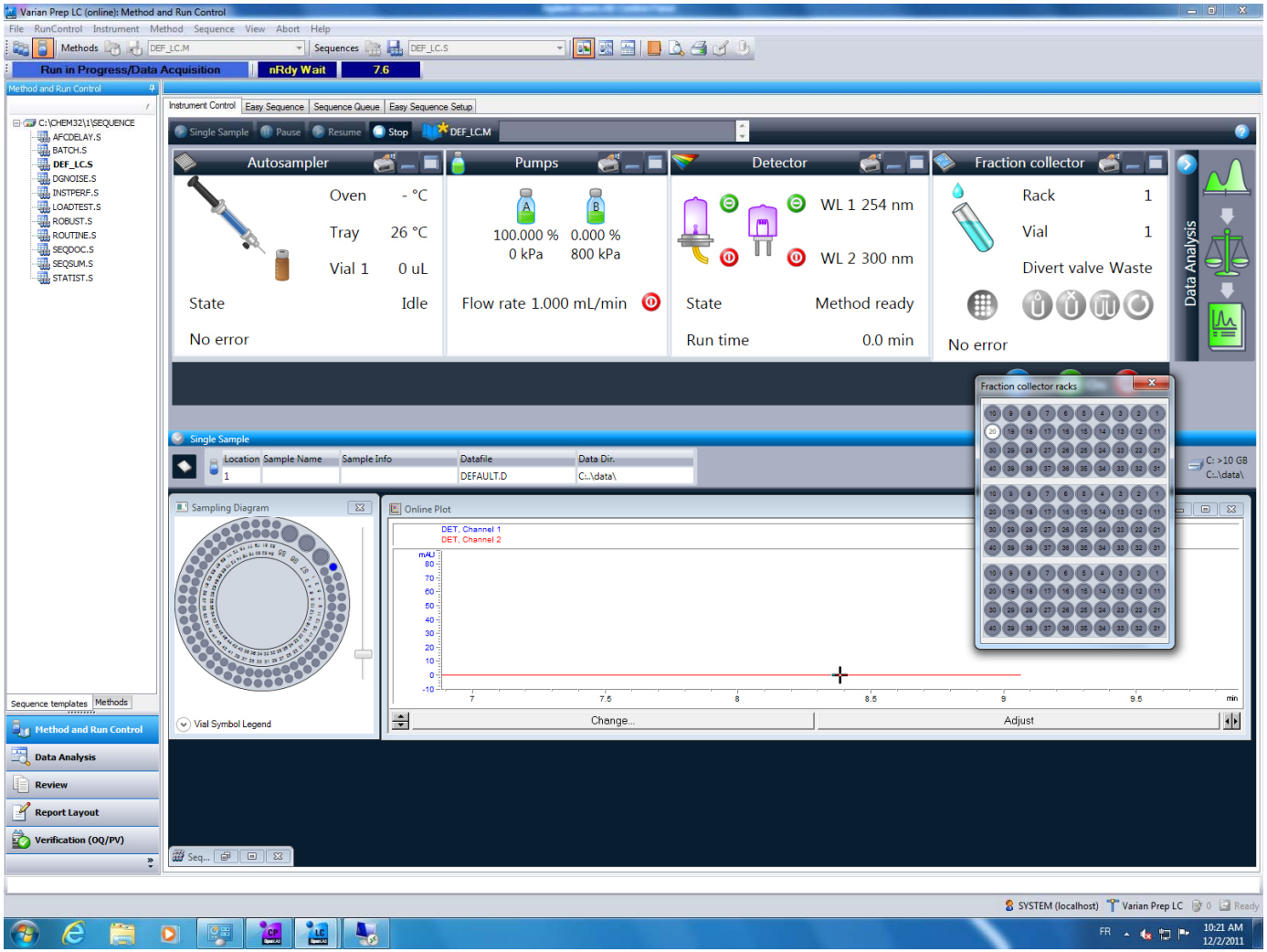
Manual Injection
or
Injection Pump

440-FC Open Bed
Fraction Collector

Easy OpenLAB
CDS Software

Agilent OpenLAB CDS User Interface

A single software for purification & analysis

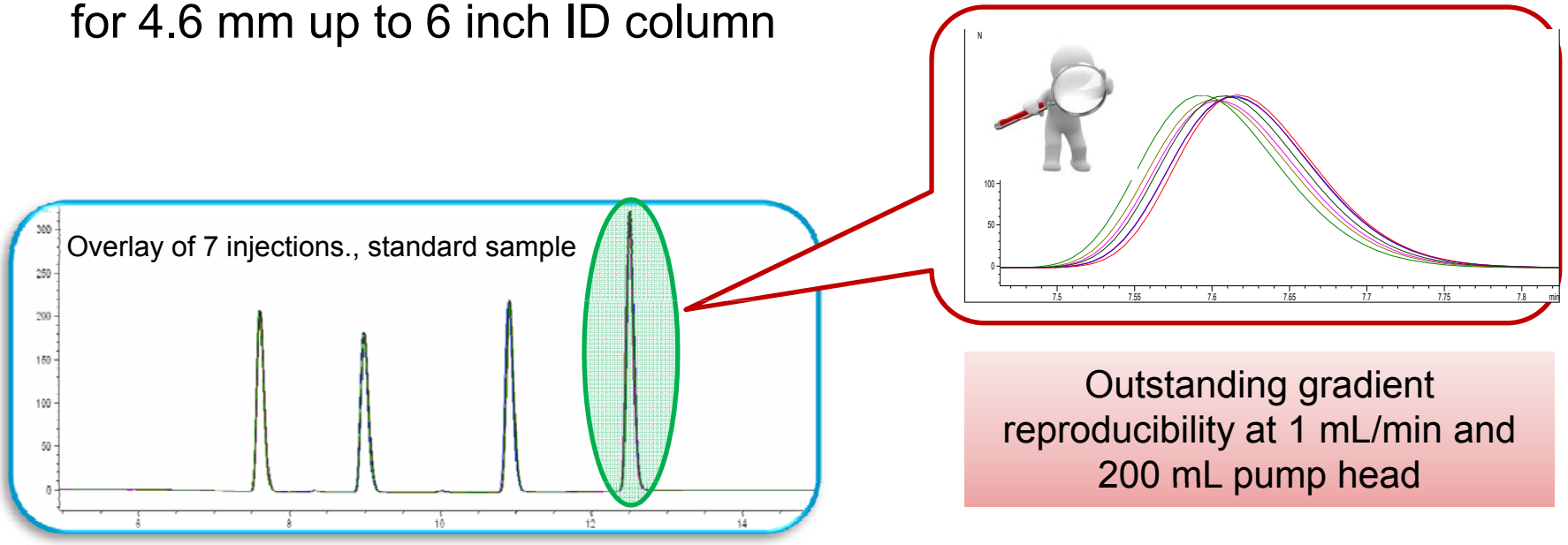


OpenLAB
CAPTURE • ANALYZE • SHARE

Agilent SD-1 Solvent Delivery Modules

Maximized flexibility and performance

- **Optimum performance for high-resolution HPLC at low flow rates and high-flow preparative applications** – dual piston design with independent control
- **High pressure mixing design for binary gradient work** – no degasser required
- **Exchangeable pump heads** for flow rates up to **200, 500 and 800 mL/min** for 4.6 mm up to 6 inch ID column



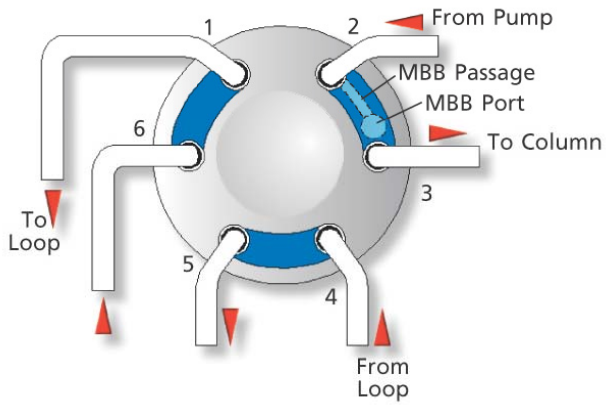
Outstanding gradient reproducibility at 1 mL/min and 200 mL pump head

Agilent 7725i Manual Injector

Robust make before break design

- Mounted in Organiser or Mast Assembly
- Available with Prep LC loops of 50 mL or 100 mL volume
- ≤ 5 samples and large volume up to 100 mL
- With internal switch for stand-alone use

Figure A. A Model 7725 Injector Reduces Wear and Tear on Your Columns



A conventional HPLC valve momentarily interrupts flow during sample injection, subjecting your column to repetitive pressure shocks. Rheodyne's patented MBB (make-before-break) design makes the new connection before breaking the old one, providing uninterrupted flow.

The Agilent 410 Preparative Autosampler

Unattended automated operation

- Wide injection capability up to 10 mL
- A choice of total or partial loop injection, or microliter sample pick-up
- Sample capacity of 24 x 10 mL vials
- Robust wide bore preparative injection needle

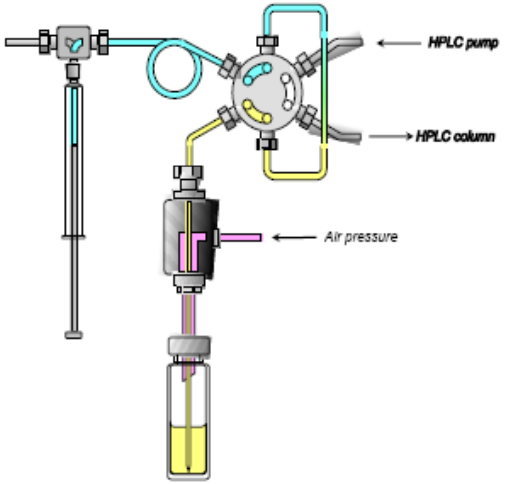
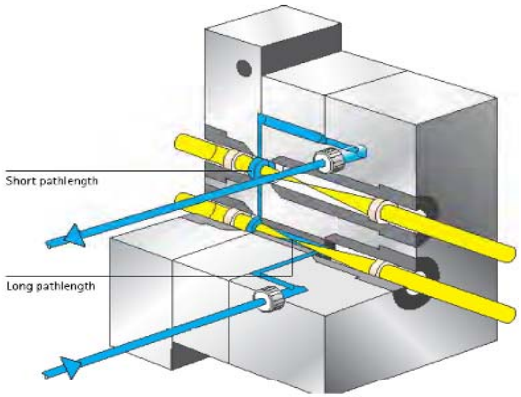


Diagram of Sample Loading Configuration.

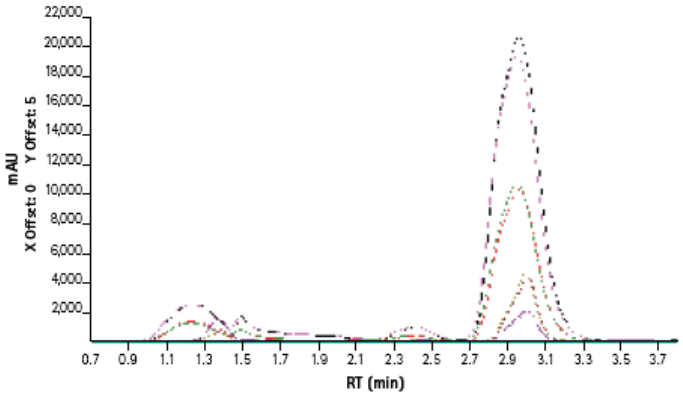
Agilent 325 UV-Vis Detector

Unique dynamic range

- **Ideal to cover extremely high and low concentrations without flow cell change** – dual path length flow cells
  - 9 x 1 mm flow cell has useable absorbance up to 13 AU
  - 4 x 0.15 mm flow cell has useable absorbance up to 80 AU
- **Maximum sensitivity** – over the wavelength range from 190 to 900 nm



The dual path length cell maximizes sensitivity for analytical applications whilst preventing “flat top peaks” for preparative runs. The dual path cell is as described – its two cells merged into one!



Achieve up to 80 AU when moving from analytical to preparative operation, without changing the dual pathlength flow cell. Above shows dynamic range from 2 to 21 AU of 5-hydroxytryptophan sample.

Column: Varian Pursuit XRs C18; Mobile phase: 85% water, 15% methanol; Detection: UV at 230 and 280 nm; Flow: 21 mL/min

Agilent 440 Fraction Collector

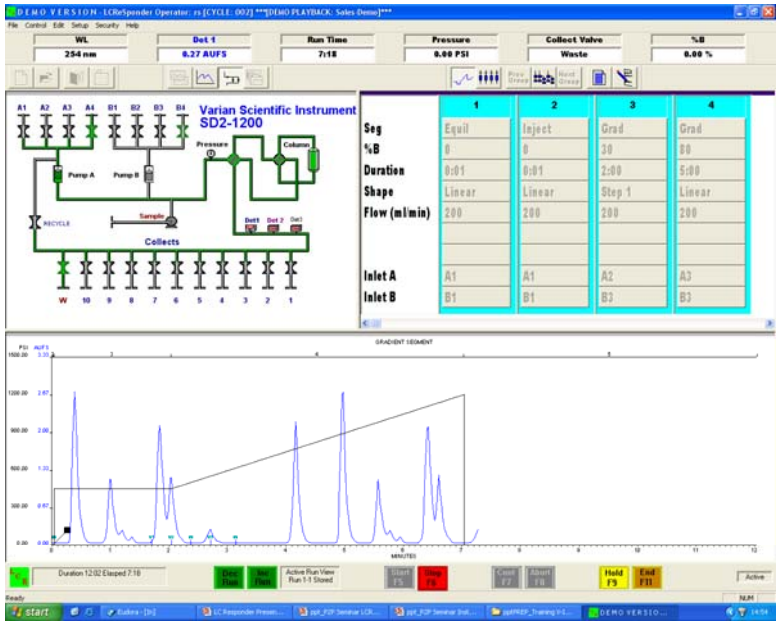
Open-bed flexibility

- **Ideal for semi-prep and preparative scale work** - compatible with flow rates from 1 mL/min to 800 mL/min
- **Secure fraction triggering** - Choice of collection by any combination of time-slicing, threshold or peak detection
- **Easy retrieval of collected fractions and source injections** - software graphical display
- **Flexibility from a range of supported collection vessels**
  - Large collection capacity of up to 270 x 13 mm OD tubes
  - From microvials to up to 50 mL tube capacity
  - Funnel rack for unlimited volume collection

Agilent SD-1 Purification System

Large scale solution

Easy Process Control



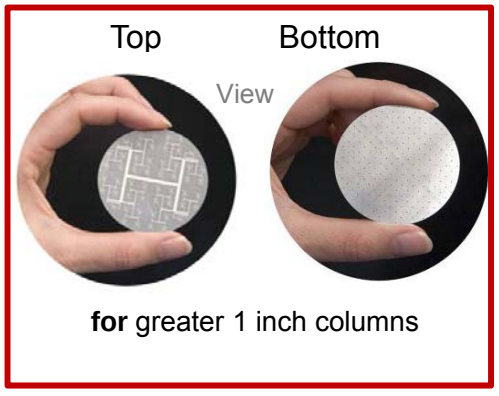
Designed to meet the bench-top preparative liquid chromatography needs of organic/medicinal chemist and process/chemical engineers, who require high flow rates till 800 mL/min along with an intuitive user interface.

Agilent Load & Lock Columns & Self-Packer

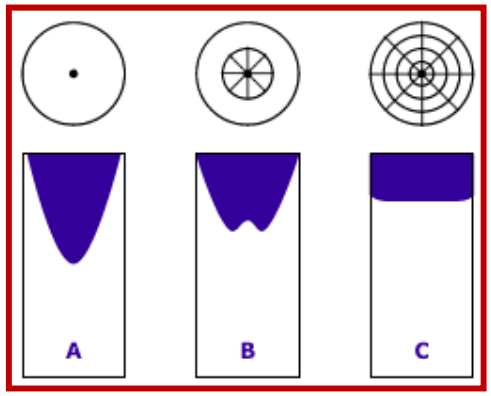
Leading innovative DAC columns & self-packer technology

- **Highest performance** – achieve superior results with the unique flow distribution system.
- **Maximum flexibility** – perform both Dynamic or Static “locked” axial compression (DAC/SAC) at 1 inch up to 3 inch ID.
- **Greater convenience** – pack your own column in a few minutes.
- **Maximum mobility** – column and packing station are combined in one easy-to-move skid, wherever it’s needed.

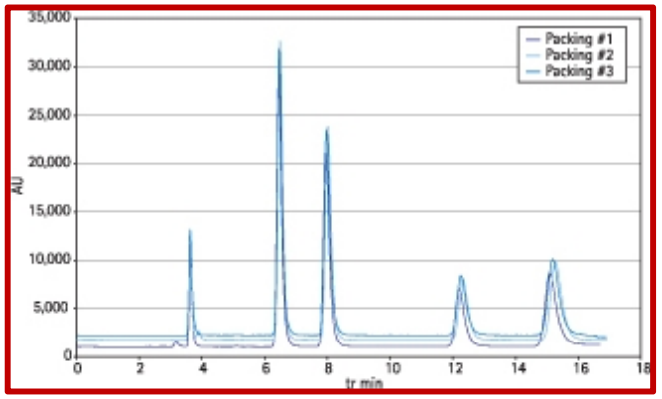
Agilent column distribution plate



Impact on profile C: with Agilent plate



Unmatched reproducibility of self-packed columns



Agilent SD-1 Purification System

Efficient and flexible

Outstanding solvent delivery

- Unmatched reputation for performance and reliability due to powerful stepper motors and durable drive components
- Settable flow rate range from 0.01 mL/min up to 800 mL/min
- Truly covering the analytical-to-prep scale up process

Unique UV detection options

- Programmable UV-Vis dual wavelength detector with dual-path flow cell
- Wide absorbance range without sacrificing sensitivity for preparative LC

Unique dynamic axial compression (DAC) column technology

- Highly reproducible and efficient separations of compounds of interest

Accurate, reproducible fraction collection

- A choice of Agilent OpenLab CDS software or LC ReSponder software

One single software platform

- Control of your purification and analytical systems with OpenLab ChemStation software