



# 1220

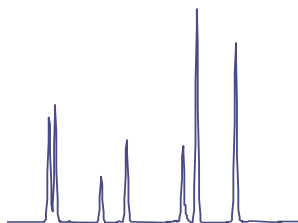
Agilent 1220 Infinity II LC

**GET ON THE FAST TRACK TO HIGHEST  
EFFICIENCY – AT A PRICE YOU CAN AFFORD**



## AFFORDABLE EFFICIENCY WITH CONFIDENCE

Take a close look at the Agilent 1220 Infinity II LC and you'll find everything you need to get you on the fast track to highest efficiency and result confidence – all in a high-quality, compact unit at a price you can afford – for maximum return on investment.



### AFFORDABLE ANALYTICAL EFFICIENCY

Leveraging proven Agilent LC technology to deliver run-after-run, day-after-day reproducibility for highest confidence in your results.



### AFFORDABLE INSTRUMENT EFFICIENCY

Factory configured and tested to get your lab on the fast track to robust and reliable sample analysis for immediate productivity.



### AFFORDABLE LABORATORY EFFICIENCY

Robust and highly reliable LC quality compatible with all InfinityLab LC Series detectors for full application flexibility and easy upgrade to meet future demands.

**AGILENT INFINITYLAB –**

# A PERFECT MATCH

The Agilent InfinityLab family of instruments, columns and supplies are matched to work seamlessly together, alongside Agilent OpenLAB software and Agilent CrossLab services, to provide highest efficiency in laboratory workflows. Agilent InfinityLab columns and supplies provide the links to the Agilent InfinityLab LC Series to optimize performance for highest efficiency and laboratory safety.



AFFORDABLE ANALYTICAL EFFICIENCY

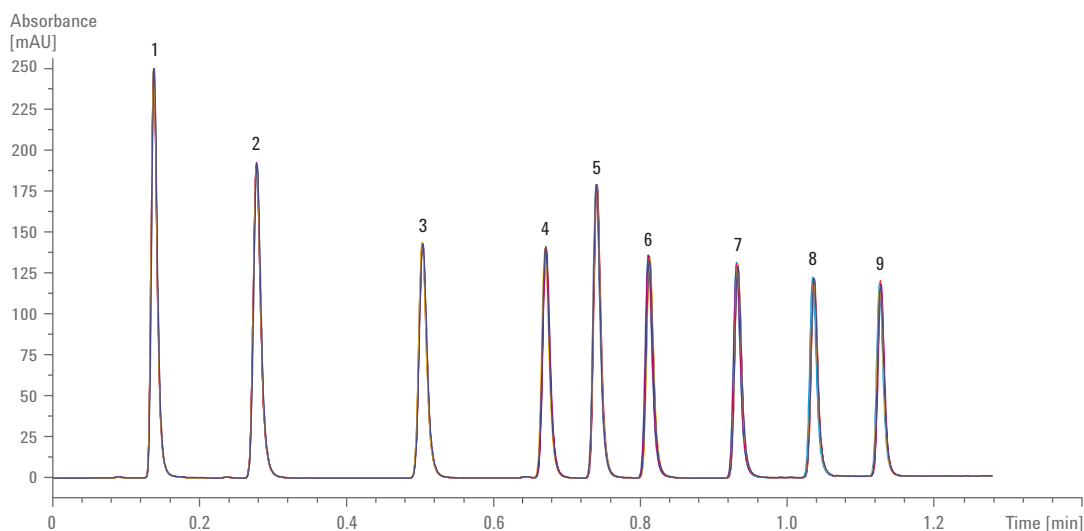
## RUN-AFTER-RUN REPRODUCIBILITY FOR HIGHEST CONFIDENCE IN YOUR RESULTS

Leveraging proven Agilent LC technology, the 1220 Infinity II LC delivers run-after-run, day-after-day reproducibility – for highest confidence in your results.

### Precise and reliable solvent delivery

The 1220 Infinity II LC pump ensures stable, virtually pulse-free solvent flow up to 10 mL/min. A pressure range up to 600 bar even enables the use of columns with smaller particles for better resolution and faster run times. Choose from different configurations, including either an isocratic or a gradient pump with integrated dual-channel degassing unit.

With low internal volumes of 1.5 mL per channel, the degassing unit creates continuous vacuum, eliminating baseline fluctuations and shortening equilibration times. An optional automated solvent-selection valve for the gradient pump combines two-out-of-four solvents for gradient formation or for column flushing with different solvents.



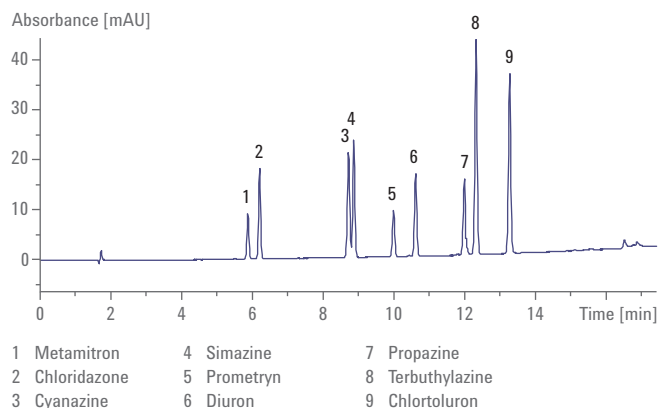
Peak	% RSD RT
1	0.149
2	0.096
3	0.070
4	0.090
5	0.060
6	0.106
7	0.097
8	0.073
9	0.059

Six overlaid consecutive analyses of a standard sample using a Poroshell 120 EC-18, 3 x 50 mm, 2.7  $\mu$ m column with 1  $\mu$ L injection volume, demonstrating a fast gradient run at 563 bar with retention time precision less than 0.15 % RSD.

## Fast, reproducible and robust detection

Featuring optimized optics for high sensitivity, low baseline drift, wide linear range and 80 Hz data rate, the variable wavelength detector not only lowers your detection limits but also expands your application capabilities. Choose from a range of flow cells with different volumes and path lengths to match the demands of your application.

Capable of acquiring spectral data, the diode array detector gives you more confidence in the qualification and quantification of impurities – even at trace levels. Low-noise electronics and the detector's 80 Hz data rate guarantee highest sensitivity for conventional or ultrafast LC. Selection of up to 8 signal wavelengths provides for increased selectivity for complex samples. Flow cells with 2, 5 or 13  $\mu\text{L}$  volume are available to match your application's needs.



Trace analysis with variable wavelength detector 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.

## Rugged, high-resolution separations

InfinityLab Poroshell 120 columns provide fast, rugged, high-resolution separations at pressures up to 600 bar and perform best with the 1220 Infinity II LC. Within our InfinityLab column family, currently 12 bonded phases are available for flexible development and straightforward transfer of methods (see page 4 for an application example of our InfinityLab Poroshell 120 columns). InfinityLab Quick Connect fittings provide robust, leak-tight connections for every user through innovative spring-loaded design with zero dead volumes – even after hundreds of reconnections.



InfinityLab columns and supplies match perfectly with our InfinityLab LC Series systems and solutions, taking advantage of the latest innovations to combine ease of use with robust performance, for highest confidence in your daily results.

AFFORDABLE INSTRUMENT EFFICIENCY

## CONFIGURED, TESTED AND READY-TO-RUN FROM DAY ONE

Every system is configured and tested at our factory to get your lab on the fast track to robust and reliable sample analysis – for immediate productivity.

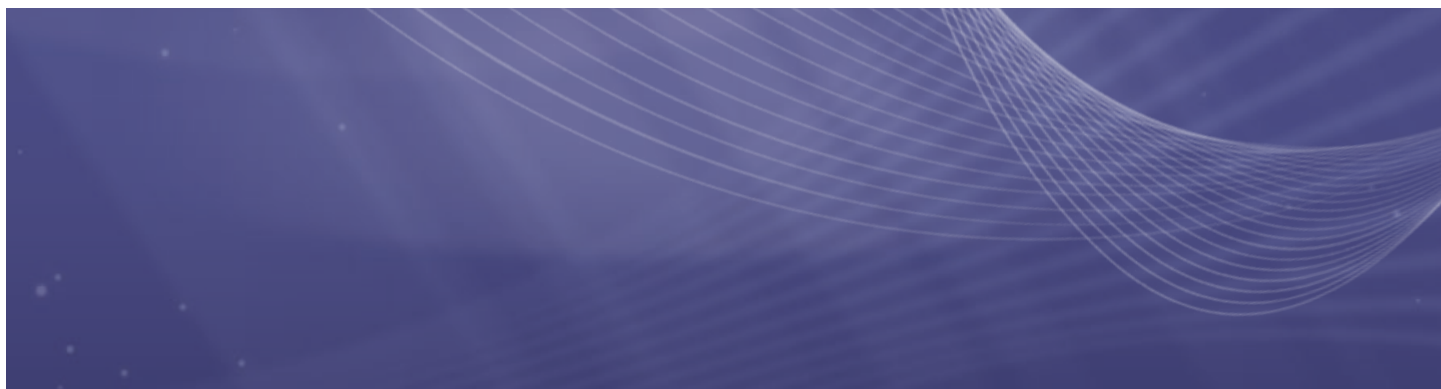


### Reliable and straightforward sample handling and injection

The integrated autosampler is designed for reliability, safety and easy maintenance, and enables injections from 0.1 to 100  $\mu$ L. The flow-through design ensures that there is no loss of sample; the entire sample drawn from the vial is injected. The standard full-size sample tray holds up to 100  $\times$  2 mL vials. Half-size trays are also available, holding 40  $\times$  2 mL or 15  $\times$  6 mL vials. Choose any configuration of half- or full-size trays to meet your needs for sample handling and throughput.

The easy-to-use manual injector includes a durable injection valve that features ceramic rotor faces for highest reliability and uptime. Supplied with a standard 20  $\mu$ L sample loop, injection volumes up to 5 mL are possible with optional loops.

With the flexibility to manage different sample containers, the autosampler ensures reliable and reproducible injection of your samples.



Isocratic Configuration	Gradient Configurations		
Isocratic Pump	Gradient Pump	Gradient Pump	Gradient Pump
Manual Injector	Manual Injector	Autosampler	Autosampler
...	...	Column Oven	Column Oven
Variable Wavelength Detector	Variable Wavelength Detector	Variable Wavelength Detector	Diode Array Detector

### Integrated, robust and easy to use for easy entry into high-efficiency LC

Choose from four integrated “all-in-one” configurations that include all the components you need to meet the requirements of your LC workflows. To increase instrument efficiency or meet future demands, a wide variety of upgrade paths are available, please see page 8 for more information.



Peak Explorer helps you uncover and resolve problems faster. Find anomalies at a glance – even among hundreds of chromatograms and peaks.

### Efficient control, acquisition and reporting

Agilent OpenLAB CDS software gives you the most comprehensive and fully traceable management of your 1220 Infinity II LC, including instrument control, result generation, data management and advanced reporting. With OpenLAB CDS, you can visualize data trends quickly, capturing at-a-glance artifacts or outliers such as missing or additional peaks, retention time shifts, or integration problems. Extensive built-in calculations provide results directly in data analysis, without the need to generate a full report and eliminating errors caused by data export or manual transcription. Confirmation and documentation of audit-trail reviews are part of the electronic record within the data system, making it an easy task to comply with the latest FDA regulatory requirements.

## REALIZE SEAMLESS INTEGRATION FOR HIGHEST INVESTMENT PROTECTION

The 1220 Infinity II LC is a quality instrument that is easy to upgrade and fully compatible with all InfinityLab LC Series detectors – for nondisruptive transition to meet future needs within the confines of your budget.

### Flexibility to meet your current budget and future needs

Enhance the performance, productivity and efficiency of your system through upgrade options to meet the increasing demands of your laboratory.

- Upgrade the pump from isocratic to gradient for higher method flexibility.
- Upgrade the manual injector with an autosampler for higher sample throughput and pretreatment programming.
- Upgrade with a column oven for better reproducibility and method development flexibility.
- Upgrade with an external sample tray for easy sharing of one instrument for LC or even LC/MS analysis.
- Upgrade the pump with active inlet valves to increase robustness for challenging solvent conditions.

Expand your application possibilities by adding any InfinityLab LC Series detector or other module to your system.

- Add a fluorescence detector (FLD) for analysis of compounds such as aflatoxins.
- Add a refractive index detector (RID) for analysis of sugars.
- Add an evaporative light scattering detector (ELSD) for analysis of non-UV absorbing chromophores.
- Add a multidetector suite (MDS) for advanced GPC.
- Add a 6100 Series single quadrupole MS for mass-selective detection.
- Add a fraction collector for small-scale preparative LC, purification or sample re-analysis.



Couple your 1220 Infinity II to any of a wide range of special detectors to meet your application needs.





## 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. Through preventive maintenance, 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.

## Simply more value

With its space-saving footprint the 1220 Infinity II LC is ideally suited to address the needs of small to medium-sized labs that are mainly tasked with routine analysis. The system delivers all the performance needed to meet stringent regulatory demands – while setting the standard for compactness and ease of operation. As part of the InfinityLab LC Series and representing the entry-point system, the 1220 Infinity II LC leverages the latest technology by sharing components with the 1260 Infinity II and 1290 Infinity II LCs.

	GOLD	SILVER	BRONZE
<b>Services Included in All Agilent CrossLab Service Agreements</b>			
Contract-level Preferred Response vs. T&M	✓	✓	✓
Hardware Telephone Support	✓	✓	✓
<b>Onsite Repair Services</b>			
Unlimited Onsite Repair Visits (travel & labor)	✓	✓	✓
Parts Required for Repair	✓	✓	✓
Consumables/Supplies Required for Repair, including liners, seals, tubing, assemblies, and multipliers	✓	✓	✓
<b>Advanced Diagnostics and Reporting</b>			
Agilent Remote Advisor-Assist	✓	✓	✓
Agilent Remote Advisor-Report	✓	✓	✓
Agilent Remote Advisor-Alert	✓	✓	
<b>High-Availability Services</b>			
Extended Coverage Hours Discount	✓		

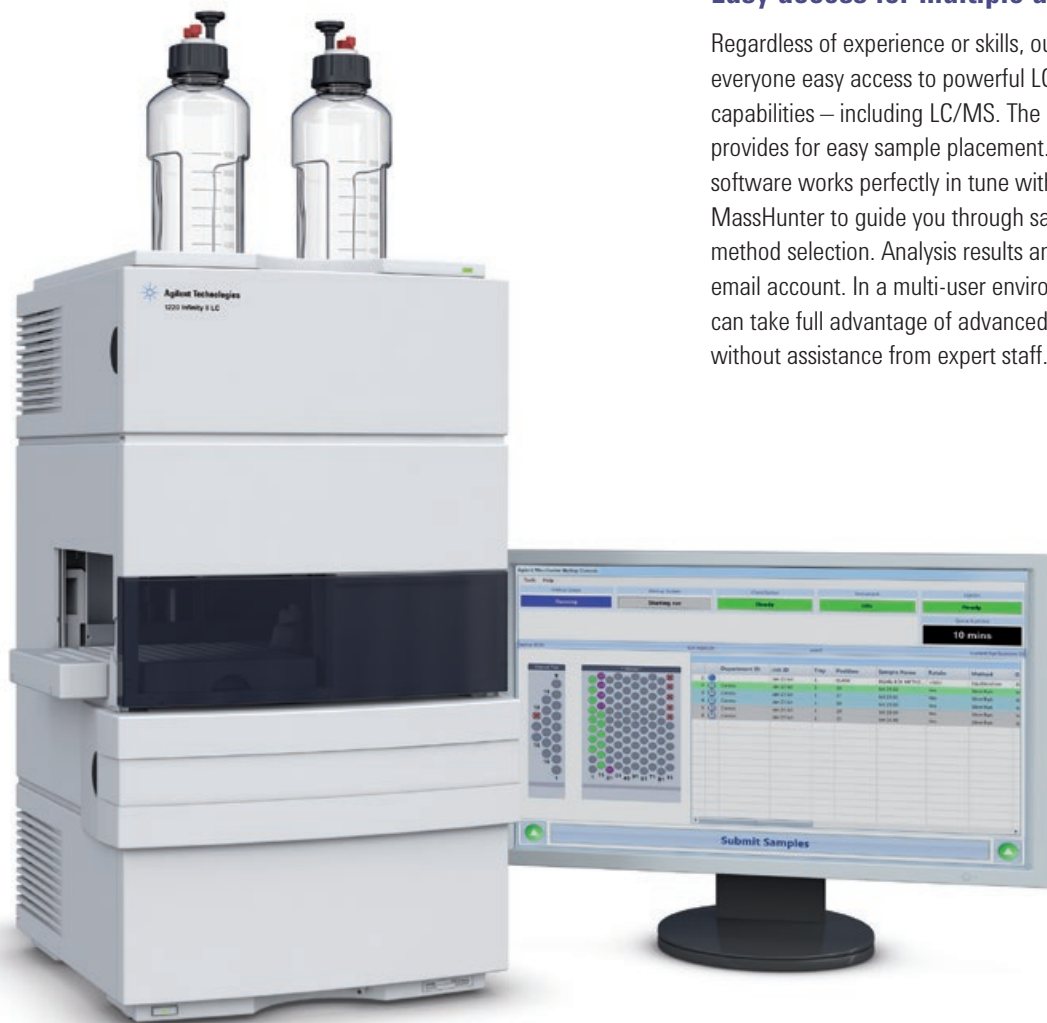
Agilent CrossLab service plans let you choose the service level that best meets your needs, goals and budget. Regional differences to service plans may apply. Additional options are available.

## INFINITYLAB QUALITY AT YOUR FINGERTIPS

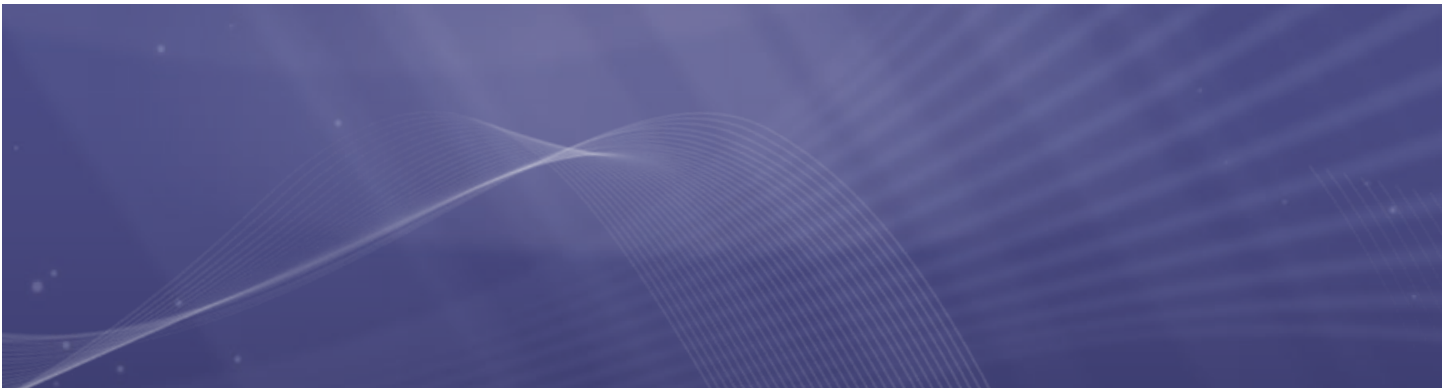
In the lab or in the field, our workflow solutions give you the highest operational efficiency – where and when you need it.

### Walk-up solution: Easy access for multiple users

Regardless of experience or skills, our walk-up solution gives everyone easy access to powerful LC separation and detection capabilities – including LC/MS. The external sample tray provides for easy sample placement. The intuitive walk-up software works perfectly in tune with OpenLAB as well as MassHunter to guide you through sample submission and method selection. Analysis results and reports are sent to your email account. In a multi-user environment, even novice users can take full advantage of advanced LC and LC/MS capabilities without assistance from expert staff.



Optimized walk-up solution for simplified and easy access to LC and LC/MS in a multiuser environment. The walk-up software makes sample submission an easy task – simply log in, choose method, and place your sample vials in the positions indicated.



### Mobile solution: InfinityLab quality where and when you need it

For mobile labs that need to measure samples at different locations or even remote sites, the Agilent 1220 Infinity II Mobile LC solution provides an ideal configuration for onsite liquid chromatography analysis. A special mounting plate absorbs shocks and vibration during transport or operation. Columns and solvent containers are held firmly in place, preventing instrument damage and maintaining operator safety.

- Gradient pump with integrated degassing unit, 600 bar, up to 10 mL/min, for reliable and robust analysis.
- Vial sampler with injector programming.
- 80 °C oven for one 25 cm column.
- Variable wavelength or diode array detector with 80 Hz sampling rate for highest sensitivity.
- Attenuation unit available as upgrade for your current instrument.



Mobile LC applications range from analysis of non-volatile pesticides in environmental and food applications, through analysis of biofuels, to drug monitoring or testing of counterfeit drugs. It can also be used in teaching, when a mobile laboratory travels to students residing in remote areas.

Another application area that has recently gained interest is the authentication of food whereby a mobile LC facilitates direct qualification of imported foodstuffs at airports and harbors.



The 1220 Infinity II mobile LC solution offers high reliability and fast analysis even under challenging onsite conditions, making it the ideal LC system for fast response in the field.

Learn more

**[www.agilent.com/chem/1220](http://www.agilent.com/chem/1220)**

Find an Agilent customer center

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