



Agilent InfinityLab LC Series

# EFFICIENT LC SOLUTIONS FOR ANY APPLICATION AND BUDGET



## EFFICIENT LC SOLUTIONS – FOR ANY APPLICATION AND BUDGET

From routine analysis to cutting-edge research, the Agilent InfinityLab LC Series offers the broadest portfolio of liquid chromatography solutions, helping you to achieve highest operational efficiency while keeping within your budget.

### Complete solutions for liquid chromatography

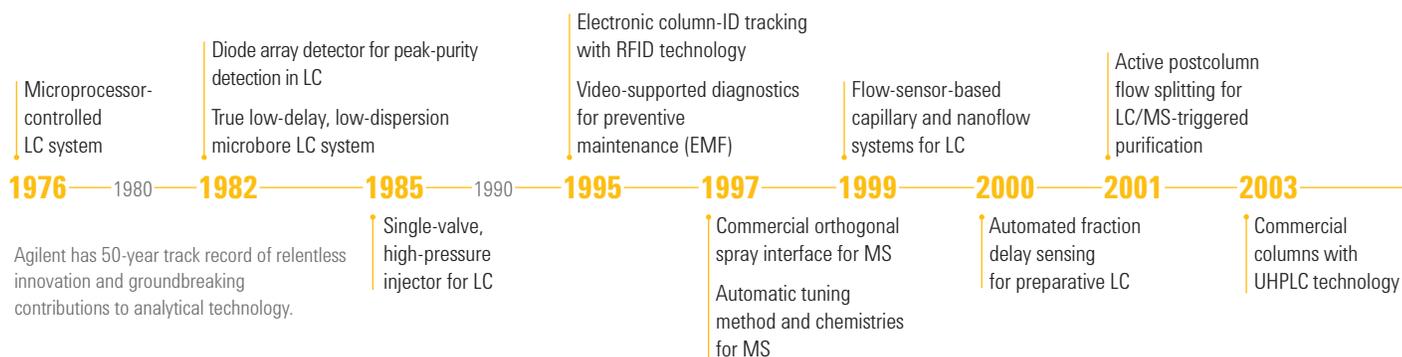
InfinityLab LC Series instruments are perfectly matched with InfinityLab columns and supplies so that you can rest assured that all components work together in perfect harmony, supporting your efforts to optimize your liquid chromatography workflows.

Controlled through Agilent OpenLAB software and supported with Agilent CrossLab instrument and enterprise service plans, Agilent provides complete solutions that make a real difference to your lab's operational efficiency.

### Highest operational efficiency for your lab

At Agilent, we are passionate about helping you to solve your liquid chromatography challenges. By focusing on the three facets of efficiency, our solutions help you succeed.

- **Analytical efficiency** – Over 50 years of innovation and development of high-quality instrumentation ensures the best separation and detector performance for your application
- **Instrument efficiency** – Superior single-vendor solutions provide a new level of usability for highest flexibility, throughput and safety
- **Laboratory efficiency** – Future-proof instrumentation combines with versatile software and services for nondisruptive operation and highest investment protection





## 1220 Infinity II LC

### Affordable efficiency

The 1220 Infinity II LC is an affordable, high-quality, integrated system that puts you on the fast track to highest efficiency — for maximum return on investment.



## 1260 Infinity II LC

### Everyday efficiency

The 1260 Infinity II LC is the trusted platform with the broadest choice of instrumentation, giving you the best operational efficiency to take you to the next level of confidence — every day in every way.



## 1290 Infinity II LC

### The benchmark in efficiency

The 1290 Infinity II LC embodies the next generation of liquid chromatography instrumentation, setting the benchmark in ultrahigh performance to deliver the maximum in efficiency.

On-chip separation with HPLC-Chip/MS technology

80 Hz technology for accurate UHPLC-UV detection

Columns with Poroshell technology for small molecule separations

High dynamic range DAD solution for 30x higher UV sensitivity

Dual-needle technology in LC autosampler for highest throughput

2004 — 2005 — 2006 — 2007 — 2008 — 2009 — 2010 — 2011 — 2012 — 2013 — 2014 — 2015 — 2017 — Future proof

Secure RF tags on LC detector flow cells and lamps

High-efficiency solvent mixer with multilayer technology  
Active-damping technology for 10x more precise solvent delivery  
Noncoated, optofluidic waveguides for 10x higher UV sensitivity

Multiple heart-cutting 2D-LC solution for peak capacities >1000

Feed injection for SFC sampling

## THE SAFE INVESTMENT WITH SUSTAINABLE RETURNS

Purchase an InfinityLab LC Series instrument from Agilent and you can be confident that you have made the safest possible investment. Seamless integration of column technology, instrumentation and software ensure utmost productivity.

### Future-proof methods

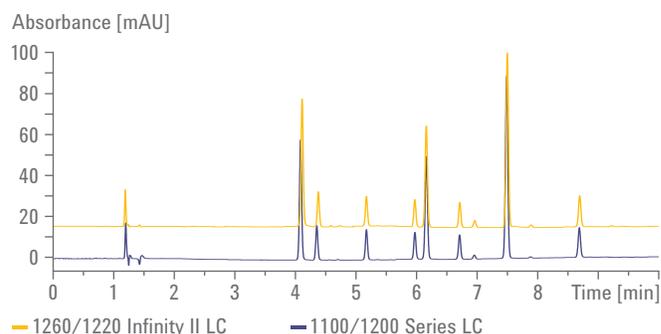
The InfinityLab LC Series facilitates seamless transfer of existing or future methods. Whether you developed your methods on earlier 1100 or 1200 Series systems, full method compatibility means you will be running your samples with no adjustments to conditions. The 1290 Infinity II and 1260 Infinity II Prime LC even allow you to transfer methods developed on third-party LCs.

### Future-proof investment

The InfinityLab LC Series provides a common platform on which you can build your own solution. It is also available as preconfigured solutions for many dedicated applications. Optimize your chromatography with a 1290 Infinity II Method Development System and then simply transfer your methods to a routine analysis environment with Agilent's unique Intelligent System Emulation Technology (ISET) – with no disruption.

### Future-proof data confidence

Agilent detection systems provide 10-times higher sensitivity than conventional diode array detectors and a 30-times wider linear range. With a broad range of options available including diode array and multiwavelength UV detection, evaporative light scattering, refractive index, and mass spectrometry detection capabilities, you can easily stay ahead of your customer's requirements.



The InfinityLab LC Series is 100 % compatible with your current methods – run your samples with no adjustments to conditions.

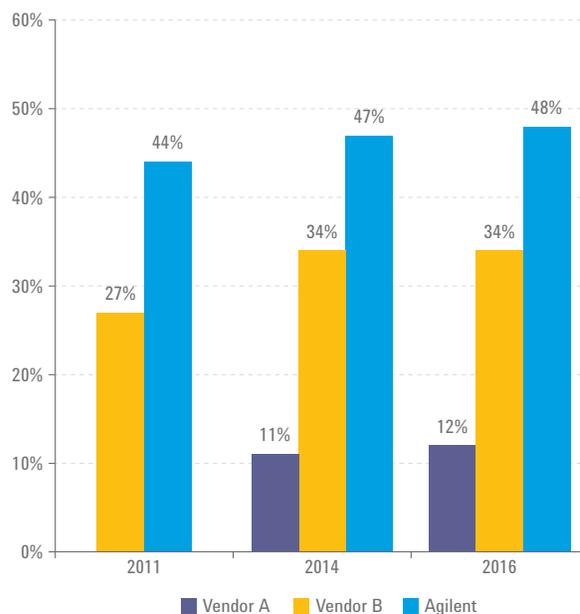
## 50 YEARS OF TECHNOLOGY INNOVATIONS

Tens of thousands of laboratories worldwide rely on Agilent LC equipment to provide the high-quality results they need, run after run and day after day. Over 150,000 LC systems are hard at work around the globe, delivering unmatched performance, productivity, and reliability.

### Reliability for highest uptime

**“It just never fails.”** That’s how users perceive the world’s top-selling LCs from Agilent. Every system is packed with the highest quality parts for highest uptime and longest maintenance intervals. Further, sophisticated built-in diagnostic and maintenance tools ensure reliable and secure operation:

- Complete leak control in every module
- Modular intelligence through CAN networking
- Unique radio-frequency tagging on detector lamps, flow cells, columns, and valve heads
- Easy front access to all user-maintainable parts
- Single LAN/PC connection
- Screw-less electronic board mounting
- Sophisticated diagnostics for maximum uptime



Agilent selected as vendor with most reliable LC instrumentation – Survey conducted through LCGC.

# THE BENCHMARK IN EFFICIENCY

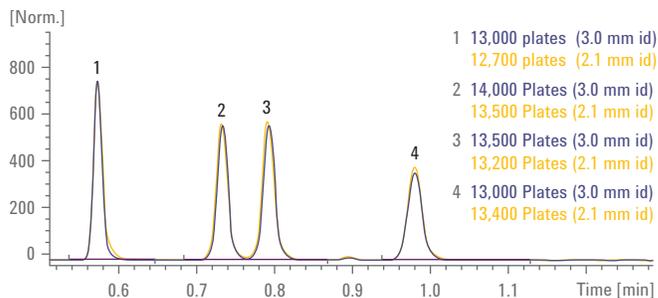
The 1290 Infinity II LC embodies the next generation of liquid chromatography instrumentation, setting the benchmark in ultrahigh performance to deliver the maximum in analytical, instrument, and laboratory efficiency.



## Maximum analytical efficiency

The 1290 Infinity II LC achieves unmatched separation and detection performance, delivering data of the highest quality – for ultimate confidence in your results.

- Highest retention time precision through precise delivery of solvent flow and composition – for reliable peak identification
- More chromatographic resolution through power range of 1300 bar at 2 mL/min, and built-in lowest dispersion
- Ultralow carryover of less than 9 ppm for uncompromised data quality
- Unique detection capabilities with data rates up to 240 Hz and noise levels typically less than  $\pm 0.6 \mu\text{AU}/\text{cm}$
- Simple upgrade to the most flexible and easy-to-use 2D-LC solution for multiple heart-cutting or comprehensive analysis
- Ideal LC system for mass spectrometry with the highest performance, maximum throughput, and lowest carryover



Thanks to lowest extracolumn volume the 1290 Infinity II LC achieves highest chromatographic efficiency in terms of plate numbers for both 2.1 mm and larger inner diameter columns.

## Maximum instrument efficiency

The 1290 Infinity II LC combines highest sample capacity with fastest injection cycles and new levels of usability to help you achieve highest throughput regardless of your application.

- Holding up to 6144 samples, the Multisampler's dual-needle design reduces injection cycle times to mere seconds
- The Multicolumn Thermostat gives you easy, valve-based access to up to eight columns in two different temperature zones with individual InfinityLab Quick Connect heat exchangers
- InfinityLab Quick Connect column fittings with dead-volume-free connections make column exchange an easy task

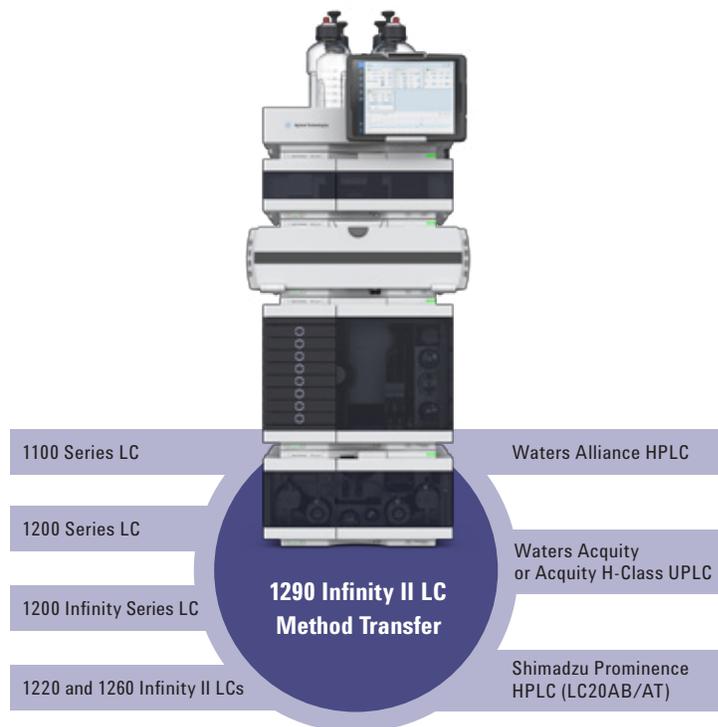


The 1290 Infinity II Multisampler – fast injection cycles and high capacity within the footprint of a standard Agilent LC stack

## Maximum laboratory efficiency

The 1290 Infinity II LC integrates seamlessly in your current laboratory and facilitates smooth method transfer from legacy equipment – for a nondisruptive transition to highest productivity and lowest cost of ownership.

- Smooth transfer of methods regardless of origin through Agilent's Intelligent System Emulation Technology (ISET), minimizing instrument-related costs, achieving higher productivity for method development, and accelerating instrument-to-instrument method transfer
- Seamless integration in non-Agilent chromatography data systems through Agilent's Instrument Control Framework (ICF), giving access to advanced functionality when controlled through third-party software



With Agilent's Intelligent System Emulation Technology you can run legacy methods while taking full advantage of the UHPLC speed, resolution, and sensitivity of the 1290 Infinity II LC.

## EVERYDAY EFFICIENCY IN EVERY WAY

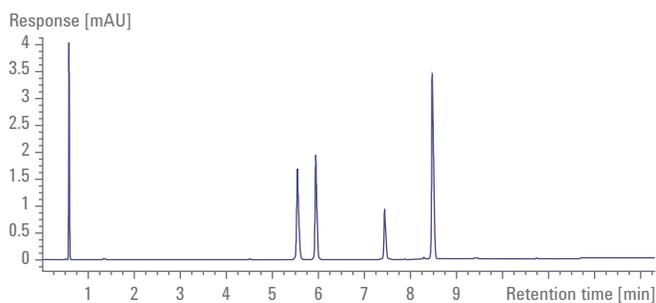
The 1260 Infinity II LC is the trusted platform with the broadest choice of instrumentation, giving you the best operational efficiency to take you to the next level of confidence – every day in every way.



### Everyday analytical efficiency

The 1260 Infinity II LC encompasses a broad range of reliable instrumentation that combines with latest column technologies and advanced supplies to guarantee robust separation and detection performance – for highest confidence in your daily results.

- Access to up to four solvents gives you a free choice of method – for utmost flexibility
- Robust materials withstand the most demanding applications – for minimum downtime and lower operating costs
- Perfectly matched with InfinityLab columns and supplies – for guaranteed separation and detection performance



The 1260 Infinity II LC delivers robust separation and detection performance. In this example, 10 replicate analyses using an InfinityLab Poroshell 120 EC-C18, 3.0 x 150 mm, 2.7  $\mu$ m column achieve an RT RSD of 0.05 % at 5.53 min and 0.03 % at 8.46 min.

## Everyday instrument efficiency

The 1260 Infinity II LC combines easy column handling through direct, valve-based access with superior sample logistics – from sample submission to data analysis – to ensure fast turnaround times and highest instrument utilization.

- The 1260 Infinity II Flexible Pump offers the driver-based feature BlendAssist to deliver automatic buffer or additive blending accurately without manual interaction
- Available as an option for the 1260 Infinity II Multisampler, multiwash capability helps you achieve ultralow carryover less than 9 ppm
- The 1260 Infinity II Multicolumn Thermostat gives you easy access to up to four columns through an InfinityLab Quick Change valve
- Nonremoveable, single-use tags for all four columns record identity and full usage history, ensuring compliance with regulatory guidelines

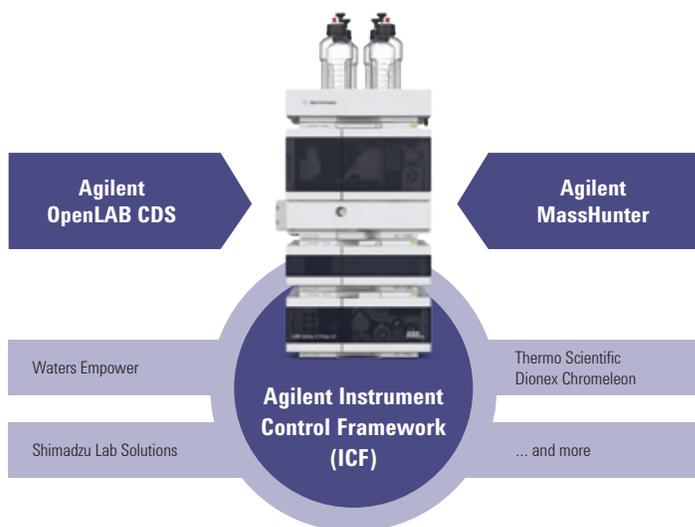


An easy-to-access compartment facilitates fast and straightforward column exchange with InfinityLab Quick Connect column fittings.

## Everyday laboratory efficiency

Seamless method transfer and stepwise upgrade paths facilitate risk-free integration in your laboratory's current infrastructure – for nondisruptive transition to highest performance within the confines of your budget.

- Direct transfer of your current 1100 and 1200 Series conventional LC methods, and even methods from other vendor LCs, with ISET using the 1260 Infinity II Flexible Pump – for nonstop efficiency and productivity
- Stepwise upgrade with full module compatibility – for smooth migration with full investment protection
- Full-feature control through OpenLAB CDS or MassHunter software – for future-proof access to highest performance
- Commitment to open systems through Agilent Instrument Control Framework (ICF) – for faster and easier integration in third-party CDS or workstation software



All InfinityLab LC Series systems run best when controlled through OpenLAB CDS or MassHunter software. Use ICF for optimum control through third-party data systems and workstations.

## AFFORDABLE EFFICIENCY

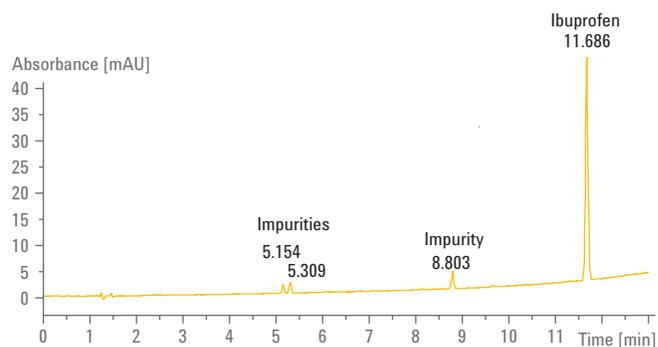
Matching the needs of small to medium-sized laboratories, the 1220 Infinity II LC is an affordable, high-quality, integrated system that puts you on the fast track to highest efficiency – for maximum return on investment.



### Affordable analytical efficiency

The 1220 Infinity II LC delivers run-after-run, day-after-day reproducibility – for highest confidence in your results. Setting new standards for compactness and ease of operation, the 1220 Infinity II LC leverages latest InfinityLab LC Series technology.

- Solvent delivery up to 600 bar supports a wide choice of columns as well as smaller-sized particles
- Variable wavelength UV detection at up to 80 Hz achieves lower detection limits
- Diode array detection for sensitive UV analysis and spectra-supported compound identification



The 1220 Infinity II LC is ideal for the routine analysis of pharmaceutical preparations such as the quantification of the active ingredient ibuprofen and three earlier-eluting impurities.

## Affordable instrument efficiency

The 1220 Infinity II LC is a factory-configured and tested system that allows you to start analyzing your samples right after installation – for immediate productivity.

- Integrated, dual-channel degassing for trouble-free solvent delivery
- Autosampler with 100 positions for 2 mL vials for reproducible and convenient sample throughput
- Optional continuous seal wash prevents issues with buffers of high concentration

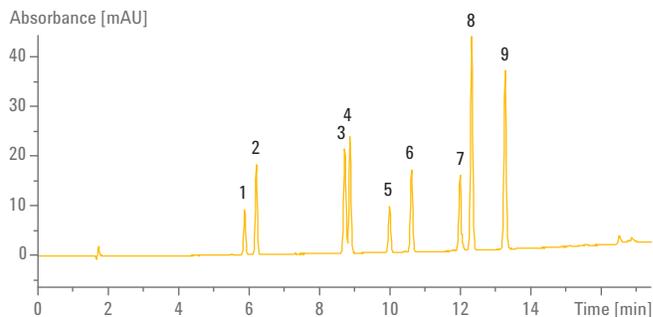


Optimized walk-up solution for simplified and easy access in a multiuser environment.

## Affordable laboratory efficiency

The 1220 Infinity II LC is a quality instrument that is robust, highly reliable, and compatible with all InfinityLab LC Series detectors – for easy upgrade to meet future demands.

- Seamless integration in any laboratory enables fast and secure system startup
- Options for pumps, injectors and a wide range of detectors offer a flexible choice to solve any application challenge
- Ideal entry point to high-efficiency LC through lowest capital investment
- Solid and reliable hardware and electronics based on 1260 Infinity II architecture and module design



1 Metamitron	4 Simazine	7 Propazine
2 Chloridazone	5 Prometryn	8 Terbutylazine
3 Cyanazine	6 Diuron	9 Chlortoluron

Trace analysis of pesticide residues, showing a limit of detection (LOD) of less than 50 pg. The relative standard deviation is less than 0.08 % for retention times and less than 0.5 % for areas.

## MAXIMIZING EFFICIENCY WITH COMPLETE SOLUTIONS

The flexibility of the InfinityLab LC Series allows Agilent to offer the broadest portfolio of LC solutions. Choose a standard LC or configure a complete solution to meet your specific application requirements.

### Complete application and workflow solutions for maximum efficiency

- **2D-LC solution** – Multiple heart-cutting or comprehensive analysis
- **Method development and multimethod applications** – Automatic access to up to 8 columns and 26 solvents
- **Bio-inert LC solutions** – Highest confidence in analysis of biomolecules and compounds requiring inert conditions
- **High-throughput, high-capacity LC/MS solutions** – Low delay volume for high-speed separations
- **Low-flow LC solutions** – Electronic flow control for unprecedented flow stability
- **LC purification solutions** – Purification of nanogram to gram quantities of samples
- **SFC – Super critical fluid chromatography** – New standards for ease-of-use, performance, and reliability
- **GPC/SEC analysis** – High-accuracy molecular weight determinations

### LC solutions perfectly in tune with Agilent mass spectrometers and mass selective detectors

- **InfinityLab LC/MSD Series** – Industry leading robustness and data quality in an efficient space-saving benchtop and stackable design
- **6200 Series Accurate-Mass Time-of-Flight (TOF) LC/MS** – Unmatched speed and performance in a compact bench-top instrument
- **6400 Series Triple Quadrupole LC/MS** – Greater sensitivity, productivity, and value than ever before, and now the space-saving Ultivo Triple Quadrupole LC/MS has all the power of the big guys in a 70 % smaller footprint
- **6500 Series Accurate-Mass Quadrupole Time-of-Flight (Q-TOF) LC/MS** – Unmatched combination of mass accuracy, mass resolution, sensitivity, in-spectrum dynamic range, and speed



## ACCURATE RESULTS EFFICIENTLY AND CONFIDENTLY

Maximize system performance and reliability for all your separation needs by combining your InfinityLab LC Series system with ZORBAX and Poroshell columns and InfinityLab LC supplies for the high-quality results you need and expect, time after time.

### InfinityLab column choices for efficiency and confidence

InfinityLab Poroshell 120 columns provide fast, rugged, high-resolution separations. Within the InfinityLab column family, currently 18 bonded phases are available for flexible development and straightforward transfer of methods. Columns are available with a permanently fitted column ID tag that is preprogrammed with details of phase and dimensions. When in use, you can confirm the type of column installed as well as track the column usage history, providing you with added confidence and security in your routine analysis.



Agilent InfinityLab LC columns and supplies allow you to address the challenges of almost any application – and get accurate results quickly and confidently.

### InfinityLab supplies for easier usability and higher efficiency

Agilent InfinityLab LC supplies provide the links in your InfinityLab LC Series instruments and solutions to achieve the highest performance, operational efficiency and lab safety. InfinityLab Quick Connect fittings along with InfinityLab Quick Connect heat exchangers and optimized capillaries maximize separation efficiency.

High-intensity lamps and Max-Light cartridge cells with RFID are automatically recognized by InfinityLab LC systems to provide critical information and traceability for added confidence. Lab operations are improved with ergonomic solvent bottles, InfinityLab Stay Safe caps that protect you from harmful solvent vapors, and InfinityLab Flex Benches that allow you to easily maneuver your LC for maintenance or MS analysis.

## SOFTWARE TO ENHANCE YOUR LAB'S EFFICIENCY

Agilent offers software and informatics solutions to achieve all the benefits of the InfinityLab LC Series performance levels. Agilent OpenLAB CDS gives you the most comprehensive and fully traceable management of any InfinityLab LC Series system.

### Reliable, intuitive software for Agilent InfinityLab LC Series Instruments

#### Quick, reliable answers

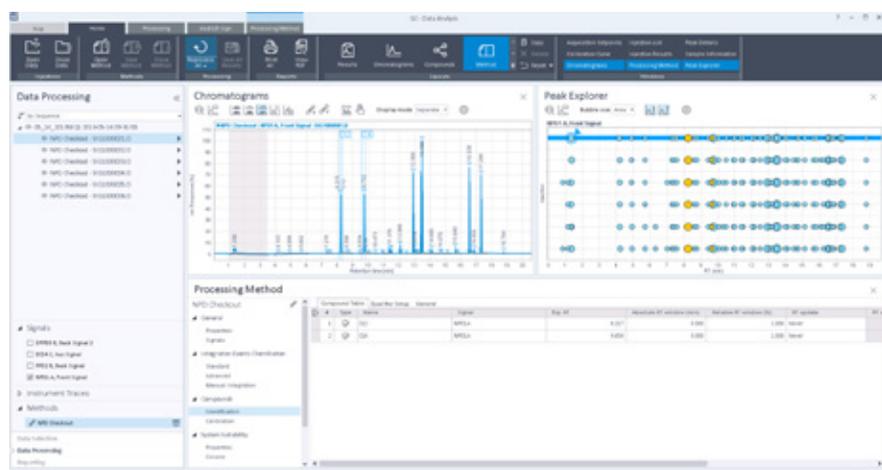
Simplify data analysis with visual tools like Peak Explorer that help you quickly identify outliers and artifacts. Speed up the process and review of large data sets with a fast data processing engine and automated calculations.

#### Consistent, efficient reporting

Dependably produce reports that are accurate and on time, every time. Customizable templates and built-in custom calculation capabilities eliminate the need to export results into other software such as Microsoft Excel.

#### Data integrity

Agilent takes compliance seriously. That's why OpenLAB CDS includes extensive technical controls to ensure data security and data integrity—minimizing the need for procedural controls and preventing the deletion or manipulation of data.



Peak Explorer helps you quickly identify samples with missing or extra peaks.

## FROM INSIGHT TO OUTCOME

Maximize performance and reliability by combining your InfinityLab LC Series system with Agilent CrossLab – our coordinated method of delivering services and support that dramatically improve laboratory efficiency and productivity.

### Get the most from your investment

Agilent offers comprehensive instrument and enterprise services as well as a full curriculum of Agilent University learning solutions to maximize uptime, simplify administration and protect the investments in your laboratory. Our service plans protect your laboratory against the unknown, for dependable efficiency, fewer workflow disruptions, and optimized laboratory productivity. All service plans include Agilent Remote Advisor, a powerful set of proactive, real-time support and reporting features, delivered by knowledgeable Agilent experts.

Agilent  
**CrossLab**

From Insight to Outcome

### An award-winning partner with service you can trust

When you choose Agilent, you invest with confidence. We do everything to uphold that level of trust. It starts with our Agilent Value Promise and continues with our Agilent Service Guarantee. You will always have the service and support you need to keep your lab running at peak performance.



#### Agilent Value Promise

Guarantees at least 10 years of use from your instrument, or we will credit you with the residual value towards a replacement model.



#### Agilent Service Guarantee

Our promise to you—if we cannot fix an Agilent instrument\* covered by an Agilent agreement, we'll replace it for free.

\*For Agilent systems only



#### SelectScience® Winner

Agilent is the 2015 and 2016 recipient of the Customer Service of the Year award, honoring lab products and manufacturers that are making a difference in the industry.

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