Waters Alliance® System

Performance PerSPECtives

Reproducible Performance

A New Generation of HPLC

The Waters Alliance Separations Module represents a new dimension in reproducible HPLC performance. Incorporating a design which consolidates and controls all the critical fluidic functions of the LC process, the Waters Alliance provides reproducible performance from unit to unit, lab to lab, and chromatographer to chromatographer. This unique design, which integrates solvent and sample management, minimizes the variables in system volume from instrument to instrument. The table below represents the chromatographically measured system volumes of eight randomly chosen production units of the Waters Alliance Separations Module. It demonstrates the ability to manufacture this instrument with extremely tight system volume tolerances. This reproducibility of system volume translates into a seamless transfer of methods from unit to unit.

Unit Number	System Volume (µL)
1	518
2	522
3	542
4	504
5	515
6	532
7	505
8	520

Typical System Volume < 550mL

Greatest Volume Differential = 38µL

Waters

Waters Corporation 34 Maple Street Milford, MA 01757 508 478 2000

Reproducible chromatography

Unit to unit....Lab to lab....Chemist to chemist....

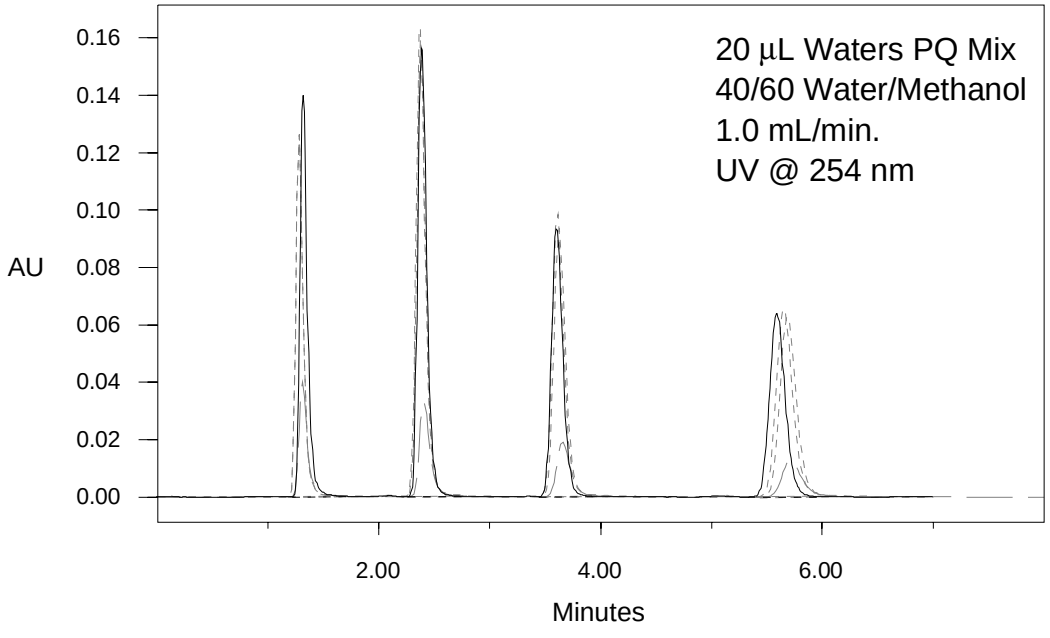
Traditionally one of the challenges with HPLC has been the reliable transfer of methods from system to system. The design of the Waters Alliance Separations Module sets a new standard for method transfer. From manufacturing process to chromatographic performance, the concept and design of the Alliance supports seamless method transfer. The figure below is an overlay of chromatography from four different units operated by four different chemists (one unit incorporated a microbore flow cell which results in a lower response). This demonstrates the exceptional system to system chromatographic reproducibility for retention time and response of the Waters Alliance. Both of these are critical criteria to implement predictable method transfer which is demonstrated by the superior system to system % RSD seen below.

Easy and Reliable Method Transfer

The Waters Alliance Separations Module facilitates method transfers not only in concept but also in function. An onboard floppy disk drive allows methods to pass from one instrument to another without tedious key-punching. This feature minimizes the chance for error and maximizes the success of direct method transfer from instrument to instrument and chemist to chemist.

System to System Retention Time % RSD (Four Systems)

Peak 1 = 0.02 Peak 3 = 0.026
Peak 2 = 0.021 Peak 4 = 0.049



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