



1290

Agilent 1290 Infinity II LC

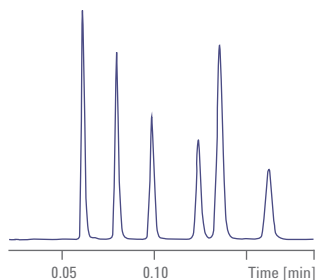
**SET NEW BENCHMARKS IN EFFICIENCY –
WITH THE NEXT GENERATION OF UHPLC**



Agilent Technologies

NEW BENCHMARKS IN EFFICIENCY

The Agilent 1290 Infinity II LC embodies the next generation of UHPLC – with the exceptional reliability and robustness you expect from Agilent, plus breakthrough technologies to maximize the efficiency of your business in three dimensions.



MAXIMIZE ANALYTICAL EFFICIENCY

Unmatched separation and detection performance deliver analysis data of the highest quality – for ultimate confidence in your results.



MAXIMIZE INSTRUMENT EFFICIENCY

Highest sample capacity and fastest injection cycles combine with new levels of usability – for highest throughput for any application.



MAXIMIZE LABORATORY EFFICIENCY

Seamless integration in current infrastructure and smooth method transfer from legacy equipment – for non-disruptive transition to highest productivity and lowest cost of ownership.

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.



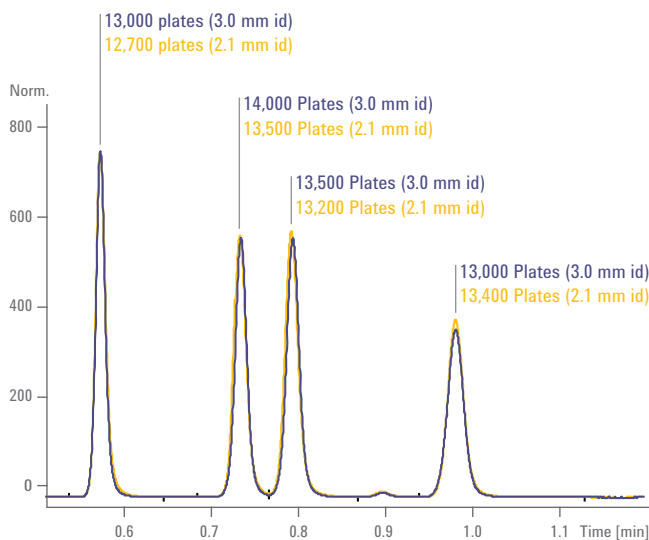
MAXIMUM ANALYTICAL EFFICIENCY

EXPERIENCE UNMATCHED PERFORMANCE FOR ULTIMATE CONFIDENCE IN YOUR RESULTS

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

Lowest dispersion for highest resolution

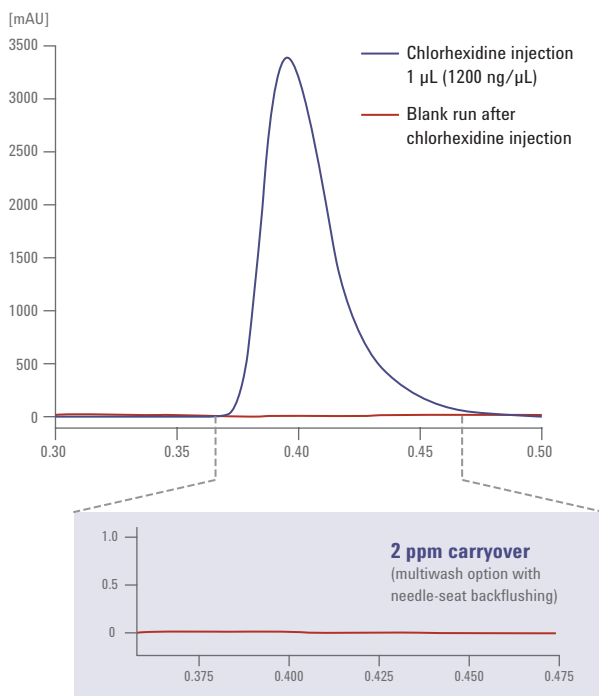
The entire flow path of the 1290 Infinity II LC is optimized for lowest extra-column band broadening. Specially designed components such as needle seats, heat exchangers, column fittings and flow cells allow you to fully exploit the power range of 1300 bar at 2 mL/min. Data rates up to 240 Hz deliver uncompromised chromatographic resolution – even for your fastest separations.



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

Lowest carryover for highest data quality

The 1290 Infinity II Multisampler reduces carryover to less than 9 ppm. Using the multiwash feature you can flush the inside and outside surfaces of the injection needle with up to three different solvents, as well as backflush the needle seat.



Even with problematic samples the 1290 Infinity II Multisampler can keep carryover down to less than 9 ppm.

Exceptional efficiency: InfinityLab Poroshell 120 Columns

Achieve high-resolution, high-efficiency separations at pressures up to 1300 bar with InfinityLab Poroshell 120 columns. 12 bonded phases and three particle diameters (4.0, 2.7 and 1.9 μm) are available for flexible development and straightforward transfer of methods. Manageable pressure and long column lifetime allow you to get the most from your InfinityLab LC. Permanently fitted column ID tags track column usage, adding confidence and security to your analysis.



InfinityLab Poroshell 120 columns with ID tags are recognized automatically by the 1290 Infinity II LC and add traceability to your results by providing at-a-glance detail about the last injection date, number of injections, and the maximum temperature used.

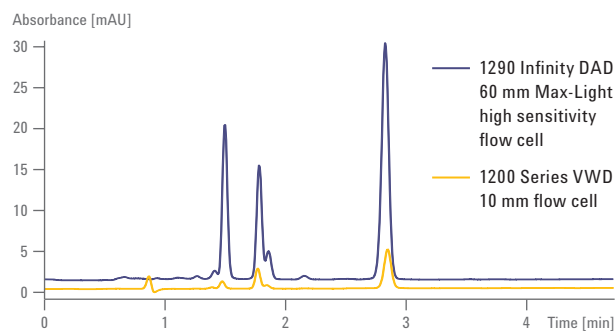
Unique detection capabilities reveal more

The 60 mm path length of the Agilent Max-Light flow cell enables the 1290 Infinity II Diode Array Detector to achieve typical noise levels of less than $\pm 0.6 \mu\text{AU}/\text{cm}$ for highest detection sensitivity and lowest detection limits.

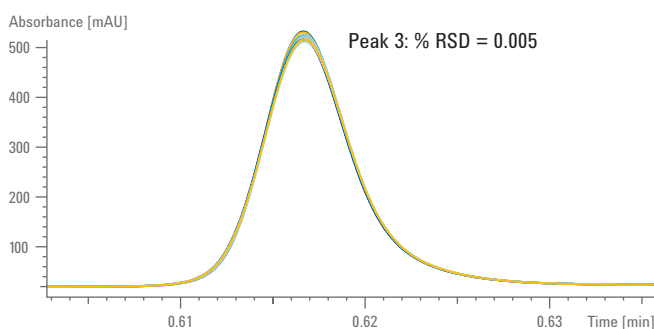
The 1290 Infinity II Evaporative Light Scattering Detector is the only detector of its kind that provides a 90x wider dynamic range. Further, this ELSD facilitates subambient operation for unrivalled detection of thermally-labile analytes.

Highest retention time precision for reliable peak identification

The 1290 Infinity II High Speed Pump and the 1290 Infinity II Flexible Pump deliver unmatched flow and composition precision for reproducible and robust results. The 1290 Infinity II Flexible Pump is the only low-pressure mixing pump that combines the ultimate performance of a high-pressure mixing UHPLC pump with the flexibility of a quaternary pump. This pump delivers superior gradient performance over the entire composition range from 1 to 99 %.



The 1290 Infinity II DAD achieves 10x higher sensitivity than earlier 1200 Series diode array or variable wavelength detectors.



This overlay of 10 chromatograms shows superior retention time precision of the 1290 Infinity II High Speed Pump of 0.005 %RSD, even for ultrafast separations.

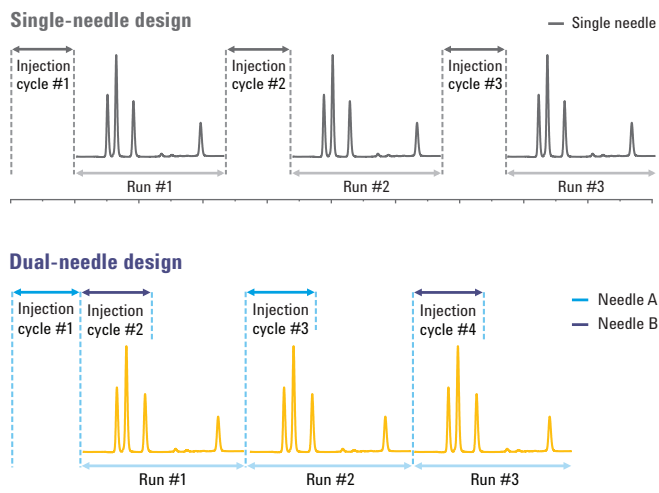
MAXIMUM INSTRUMENT EFFICIENCY

EXPERIENCE UNLIMITED CAPACITY AND FASTEST TURNAROUND FOR HIGHEST THROUGHPUT

The 1290 Infinity II LC provides the capacity and speed you require to get your work done as effectively and efficiently as possible. Highest sample capacity and fastest injection cycles combine with new levels of usability – for highest throughput for any application.

High capacity and fast injection cycles

Within the footprint of an Agilent LC stack, the 1290 Infinity II Multisampler takes a maximum load of 16 microtiter plates for a total capacity of 6144 samples, or up to 432 vials. For temperature-sensitive or thermally-labile samples, a highly efficient and integrated cooling system is optionally available. The 1290 Infinity II LC allows you to run extremely fast UHPLC separations, so that the total run time is determined by the duration of the injection cycle and not the separation itself! With a second injection needle in the 1290 Infinity II Multisampler, you can reduce cycle times to mere seconds – virtually eliminating wait times!



The dual-needle design of the 1290 Infinity II Multisampler eliminates wait times by overlapping injection cycles without compromising data quality by carryover or sample discrimination.

Efficient control, acquisition and reporting

Agilent OpenLAB CDS software gives you the most comprehensive and fully traceable management of your 1290 Infinity II LC, including instrument control, result generation, data management and advanced reporting. Visualize data trends quickly, capture outliers, retention time shifts, or integration problems efficiently. Built-in calculations provide results directly in data analysis – no need to generate a full report, no errors caused by data export or manual transcription. Confirmation and documentation of audit-trail reviews in electronic records make it an easy task to comply with the latest FDA regulatory requirements.

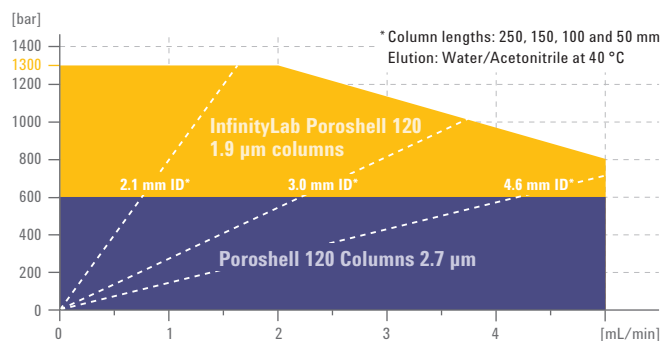


Peak Explorer helps you uncover and resolve problems faster. Find anomalies at a glance – even among hundreds of chromatograms and peaks.

Flexibility for all applications

The 1290 Infinity II LC gives you the full flexibility you need for any analytical task.

- Wide power range for optimum use of most analytical columns independent of inside diameter or particle technology
- Wide column temperature range from 20 degrees below ambient to 110 °C to tune selectivity or speed
- Intelligent System Emulation technology to run legacy methods – even from other vendors LCs
- Dual-needle injection for automated scalable injection volumes from less than 1 µL up to 900 µL



The power range of the 1290 Infinity II LC gives you the flexibility to meet virtually any separation challenge.

A new level of usability

With the 1290 Infinity II LC, running a UHPLC system has never been so easy.

- Revolutionary InfinityLab Quick Connect UHPLC column fittings for easy-to-use, accurate and robust zero-dead-volume connections
- Multicolumn thermostat with simplified access and space for up to 8 columns
- Easy-to-install InfinityLab Quick Connect heat exchangers with volumes of 1.0, 1.6 or 3.0 µL



InfinityLab Quick Connect fittings and Quick Connect heat exchangers are easy to install.

More automation capabilities

The 1290 Infinity II LC is packed with productivity tools – helping your lab to be more efficient.

- BlendAssist software for convenient, accurate and precise additive or buffer blending
- Injector programming for simple sample preparation steps such as dilution, mixing or derivatization
- InfinityLab Quick Change valves for column and solvent selection, column regeneration, or sample clean-up and enrichment



InfinityLab Quick Change valves allow you to automate a wide variety of applications – the valves' unique design gives you the flexibility to choose switching configurations that match your lab's individual requirements.

MAXIMUM LABORATORY EFFICIENCY

DRIVE NON-DISRUPTIVE TRANSITION TO HIGHER PRODUCTIVITY AND LOWER COSTS

The 1290 Infinity II LC integrates seamlessly in your laboratory's current infrastructure and facilitates smooth method transfer from legacy equipment – for non-disruptive transition to highest productivity and lowest cost of ownership.

Transfer methods seamlessly between LCs, regardless of brand

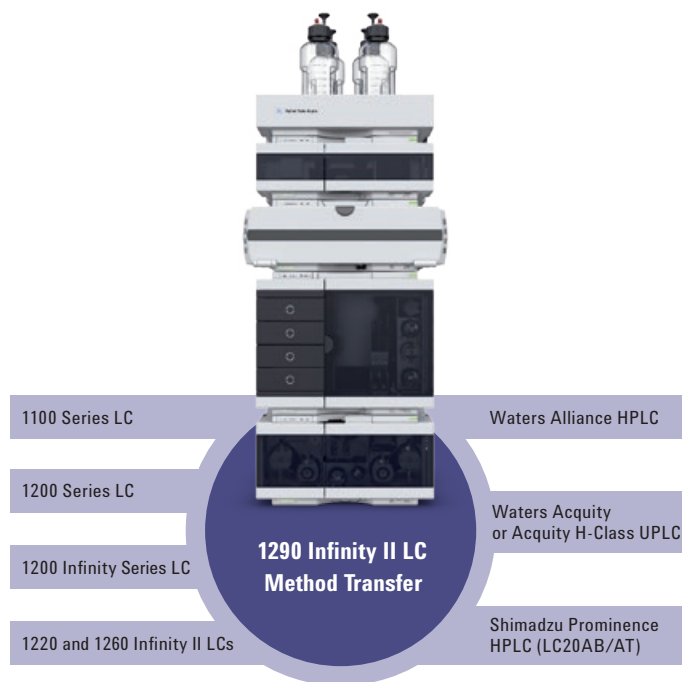
With Intelligent System Emulation technology (ISET) from Agilent you can execute any legacy HPLC or latest UHPLC method while delivering the same chromatographic results – all through a few mouse clicks. ISET eliminates deviations in resolution and retention times when your laboratory deploys methods developed originally on other HPLC or UHPLC systems.

Minimize your instrument-related costs

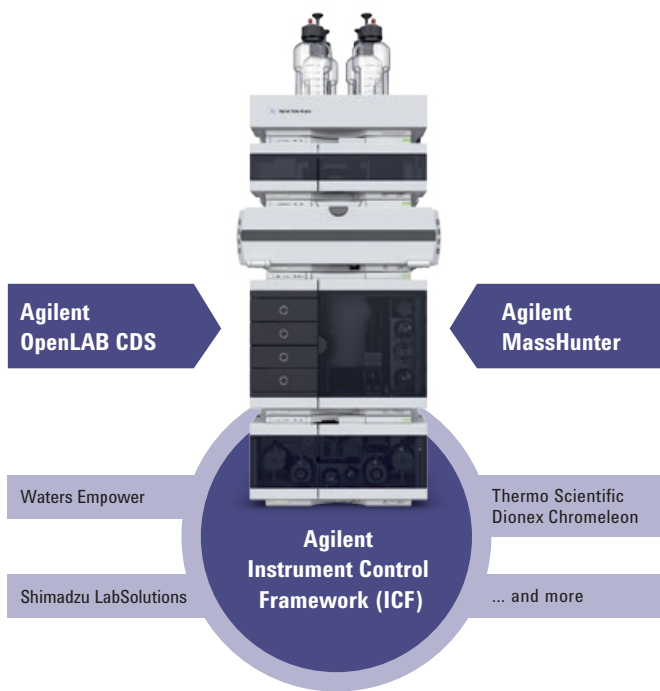
Run your legacy methods with ISET while taking full advantage of the UHPLC speed, resolution and sensitivity of the 1290 Infinity II LC. You no longer need to maintain your old legacy LC systems!

Achieve higher productivity for method development

Speed up your method development with UHPLC performance and then fine-tune your method by emulating the target system – and be confident that the method will run as intended.



With 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.



The 1290 Infinity II LC runs best when controlled through OpenLAB CDS or MassHunter software. Agilent ICF technology gives third-party CDS providers an easy route to support the 1290 Infinity II LC.

Take control of your chromatography

Agilent OpenLAB CDS is the perfect companion for your 1290 Infinity II LC and 6100 Series Single Quadrupole LC/MS. For more demanding LC/MS applications, Agilent MassHunter gives you combined control of your Agilent LC and Triple Quadrupole or Quadrupole Time-of-Flight LC/MS, as well as powerful tools for comprehensive data analysis.

With a strong commitment to open systems, Agilent offers Instrument Control Framework (ICF), a free-of-charge software component that makes it faster and easier for third-party providers to enable and control Agilent LCs through their CDS or workstations. Integrate a new 1290 Infinity II LC in your current CDS, seamlessly and with access to most of the advanced capabilities and features.

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

Get the most from your investment

If you are ready for a true technology refresh of the instrumentation and software in your lab, Agilent CrossLab provides transition services to enable rapid and seamless shift to the latest technology. Leave it to the experts to provide a speedy, stepwise upgrade that matches your needs and budget with minimal disruption to your workflows.

Agilent also 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.

EXPERIENCE THE ULTIMATE IN EFFICIENCY WITH TAILORED LC AND LC/MS SOLUTIONS

Automated method development

Accelerate your method development by combining superior hardware with dedicated software for smooth automation of LC and LC/MS method development.

- Access more than 1000 different sets of unique LC separation conditions from a choice of up to 26 solvents and 8 columns, and a selection of different temperature zones
- Set up new screening campaigns fast and easily with the Agilent Method Scouting Wizard
- Perform advanced automated method optimization with solutions from Agilent partners ACD/Labs, ChromSword, or S-Matrix



The InfinityLab Method Development Solution comes ready-to-run and is designed for automated access to more than 1000 sets of unique LC separation conditions.

Analysis of trace-level impurities

With a 30x wider UV dynamic range, 30x higher UV sensitivity, UHPLC resolution and speed plus universal detection capabilities, the InfinityLab HDR-DAD Impurity Analyzer is an ideal solution for impurity analysis of formulations with widely different concentrations.

- Quantify the active ingredients as well as impurities in a single assay and thereby dramatically reduce sample turnaround times
- Achieve higher area precision and gain more confidence in automated peak integration
- Don't miss any compound through combination with other detection options such as the 1290 Infinity II ELSD with 90x wider dynamic range



The InfinityLab HDR-DAD Impurity Analyzer quantifies sample components with widely different concentrations in a single assay.

Ultrahigh resolution for complex samples

Comprehensive 2D-LC provides the ultimate separation performance you need to analyze complex matrixes such as herbal extracts, food samples or polymer synthesis products. With the InfinityLab 2D-LC Solution you gain fast access to orthogonal data from heart-cutting, multiple heart-cutting, high-resolution sampling or comprehensive analyses. What's more, at the flip of a switch you can select between single-dimension UHPLC and the ultimate chromatographic power of 2D-LC, allowing you to match separation performance with sample complexity.



InfinityLab 2D-LC Solution – on one system you can perform single-dimension UHPLC as well as aspire to the ultimate chromatographic power of heart-cutting, multiple heart-cutting or comprehensive 2D-LC.

High-throughput screening LC/MS solutions

The 6200 Series Accurate-Mass Time-of-Flight (TOF) LC/MS acquire data at 30 spectra per second to ensure excellent data quality for fast UHPLC. Agilent proprietary technologies in all system components combine synergistically for shortest analysis times and highest throughput.

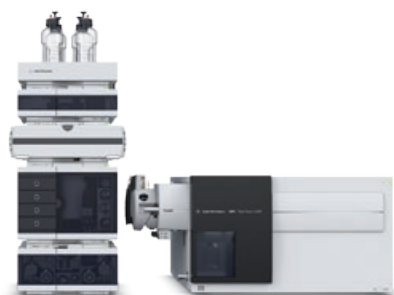
- Dual-needle injection for ultrafast injection cycles down to 5 seconds
- High sample capacity of up to 6144 samples within footprint of Agilent LC stack
- Low pump delay volumes for fast gradients
- Quick-Change valve solution for alternating column regeneration



Agilent High-Throughput LC/MS solutions achieve highest analysis speeds and shortest cycle times without compromising robustness or data quality.

High-sensitivity LC/MS solutions

The 6495 Triple Quadrupole LC/MS helps you achieve highest sensitivity. Agilent's iFunnel technology dramatically increases ion sampling and transmission, enabling the lowest limits of detection and quantification for your most demanding applications. Data quality can be improved further using the multi-wash capabilities of the 1290 Infinity II Multisampler for sample carryover of less than 9 ppm.



Agilent High-Sensitivity LC/MS solutions achieve lowest limits of detection and quantification.

Untargeted analysis LC/MS solutions

Agilent LC/MS solutions for untargeted analysis allow you to screen and quantify hundreds of compounds in a single analysis. Your laboratory can focus on running samples rather than tedious method development. The 6500 Series Accurate-Mass Quadrupole Time-of-Flight (Q-TOF) LC/MS is the ideal choice for screening applications, delivering low femtogram-level sensitivity with high resolution and accurate mass. The 6560 Ion Mobility Q-TOF LC/MS adds an extra dimension of ion mobility separation, revealing a greater detail from complex samples.



Agilent LC/MS solutions for untargeted analysis feature reduced system dispersion for highest chromatographic resolution and sensitivity.

Learn more

www.agilent.com/chem/1290

Find an Agilent customer center

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