



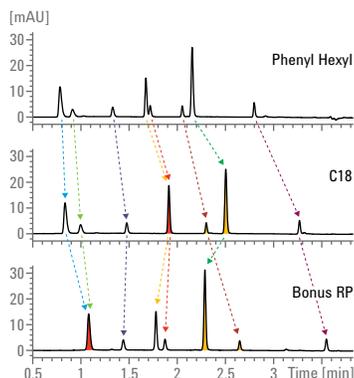
Agilent InfinityLab LC Method Development Solution

# DEVELOP LC SEPARATION METHODS WITH MAXIMUM EFFICIENCY



## DEVELOP LC SEPARATION METHODS WITH MAXIMUM EFFICIENCY

Achieve maximum efficiency with automated, fully scalable and flexible analytical method development solutions from the Agilent InfinityLab LC Series. Run your screening campaigns with minimal manual interaction and reduce significantly the overall time for initial development and final refinement. Transfer your optimized method between HPLC and UHPLC platforms and across a wide range of scalable column chemistries using Agilent Intelligent System Emulation Technology (ISET).



### ANALYTICAL EFFICIENCY

Use the maximum in LC performance to find the optimal combination of selectivity, resolution and speed for your separation.

### INSTRUMENT EFFICIENCY

Screen hundreds of different chromatographic conditions automatically – on a single system and without the need for manual interaction.

### LABORATORY EFFICIENCY

Reduce costs through automated and unattended solutions. Develop methods with ISET's on-the-fly emulation of target systems.

# COMPLETE SOLUTIONS

The Agilent InfinityLab LC Method Development Solution is a truly complete end-to-end solution, combining superior instruments and columns, smart supplies, intuitive software and dedicated services.



## InfinityLab Instruments, Columns and Supplies

Designed to work together in perfect harmony, Agilent InfinityLab LC instruments and Quick Change valves combine with Agilent InfinityLab Poroshell 120 columns to maximize the efficiency of your LC method development.

## Agilent CrossLab

### Services and Support

Maximize the efficiency of your LC method development through our comprehensive suite of services and learning solutions, including dedicated training courses.

## Agilent OpenLAB

### Software and Informatics

Optimize your LC method development through Method Scouting Wizard – an intuitive and tailored software that automates the entire workflow from start to finish.

# FULL AUTOMATION, FULL FLEXIBILITY, FULL SCALABILITY

Benefit from the automation, flexibility and scalability of the Agilent InfinityLab LC Series and configure a solution for method development and method transfer that matches your needs and your budget.

## Automation, flexibility and scalability for everyday method development

The 1260 Infinity II Method Development System is ideal for everyday method development at pressures up to 600 bar. Screen more than 100 different sets of LC separation conditions without the need for manual interaction. Access 15 different mobile phases, and 4 columns with 2 independent temperature zones. To meet the challenges of separating your biological samples, choose the bio-inert version with a 100 % metal-free sample flow path. Pair with 2.7  $\mu\text{m}$  InfinityLab Poroshell columns for maximum efficiency and selectivity.



## Automation, flexibility and scalability for maximum method development efficiency

The 1290 Infinity II Method Development System provides the flexibility and performance to solve your most complex method development challenges easily and with maximum efficiency. Screen over 1300 different sets of LC separation conditions automatically in a single campaign – at pressures up to 1300 bar with up to 26 solvents and up to 8 columns. Pair with 1.9  $\mu\text{m}$  InfinityLab Poroshell columns for fast, high-resolution separations to maximize method development efficiency.

Use Agilent Intelligent System Emulation Technology (ISET) to emulate other LC systems for straightforward and seamless transfer of your optimized method to target instruments in your production or quality assurance labs.



## Advance with ease, at ease

The Agilent InfinityLab LC Series features bidirectional compatibility for seamless integration in any laboratory using Agilent LC systems. You can upgrade your current Agilent LC module-by-module over time and when budget is available.

Alternatively, you can mix and match 1260 Infinity II and 1290 Infinity II modules for extra functionality. Adapt your system to your needs both now and in the future to protect your investment.

**solvents**

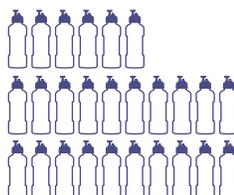
**15**



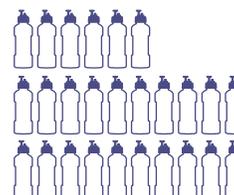
**15**



**26**



**26**



**columns**

**4**



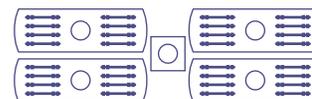
**8**



**8**



**32**



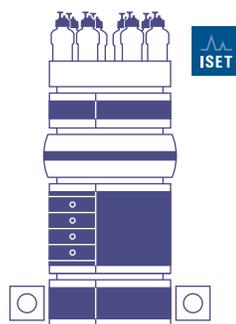
**systems**



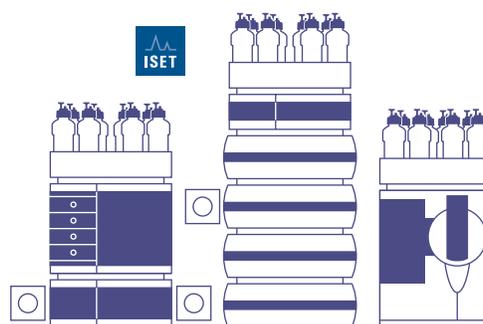
**1260 Infinity II LC Method Development System**



**1260 Infinity II LC Method Development System with 1290 Infinity II Multicolumn Thermostat**



**1290 Infinity II LC Method Development System**



**1290 Infinity II LC Method Development System with 6100 Series Single Quadrupole LC/MS**

Add one or two external solvent selection valves and gain automated access to up to 15 or even 26 different solvents. Cluster up to four 1290 Infinity II Multicolumn Thermostats, each holding eight columns, to achieve ultimate flexibility to solve your toughest development challenges.

# INFINITYLAB SOLUTIONS – WHERE EACH COMPONENT MAXIMIZES THE EFFICIENCY OF THE WHOLE

The InfinityLab LC Method Development Solution comprises instruments, columns, software and services that work together in perfect harmony, helping you to develop your LC methods with maximum efficiency.

## InfinityLab Poroshell 120 columns make method development fast and easy

Agilent's innovative superficially porous particle chemistry offers high efficiencies, superior peak shape, manageable backpressures and long lifetime at pressures up to 1300 bar.

- Choose from 12 chemistries for a wide range of selectivity to quickly identify the ideal column for optimal separation
- Screen at high pH Agilent's innovative superficially porous to maximize selectivity and improve peak shape for basic compounds
- Use the same Poroshell chemistries across three particle sizes (1.9, 2.7 and 4.0  $\mu\text{m}$ ) so you can develop methods on any system and easily transfer methods across platforms



### 12 chemistries to help target the optimal separation

Best all-round	Low pH	High pH	Alternate selectivity	Polar compounds
EC-C18	SB-C18	HPH-C18	Bonus-RP	SB-Aq
EC-C8	SB-C8	HPH-C8	PFP	EC-CN
Phenyl-Hexyl				HILIC

## INFINITYLAB QUICK CHANGE VALVES

Automate column and solvent selection to simplify and accelerate your screening campaigns and method optimization.



## INFINITYLAB QUICK CONNECT HEAT EXCHANGERS

Remove variability from your method development by ensuring a consistent temperature for solvent delivery – for the most accurate and reproducible results.





**INFINITYLAB SOLVENT BOTTLES WITH STAY SAFE CAPS**

Save space in your solvent trays with smaller footprint, easy-to-grip solvent bottles, and keep harmful vapors out of the lab.

**INFINITYLAB QUICK CONNECT FITTINGS**

Exchange your columns fast and easily, with a perfect zero-dead volume connection by any user, every time.



**INFINITYLAB COLUMN ID TAGS**

Track column details and usage information for InfinityLab Poroshell, ZORBAX, or any other LC column.



**INFINITYLAB FLEX BENCH RACK**

Expand your stack to hold all the column compartments and solvent trays needed for your method development. Keep your system tidy and maneuverable for optional MS analysis.

# METHOD DEVELOPMENT MEETS METHOD TRANSFER

The InfinityLab LC Method Development Solution supports the entire workflow and beyond. Dedicated software accelerates method screening and optimization, and ISET links method development to method transfer.

## Dedicated software accelerates method development

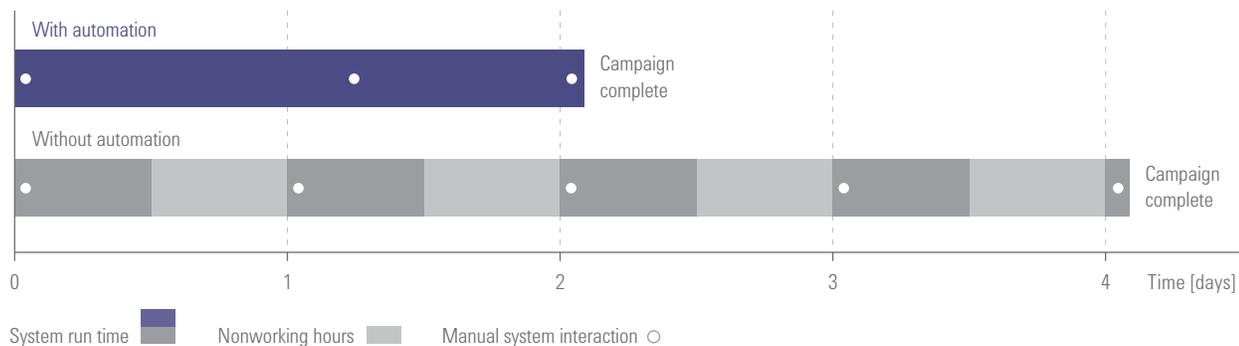
Agilent Method Scouting Wizard is a simple-to-use but highly effective plug-in tool for Agilent OpenLAB CDS ChemStation.

- Generation of complex screening campaigns within minutes, including scouting solvent type, gradient, column and temperature
- Automatic flushing and column equilibration
- Automatic optimization of run time and solvent consumption
- Warning of incompatible parameters when using column ID tags
- Creation of powerful reports to identify optimum conditions at a glance



## Time saving through workflow automation with Method Scouting Wizard

(campaign with 4 columns, 3 solvents and 3 temperatures; 2 injections per condition; 20-minute initial gradient)



Traditional method development systems waste valuable time overnight or at weekends because nobody is available to change columns or solvents. Not so with the InfinityLab LC Method Development Solution. The column and solvent are simple parameters so you can combine different studies and run them as a sequence overnight or at weekends for optimal use of your laboratory assets.

## Advanced software functionality through Agilent partner solutions

Agilent has partnered with ACD Labs, ChromSword, and S-Matrix, all leading vendors of quality-by-design software. These solutions provide fully automated optimization of separation parameters in unattended operation combined with sophisticated peak tracking and advanced reporting functionality.



## Combine method development and method transfer using intelligent system emulation

ISET emulates other HPLC and UHPLC instruments through a few simple clicks – for seamless and secure method transfer from instrument to instrument – regardless of brand. Eliminate the probability of unexpected variations in retention behavior by on-the-fly target system emulation to overcome compromising key chromatographic parameters during method transfer.

Your 1290 Infinity II Method Development System acts as the parent system, creating methods for other target LC systems in your laboratory or other laboratories in production or quality assurance.



# SCREEN, OPTIMIZE AND TRANSFER YOUR METHODS

The InfinityLab LC Method Development Solution offers the flexibility and scalability you need to address the widest variety of applications. With a single system, you can screen, optimize and transfer your methods seamlessly to a broad range of target systems.

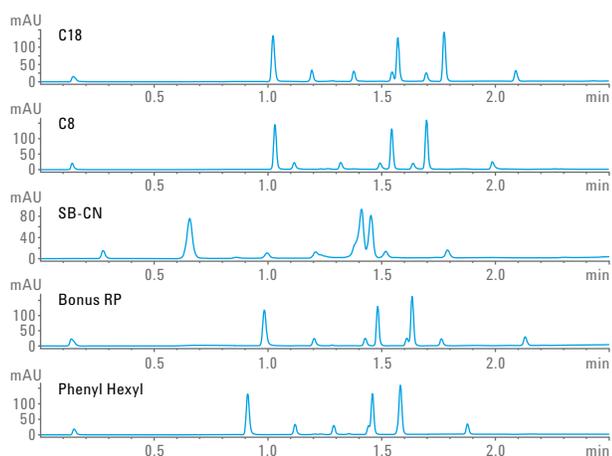
## Screening and method optimization plus advanced reporting



Simplify your data analysis using the enhanced reporting features of Method Scouting Wizard. Generate easy-to-read method development reports. Use bubble plots to highlight the most interesting results in your screening campaigns and give yourself easy visual guidance to find the optimal separation conditions.

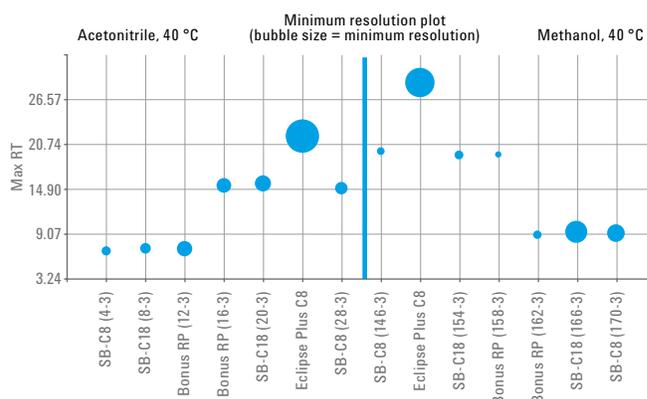
↓ Download Technical Overviews from [www.agilent.com](http://www.agilent.com), search for 5991-5934EN and 5991-6938EN.

### Column scouting with five different columns



For more details and a step-by-step guide of how to use the 1290 Infinity II Method Development Solution for automated screening campaigns, see Agilent Technical Overview, publication number 5991-5934EN.

### Advanced reporting for at-a-glance guidance



Bubble plots visualize the maximum resolution for separation of complex samples on different columns, enabling a comparison of two different solvent combinations. For details, see Agilent Technical Overview, publication number 5991-6938EN.

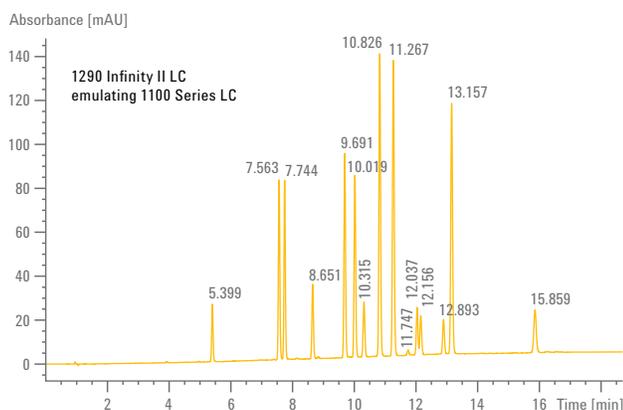
## ISET-based on-the-fly method development to solve your challenges in method transfer



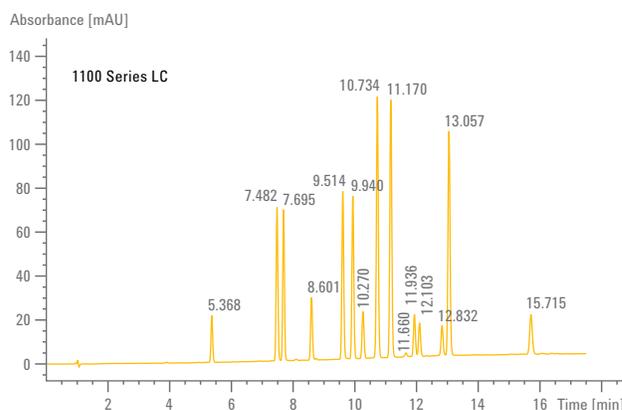
Use the 1290 Infinity II Method Development System with ISET to screen, refine, and optimize your method for the chosen target system. Deploy just one parent system to develop methods for highly diverse target systems such as 1100 Series and Waters Acquity H-Class LC systems.

↓ Download Application Note from [www.agilent.com](http://www.agilent.com), search for 5991-7794EN.

### Optimized separation on 1290 Infinity II LC with ISET and confirmatory separation on 1100 Series LC

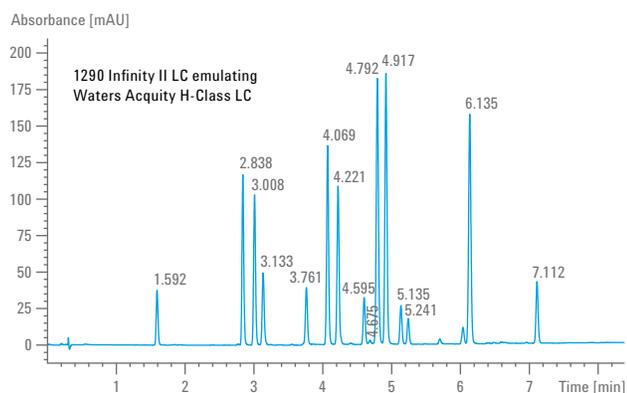


Best possible separation of a complex test sample, which was obtained after the refinement campaign. This screening campaign was run under ISET conditions of the target LC system, the Agilent 1100 Series LC.

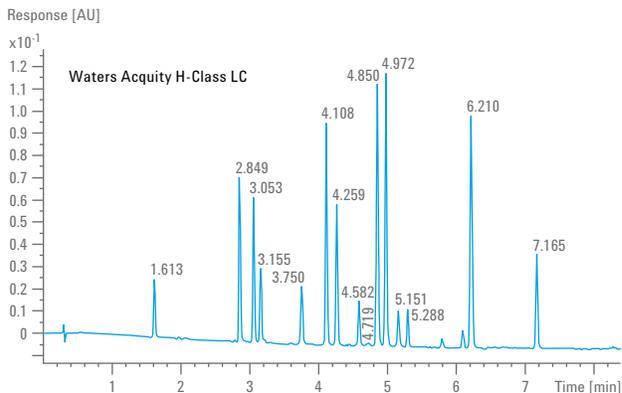


Final separation of the test sample obtained on the target system, the Agilent 1100 Series LC.

### Optimized separation on 1290 Infinity II LC with ISET and confirmatory separation on Waters Acquity H-Class LC



Final optimized separation of the test sample using an InfinityLab Poroshell 120 PFP, 2.1 x 100 mm, 1.9 µm column at a flow rate of 0.85 mL/min.



Final separation of the test sample on the Waters Acquity H-Class system using the InfinityLab Poroshell 120 PFP column, applying a gradient from 10 to 47 % acetonitrile over 7.4 minutes, and at a column temperature of 40 °C.

Learn more

**[www.agilent.com/chem/infinitylab-lc-method-development](http://www.agilent.com/chem/infinitylab-lc-method-development)**

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