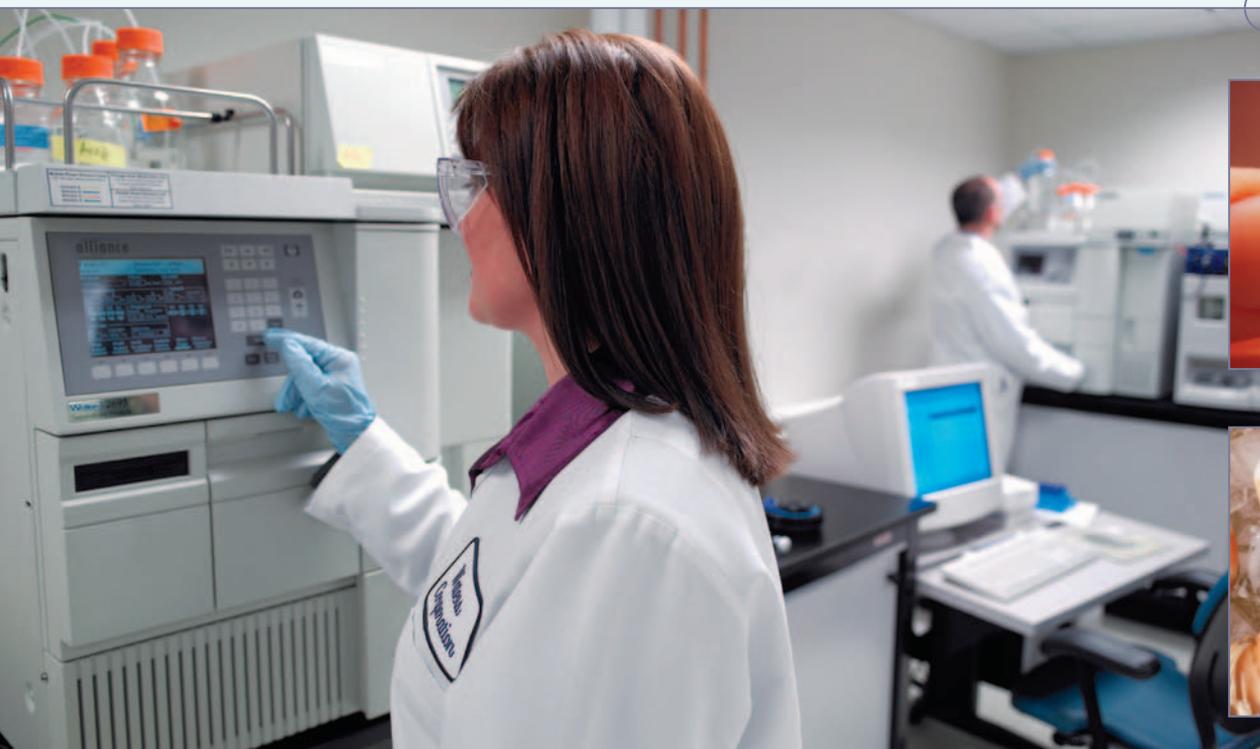


The industry-standard HPLC platform with versatile, dependable performance to support the analytical needs of your laboratory

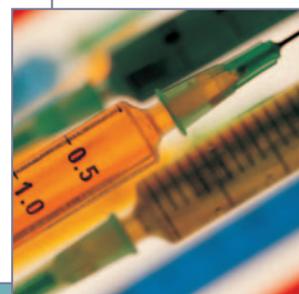
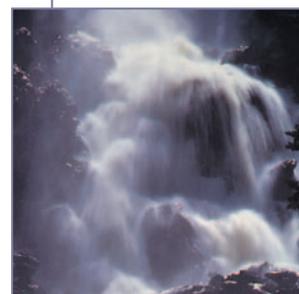
- Flexible system configurations address the needs and tasks of multiple applications
- Consistent performance that delivers timely, predictable results
- Scalable LC separation chemistries that do not compromise results quality
- Maximum system dependability with minimized downtime



The Waters Alliance HPLC System: Designed for versatility

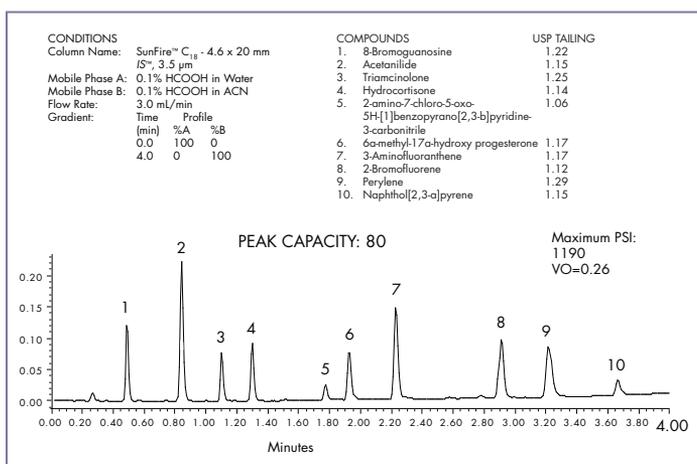
Inspired by input from our increasingly time-constrained users, industry-benchmark Waters Alliance® HPLC Systems have been continually expanded and perfected over the years to accommodate an enormous range of real-world, problem-solving HPLC separation challenges. Synonymous with dependable performance, highest quality and flexibility of operation, tens of thousands of these systems are in service worldwide today.

Alliance Systems are able to meet the rigorous requirements of routine analyses in addition to the performance standards of new-product research and method development. Whether your needs are in Pharmaceutical, Chemistry, Food Safety, Environmental or Quality Control arenas, Alliance HPLC Systems offer you a field-proven solution for all of your HPLC requirements—today and in the future.

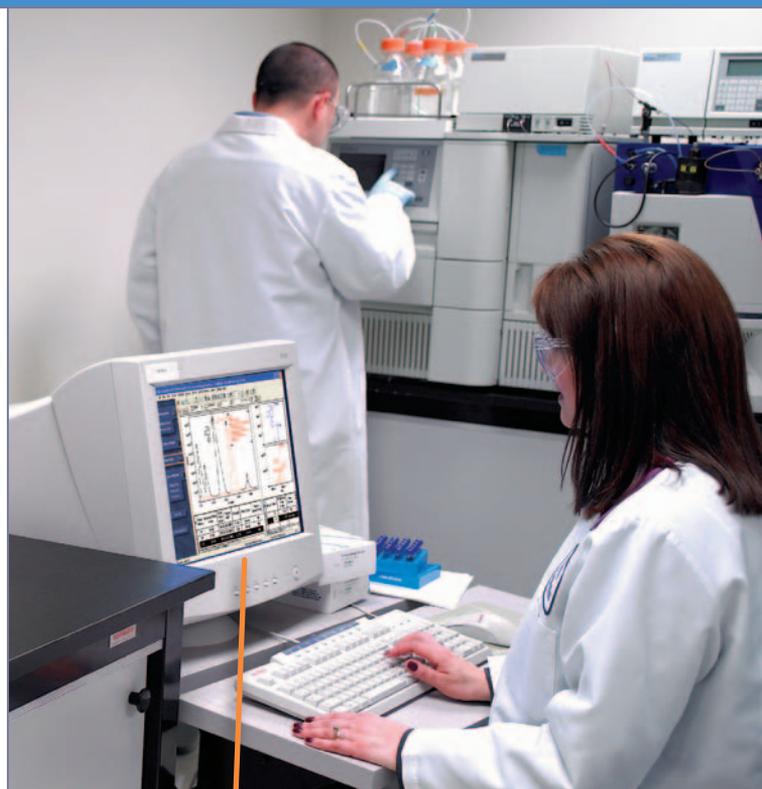


The *flexible* and *reliable* workhorse for all of your *HPLC* requirements.

Faster HPLC with the Alliance System



Alliance HPLC Systems provide faster run times, without changing hardware, with Intelligent Speed™ (IS™) HPLC column chemistries. This example shows a SunFire™ C₁₈ 2 cm IS column delivering a gradient separation of 10 diverse compounds in less than four minutes.



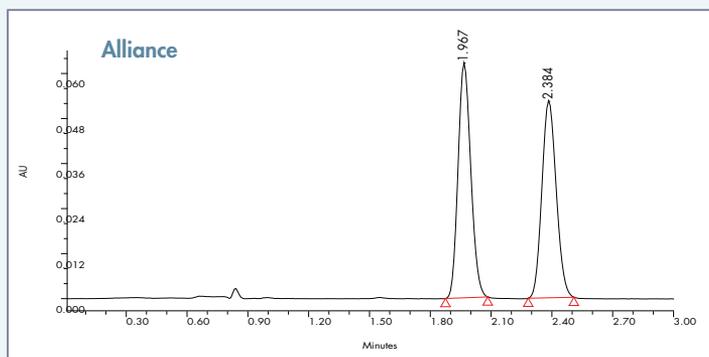
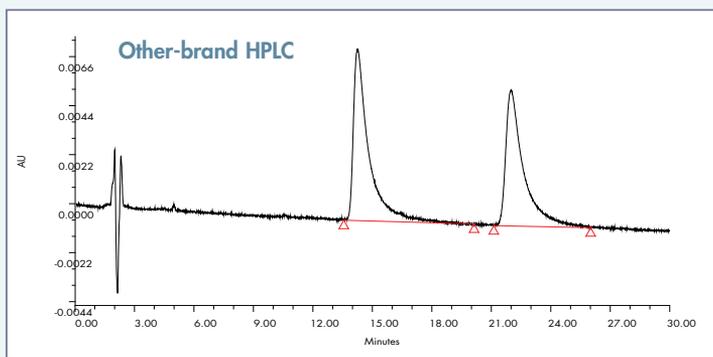
Simple start-up, robust data management

The Alliance HPLC System features a large and intuitive LCD-based user interface. Analysts can take advantage of rapid system set-up through AutoStartPLUS routines that streamline daily startups.

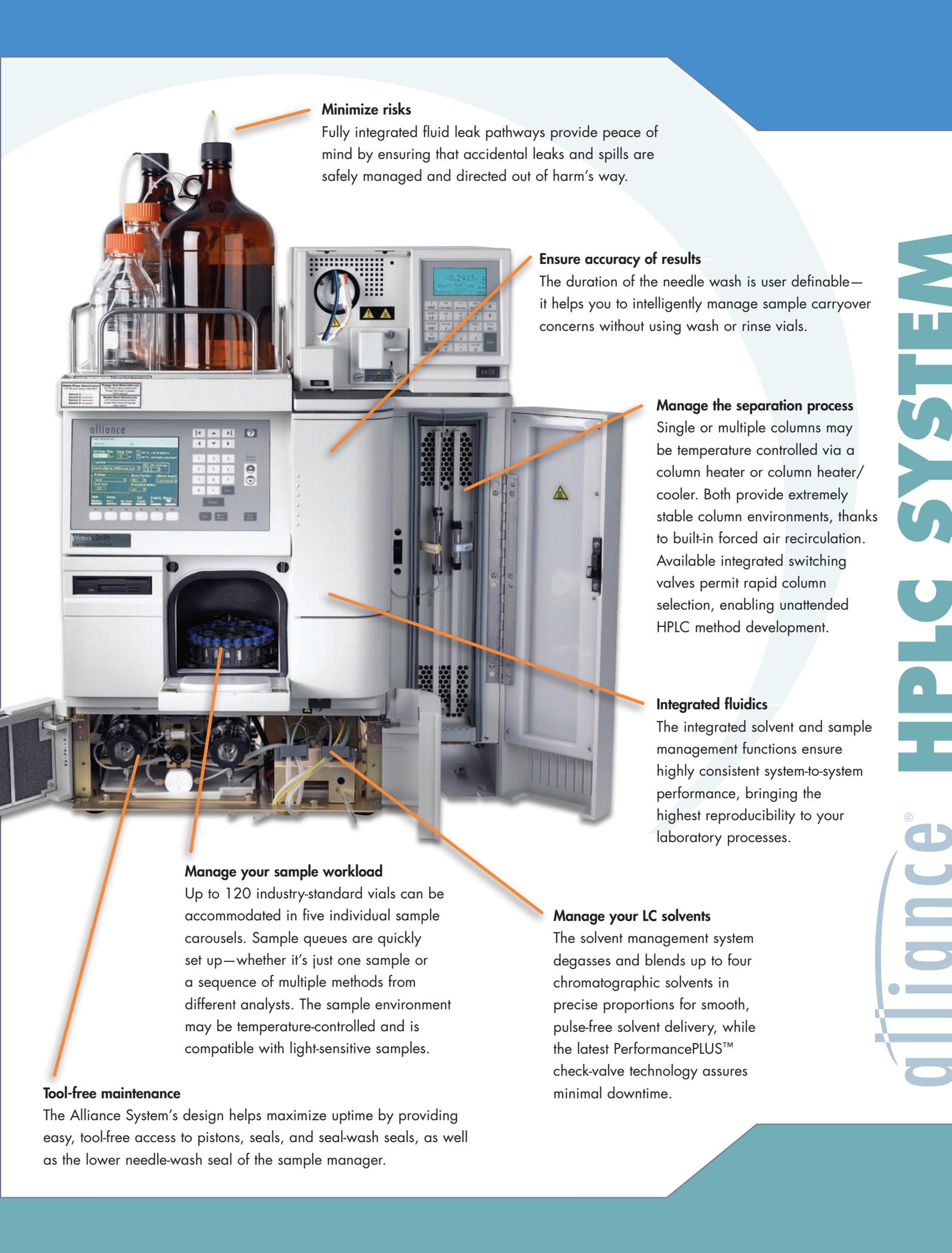
Alliance Systems also collect, analyze, report, and store data through Empower™ Software for LC and LC/MS, or MassLynx™ Software for LC/MS and LC/MS/MS analyses.



Optimizing Methods with the Alliance HPLC System



Reduce time to market with the Alliance System by running your methods faster and using more reliable separations. By taking full advantage of new HPLC chemistries, you can update and optimize your current USP methods. The Waters Automated Method Development System can facilitate this process for you.



Minimize risks

Fully integrated fluid leak pathways provide peace of mind by ensuring that accidental leaks and spills are safely managed and directed out of harm's way.

Ensure accuracy of results

The duration of the needle wash is user definable—it helps you to intelligently manage sample carryover concerns without using wash or rinse vials.

Manage the separation process

Single or multiple columns may be temperature controlled via a column heater or column heater/cooler. Both provide extremely stable column environments, thanks to built-in forced air recirculation. Available integrated switching valves permit rapid column selection, enabling unattended HPLC method development.

Integrated fluidics

The integrated solvent and sample management functions ensure highly consistent system-to-system performance, bringing the highest reproducibility to your laboratory processes.

Manage your sample workload

Up to 120 industry-standard vials can be accommodated in five individual sample carousels. Sample queues are quickly set up—whether it's just one sample or a sequence of multiple methods from different analysts. The sample environment may be temperature-controlled and is compatible with light-sensitive samples.

Manage your LC solvents

The solvent management system degasses and blends up to four chromatographic solvents in precise proportions for smooth, pulse-free solvent delivery, while the latest PerformancePLUS™ check-valve technology assures minimal downtime.

Tool-free maintenance

The Alliance System's design helps maximize uptime by providing easy, tool-free access to pistons, seals, and seal-wash seals, as well as the lower needle-wash seal of the sample manager.

alliance® HPLC SYSTEM

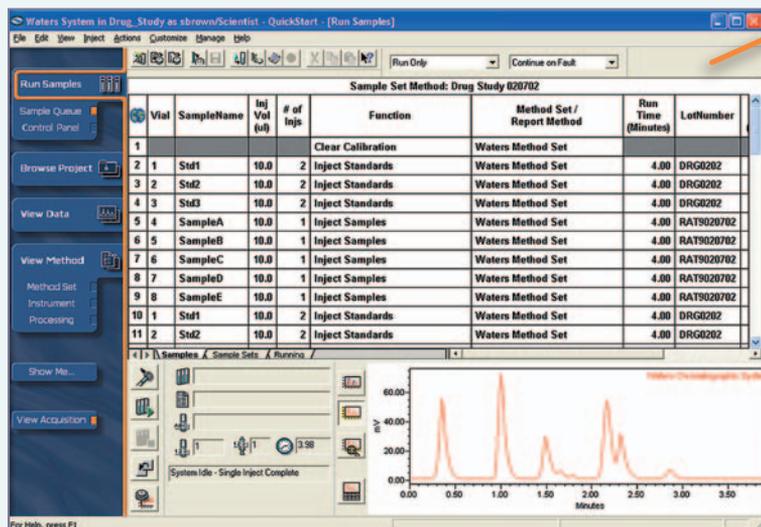
Empower Chromatography Data Software

Empower Software is Waters' market-leading chromatography data software package for advanced data acquisition, management, processing, reporting, and distribution with Alliance HPLC Systems. From the occasional user to the daily power user, Empower Software will increase your productivity in running separations and analyzing results.

Empower Software simplifies how you collect and report chromatography test results by letting you choose the user interface that matches the way you work. Whether you work at a pharmaceutical company concerned about data security, compliance and validation, or you have an industrial application where ease-of-use and high system availability are top priorities, Empower Software can help your lab perform more efficiently.

Empower includes capabilities such as automated archiving, automated method development, customizable data reports, integrated custom calculations, advanced data management (including chemical structures), and an intuitive online answer wizard to help maximize your lab's efficiency.

Empower Software's intuitive interface options help everyone in your lab work better



QuickStart—A single-window access point for data collection, processing, and reporting

Open Access—Gives the walk-up user, who may not be a trained chromatographer, the ability to simply select a method and number of samples, and start a run with the click of a mouse

Pro—For system administrators or power users who need total control and compartmental access to all Empower Software functions

Web—Provides secure, remote access to results through a standard intranet or Internet connection

Consistent, quality data with ConnectionsAQT

ConnectionsAQT is a patented technology that enhances the qualification testing and data management of the Alliance HPLC System, its software, and additional devices.

Using the advanced systems control, data acquisition, and custom reporting features of Empower Software, ConnectionsAQT provides documentation to meet GxP and 21 CFR Part 11 requirements.

Qualification Services can be delivered by trained and certified Waters Compliance Specialists, or Waters can provide you with the workbooks and training necessary to perform your own system and software qualifications.



MassLynx Mass Spectrometry Data Software

MassLynx Software is Waters' high-performance mass spectrometry data software that provides scientists with the ideal data platform for acquiring, analyzing, managing, and distributing mass spectrometry information in conjunction with the Alliance HPLC System.

Built with a sample-centric approach, MassLynx Software offers flexible control over complex instrument configurations, from single quadrupole to hybrid quadrupole time-of-flight mass spectrometers.

With its intelligent instrument control and ability to acquire nominal mass, exact mass, MS/MS and exact mass MS/MS data, MassLynx Software provides the versatility required in today's laboratories.

MassLynx offers sophisticated application managers that are tailored for specific MS analysis, including protein identification, automated quantification, tracking fractions in purification, and metabonomics.

MassLynx Application Managers, for application-specific data acquisition and processing

Chromalynx™—For the rapid detection, identification, and semi-quantitative determination of components in complex mixtures

FractionLynx™—Fraction tracking for compound isolation and purification

MarkerLynx™—Comprehensive data processing for metabonomics and biomarker applications, including multivariate statistical analysis

Metabolynx™—Automates metabolite identification

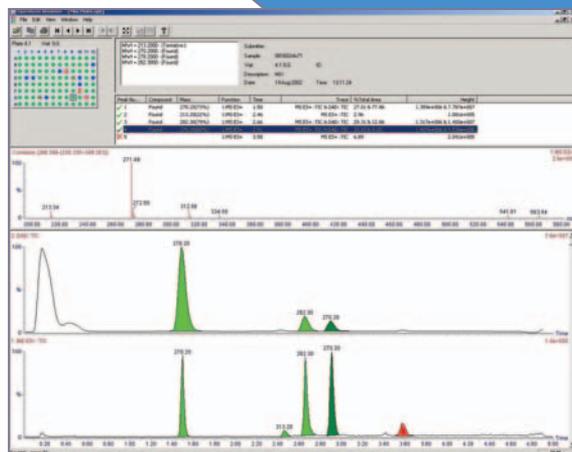
OpenLynx™—Provides walk-up LC/UV, LC/MS and LC/MS/MS capabilities, automated batch processing, and improves your ability to share and search results

ProfileLynx™—Automates data processing for chromatography-based physicochemical property analysis in drug discovery and lead optimization

ProteinLynx™—For relative protein quantification, identification, and characterization

QuanLynx™—For high performance, high throughput quantification, automated MS and MS/MS method development with QuanOptimize™; includes tools for 21 CFR Part 11 compliance

TargetLynx™—For advanced quantification through a full range of automatic quality control checks



MassLynx Software's OpenLynx browser summarizes results in a color-coded map for easy visualization. Chemists can review the data supporting any found/not found/tentative assignment by clicking on the sample location of interest.



Advanced data management solutions with Waters Laboratory Informatics

For a comprehensive information management solution for your laboratory, combine Empower or MassLynx software-driven Alliance HPLC Systems with our informatics software.

The Waters Laboratory Informatics Suite—including eLab Notebook™ and NuGenesis® SDMS (Scientific Data Management System)—brings together the information management solutions you need to compile, search, and share scientific data, and, at the end of the day, make the most knowledgeable decisions possible. These tightly integrated software solutions improve how you use the data generated by your Alliance System for immediate processing, and store and protect information to support future product development—safeguarding intellectual property.

Alliance offers a wide spectrum of HPLC



Liquid Chromatography

Alliance 2695 HPLC System

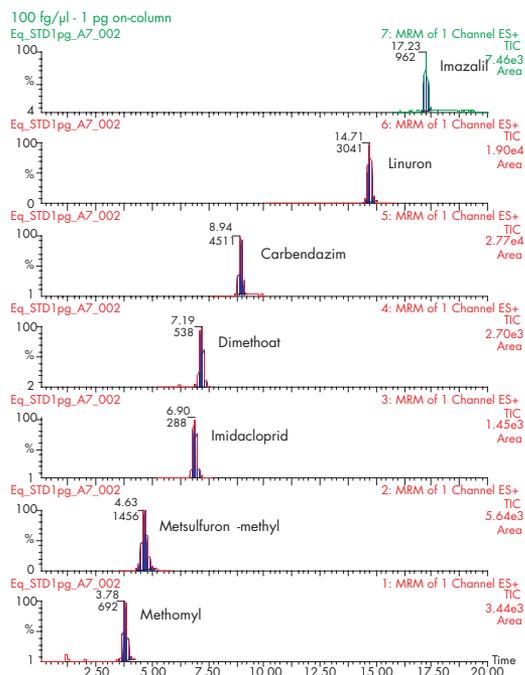
Mobile phase A: MeOH/H₂O (1:4) + 5mM CH₃CO₂NH₄

Mobile phase B: MeOH/H₂O (9:1) + 5mM CH₃CO₂NH₄

Column: Waters Atlantis[®] C₁₈ 2.1 mm id, 100 mm with 3 μm particle size, 30 °C

Flow: 220 μL/min

Gradient from 100% A to 100% B in 15 min



Confirmation with MS—When paired with an Alliance HPLC System, a tandem quadrupole mass spectrometer provides improved resolution. In this example, the Alliance System used with the Quattro Premier XE Mass Spectrometer exceeds regulatory requirements for the identification and quantitation of pesticide residues in wheat samples.

ZQ™—Our versatile single quadrupole mass spectrometer for general mass confirmation.

Leading chemistry products

Being an integral part of a world-renowned organization gives Waters Chemistry products a powerful advantage few others enjoy. Waters has a wide range of columns, Solid-Phase Extraction (SPE) cartridges and 96 well plates, Life Science solutions, and many supplies and accessories.



configurations, guaranteeing unsurpassed



Increase capacity—With the Alliance System's optional solvent tray, you can use higher capacity solvent bottles.



Quattro Premier™ XE—Achieve high performance and low detection limits with our compact, easy-to-use tandem quadrupole mass spectrometer.



LCT Premier™—An *oa*-ToF MS unit with the resolution/sensitivity to identify components in complex mixtures.



HPLC Columns

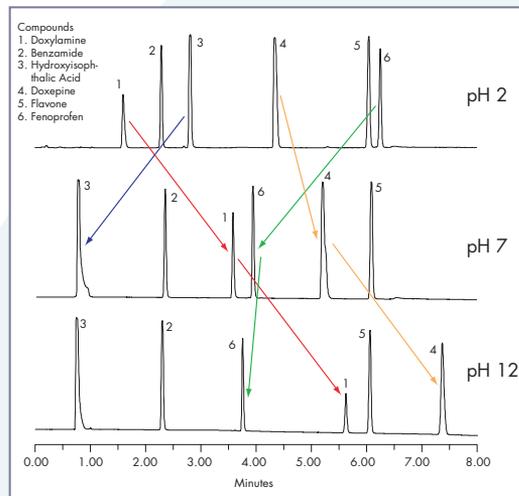
Waters' HPLC column portfolio extends from the XBridge™ columns—our second-generation hybrid particle technology—to SunFire for state-of-the-art silica phases, to Atlantis®, the industry's solution to polar compound retention; as well as established products such as Symmetry® and Intelligent Speed (IS) columns.



versatility and flexibility

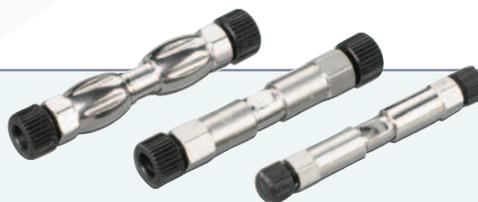


2996 Photodiode Array (PDA) Detector—With chromatographic and spectral sensitivity for analytical and preparative separations.

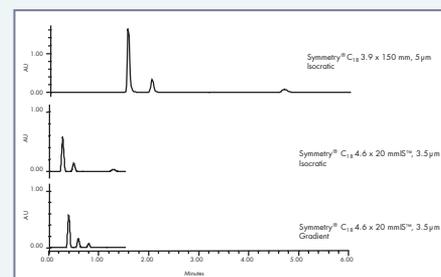


Exploring the extremes—Photodiode Array-based Alliance HPLC Systems deliver no-compromise performance that allows you to get the most out of your column chemistries. Waters XBridge™ columns are unique in their ability to withstand aggressive conditions (even at pH 12) allowing complete method development flexibility, while maintaining the highest efficiency values associated with silica columns.

2487 Dual Wavelength Absorbance Detector—The most sensitive UV/Vis absorbance detector on the market.



Check product efficacy—Reliably complete your dissolution testing for multiple active ingredients in less time with an Alliance Dissolution System combined with Intelligent Speed (IS) columns.

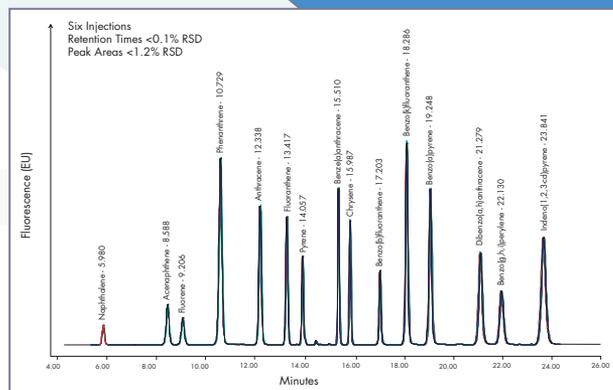




2414 Refractive Index Detector—
With sensitivity, stability for HPLC
and GPC analyses.



**2475 Multi Wavelength
Fluorescence Detector**—Sensitivity
for quantitating low concentrations
of target compounds.



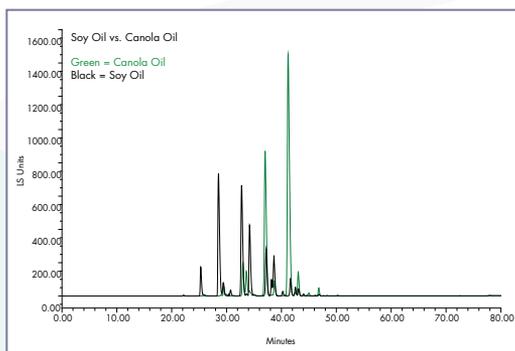
Improving the environment—Confidence in your Polycyclic Aromatic Hydrocarbons (PAH) results will increase after you combine the unwavering gradient reproducibility of the Alliance HPLC with our high-sensitivity, programmable, 3D fluorescence detection systems.



432 Conductivity Detector—
With a five-electrode flow cell
design, reduces noise, enhances
sensitivity, and allows direct and
indirect conductivity detection.



**2420 Evaporative Light
Scattering Detector (ELSD)**—
Can detect molecules that
lack UV/Vis chromophores.



Ensuring quality—Be confident about the quality of your raw materials and finished product. In a single run, you can test for adulterated materials earlier in your process, such as in vegetable oil origin and purity, shown above.



2465 Electrochemical Detector—
With DC, pulse, and scan
operation modes for analyzing
a wide range of compounds.

Sample Preparation

Waters has a comprehensive solution for a wide range of sample preparation challenges, regardless of your preferred sample preparation technique. Our sample preparation products include Oasis®, the modern polymeric SPE products; Sep-Pak®, the traditional silica SPE products; and Sirocco™, the innovative protein precipitation plates.



Sample vials

Waters' line of HPLC vials and septa are certified for cleanliness by both LC and GC testing to ensure that you get your analysis right the first time.

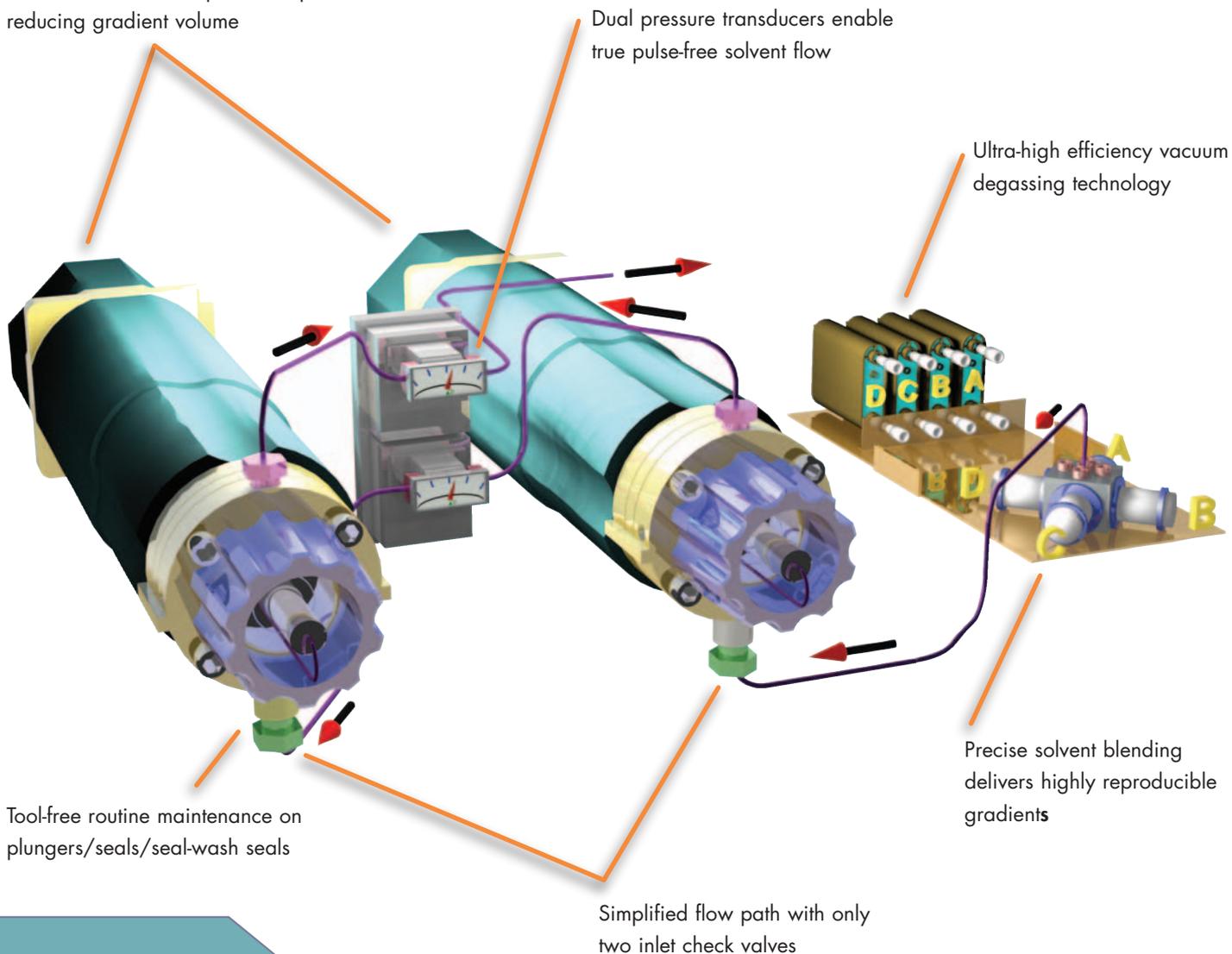
Solvent management

Waters Alliance HPLC Systems employ a simplified fluidic pathway that utilizes a serial flow path with only two check valves—reducing complexity while enhancing overall ruggedness—across a flow range that covers two orders of magnitude.

- **Dependable performance**—Due to a simplified serial flow path with two check valves
- **Automatic solvent compressibility**—Provides worry-free solvent delivery for highly reproducible retention times—with any solvents
- **Fixed gradient volume**—Ensures consistent, predictable chromatography—regardless of system back pressure
- **Flexible flow rate**—Programmable without hardware modifications, across a flow range of 50 microliters to 5 milliliters per minute
- **Improved uptime**—Standard equipment includes an automated, active plunger seal wash

The Alliance HPLC System's solvent manager

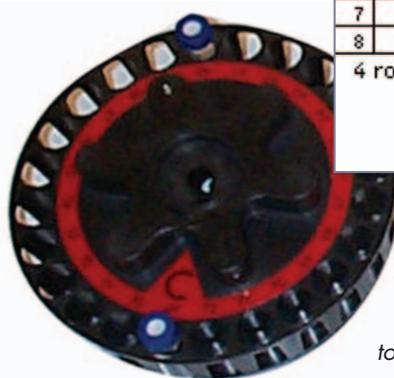
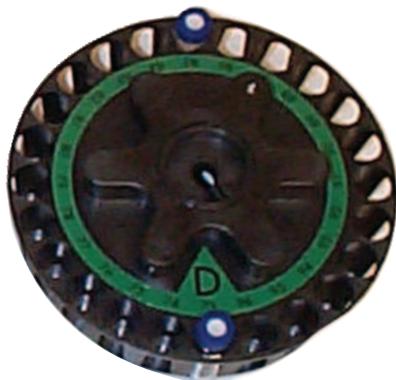
Independently driven pistons achieve smooth solvent flow—without pulse dampeners—reducing gradient volume



Sample management

The Alliance HPLC System's sample management design ensures precise sampling—delivering predictable peak areas, and thus more consistent results—thanks to:

- **Five independent carousels**—Run samples in one carousel while prepping the sequence in the next; new samples/carousels can be added without disturbing the ongoing queue
- **Sampling routines**—For automated reference, peak addition or automated pre-column derivitization procedures
- **Reproducible injections**—Select from one to hundreds of microliters, compatible with any analytical-scale HPLC column chemistry
- **Variable volume injections**—No need to change loops for analytical methods
- **Programmable needle injection**—Adjustable height accommodates various vial geometries (such as different vial bottom thicknesses)
- **Programmable syringe draw-rate**—Optimizes sampling performance with various solvent viscosities
- **Carryover management**—Controlled via a programmable needle wash cycle and an active needle wash solution
- **Consistent sample environment**—Samples are kept at a constant temperature and shielded from exposure to ambient light
- **Simplified routine maintenance**—The seal wash frit and injection syringe are easy to access and change without tools



Sample Set Default Idle

Sample Set	viols	min
1	1-2	22.50
2	5-24	22.50
3		*
4	*	*
5		
6		
7		
8		

Auto Add

List the vials in the desired order drawn:

viol	μL	Delay:
1 3	15.0	3.00 min
2 SAMPLE	10.0	
3 4	50.0	
4		

4 rows total [single vial, 3.00 min delay] (modified)

Flexible sample management—Built-in functions, such as “Auto Add,” allow users to make sample injections that are composed of aliquots from multiple vials, one of which is the sample vial. A delay time may be preset to allow the sample to passively mix prior to injection.

Support at your fingertips

The Alliance Interactive System Support CD ships with every Alliance HPLC System and contains basic troubleshooting and maintenance information to help keep your Alliance System running at its best.

The CD contains 70 minutes of video clips showing you step-by-step and easy-to-follow maintenance procedures, detailed troubleshooting information, tools to help you document your methods or system set-up, guidelines for optimum performance, and links to the Waters website for fast access to additional information, support, and training courses for the Alliance Systems.



Waters Global Services

To achieve your greatest success, every aspect of your operation needs to work together. Waters Global Services creates programs that will optimize your entire laboratory and information management processes. We offer a comprehensive portfolio of services to help your laboratories perform at their best.

- Instrument Services extend and enhance the standard limited warranty you receive when you buy a Waters instrument, delivering the value you need to avoid costly and time-consuming system downtime.
- Software Services include enterprise implementation and validation services, training, and support programs for Waters Laboratory Informatics software products.
- Professional Services provide you with programs that improve laboratory productivity, including asset management and relocation services.
- Connections Compliance Services provide you with timely and cost-effective solutions for your regulatory compliance challenges. Use Waters Compliance Services to verify proper equipment operation for cGMP/GLP compliance, significantly reducing operating costs.
- Educational Services provides extensive LC, MS, and software training and education at your site, at our corporate headquarters or at our local offices around the world.

Waters Global Services' worldwide service and support organization is staffed by experts in 94 offices located in more than 50 countries. Our technical experts are available in person, on the phone, or at www.waters.com to answer questions and provide you with service, support and information.

Waters

alliance®

For Complete Confidence

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