

Perform rugged, fast LC with confidence

Agilent InfinityLab Poroshell 120 Columns for HPLC and UHPLC





A tradition of innovation and efficiency

More than 15 years ago, Agilent introduced the industry's first superficially porous column technology with Poroshell 300 for large molecules, followed by Poroshell 120 for small molecules.

Today, the InfinityLab Poroshell 120 family has grown to include 19 chemistries—including new phases for chiral and HILIC separations. Whether you use traditional HPLC systems or newer UHPLC systems, you will experience exceptional separation efficiency, and significantly boost performance and throughput from every LC in your lab.

InfinityLab Poroshell 120 columns

- **A wide range of innovative chemistries** supports optimal separation of a variety of analytes.
- **Excellent lot-to-lot reproducibility:** A proprietary, single-step porous shell process dramatically reduces tiny differences between lots and columns.
- **A scalable family of particles:** 1.9 μm , 2.7 μm , and 4 μm superficially porous particles enable you to get the best from your methods and all of your instruments.
- **Easy method transfer between HPLC and UHPLC:** Scalable particles and similar chemistries across ZORBAX and Poroshell products simplify transferability of methods.
- **Fast method development:** Up to 19 chemistries maximize selectivity so you can find the optimal separation for your sample.
- **Long column life:** Robust Poroshell particles and chemistries are stable at required pressures. UHPLC guard columns further extend the life of your analytical column.
- **Superior peak shape:** High-purity silica and advanced bonding chemistries reduce peak tailing and give you faster, more accurate results.

Easy traceability

An optional preprogrammed ID tag allows you to track column properties and usage parameters on your Agilent InfinityLab Series LC

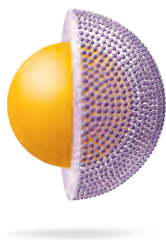
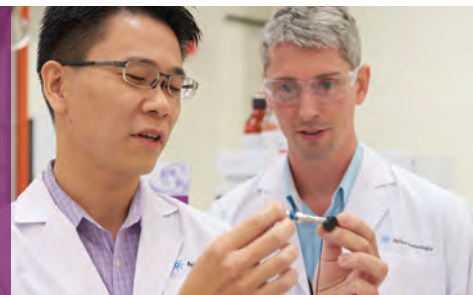


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To learn more about Agilent InfinityLab Poroshell 120 columns, visit www.agilent.com/chem/poroshell-120

What makes InfinityLab Poroshell 120 columns different?



InfinityLab Poroshell 120 columns are based on superficially porous particle technology, which features a solid silica core and a porous outer layer. Compared to traditional totally porous particles of the same (or similar) size, Poroshell particles deliver higher chromatographic efficiencies and enable fast, high-resolution separations.

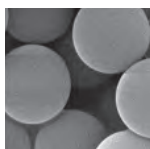
Poroshell superficially porous particles deliver high efficiency and reproducibility through several advantages over totally porous particles:

- Uniform particles with smooth surfaces ensure smaller particle size distributions
- Short analyte diffusion path in/out of the porous layer
- Narrow particle size distributions allow more uniform packing of column particles

How is a Poroshell particle made?

Agilent uses a unique manufacturing process for Poroshell particles. Specifically, we minimize the number of manufacturing steps to ensure maximum particle—and chromatographic—reproducibility.

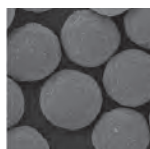
Step 1: Make the solid core



InfinityLab Poroshell 120 cores have a very smooth surface and a uniform particle size—both of which

contribute to a tight overall particle size distribution, improving analytical performance and reproducibility.

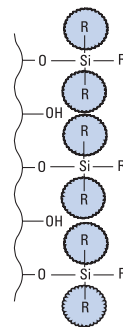
Step 2: Apply the porous shell



At Agilent, we apply the porous shell in one single step. This unique process delivers more

column-to-column reproducibility than other vendors' columns.

Step 3: Apply the bonded phase

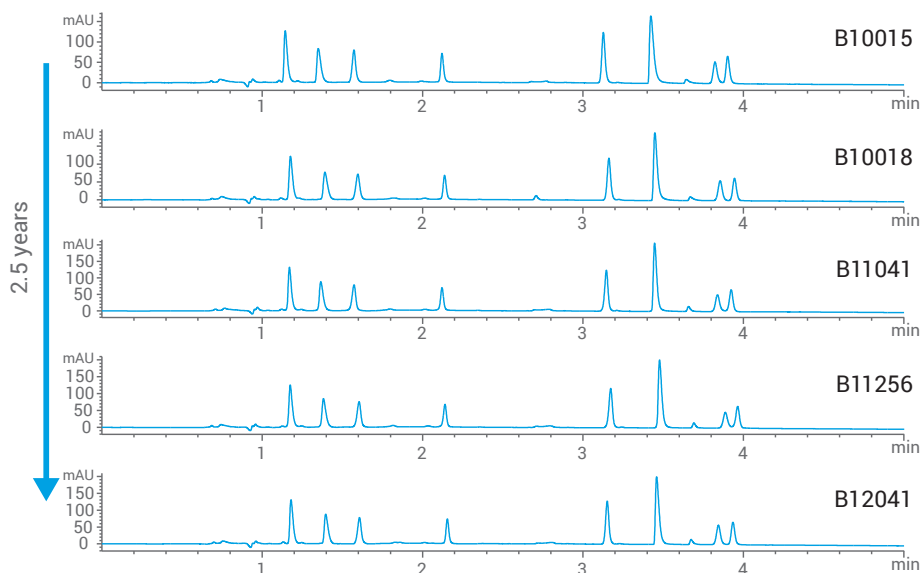


A wide range of robust bonded phases enable analysis of a variety of analytes in different LC modes, to solve even your toughest separation challenges.

Reproducible performance—lot to lot and year to year— minimizes workflow disruption

The simpler the manufacturing process, the more consistent the column

A single-step shell process creates a highly reproducible column, as you can see in this comparison of five lots of InfinityLab Poroshell 120 columns.



InfinityLab Poroshell 120 EC-C18, 3.0 x 100 mm, 2.7 μ m (p/n 695975-902) from five different lots

A scalable family of particles for faster method transfer

InfinityLab Poroshell 120 columns are available in three different particle dimensions—allowing you to choose the size that best fits your separation needs, and is most compatible with your LC systems.

Because the different particles are engineered with a consistent core-to-particle size ratio, you can easily transfer a method developed on one particle size to any of the others.

Quality you can count on

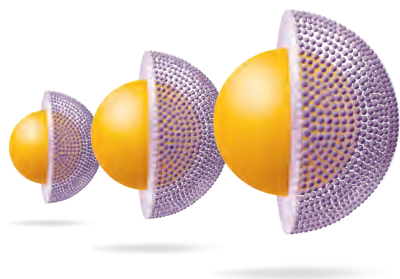
All Agilent columns are designed and manufactured end-to-end by Agilent, undergoing multiple QC tests to tight specifications. Take a closer look at our stringent manufacturing processes at www.agilent.com/chem/column-quality



Which InfinityLab Poroshell 120 column should I choose?



InfinityLab Poroshell 120 columns are available in three particle sizes to fit all your separation needs



1.9 µm	Highest UHPLC performance
2.7 µm	UHPLC performance at lower pressures
4 µm	Improved HPLC performance

System	Max pressure (bar)	Typical LC instrument	We recommend
UHPLC (very low dispersion)	600-1000+	Agilent 1290 Infinity II	InfinityLab Poroshell 1.9 µm InfinityLab Poroshell 2.7 µm
UHPLC (moderate-low dispersion)	600-1000	Agilent 1260 Infinity II Agilent 1260 Infinity II Prime	InfinityLab Poroshell 2.7 µm InfinityLab Poroshell 4 µm
HPLC	400 -600	Agilent 1220 Infinity II	InfinityLab Poroshell 4 µm InfinityLab Poroshell 2.7 µm

With 19 different chemistries, InfinityLab Poroshell 120 columns provide a range of selectivities that makes your method development fast and easy.

Best all around	Best for low-pH mobile phases	Best for high-pH mobile phases	Best for basic compounds at low pH	Best for polar compounds (HILIC)	Best for alternative selectivity	Best for Chiral separations
EC-C18 1.9, 2.7, 4 µm	SB-C18 2.7 µm	HPH-C18 1.9, 2.7, 4 µm	CS-C18 2.7 µm	HILIC 1.9, 2.7, 4 µm	Bonus-RP 2.7 µm	Chiral-T 2.7 µm
EC-C8 1.9, 2.7, 4 µm	SB-C8 2.7 µm	HPH-C8 2.7, 4 µm		HILIC-Z 2.7µm	PFP 1.9, 2.7, 4 µm	Chiral-V 2.7 µm
				HILIC-OH5 2.7 µm	Phenyl-Hexyl 1.9, 2.7, 4 µm	Chiral-CD 2.7 µm
					SB-Aq 2.7 µm	Chiral-CF 2.7 µm
					EC-CN 2.7 µm	



Develop methods quickly and easily with the right selectivities

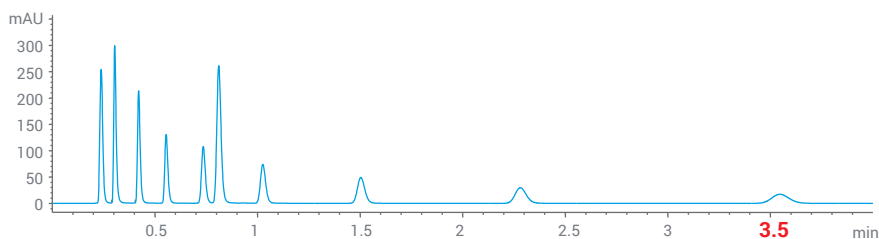
Best all around: InfinityLab Poroshell 120 EC-C18 and EC-C8

Agilent InfinityLab Poroshell EC-C18 provides a similar chemistry to the ZORBAX Eclipse Plus phase for ideal separation of a wide variety of analytes. Agilent InfinityLab Poroshell 120 EC-C8 is less retentive for faster analysis of nonpolar compounds.

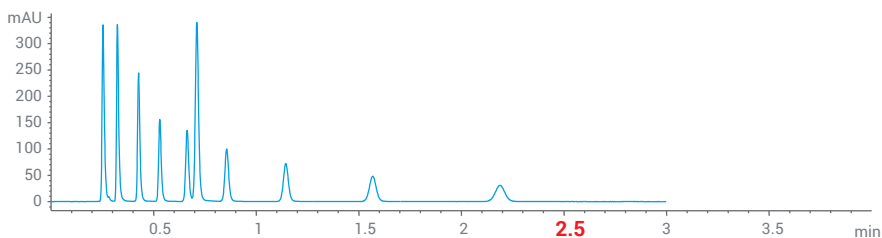
Conditions:

Mobile phase: 60% CH₃CN, 40% H₂O
 Flow rate: 0.85 mL/min
 Temperature: 26 °C
 Detection: 254 nm
 Sample: 2 µL of RRLC checkout sample (p/n 5188-6529), alkylphenones

InfinityLab Poroshell 120 EC-C18, 3.0 x 50 mm, 2.7 µm



InfinityLab Poroshell 120 EC-C8, 3.0 x 50 mm, 2.7 µm



EC-C18 is an excellent starting point. Use EC-C8 for less retention with a variety of samples.

Best for low-pH mobile phases: InfinityLab Poroshell 120 SB-C18 and SB-C8

SB-C18 and SB-C8 are made using bulky silanes that sterically protect the siloxane bond. Acid labile endcapping reagents are not used. The result is vastly improved column life and extraordinary chemical and temperature stability at pH 1-6. A lack of endcapping also provides a different selectivity to the endcapped EC-C18 and EC-C8.

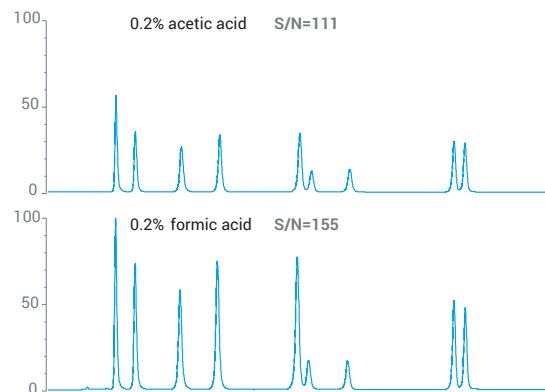
Conditions:

Column: InfinityLab Poroshell 120 SB-C18, 2.1 x 100 mm, 2.7 µm
 Mobile phase: A: Acid in H₂O
 B: CH₃CN
 Flow rate: 0.729 mL/min
 Gradient:

Time	%B
0.00	10
1.43	15
2.86	27

 Temperature: 40 °C
 Source: 350 °C, 10 L/min, 50 psi, -3500 V
 Acquisition: SIM Neg (169, 305, 193**, 289, 457, 441) **caffeine is not detected in Neg mode
 Sample: 3 µL of 3 µg/mL each of GA, GC, EGC, C, Caf, EC, EGCG, GCG, ECG, CG in H₂O/ CH₃CN

InfinityLab Poroshell 120 SB-C18 2.1 x 100 mm x 2.7 µm



Samples:
 Gallic acid
 Gallocatechin
 Epigallocatechin
 Catechin
 Caffeine
 Epicatechin
 Epigallocatechin gallate
 Gallocatechin gallate
 Epicatechin gallate
 Catechin gallate

Agilent InfinityLab Poroshell 120 SB chemistry provides exceptional peak shape and column stability at low-pH. A separation of catechins in green tea demonstrates the value of screening acidic modifiers to enhance LC/MS detection sensitivity.

Learn more at www.agilent.com/cs/library/applications/5990-7824EN.pdf

Best for high-pH mobile phases: InfinityLab Poroshell HPH-C18 and HPH-C8

HPH-C18 and HPH-C8 incorporate hybrid InfinityLab Poroshell particle technology to provide high-pH stability. Hybrid particle technology improves overall particle ruggedness at extended pH, enabling long lifetimes and fewer column changes. The selectivity of the HPH chemistries is very similar to EC-C18 and EC-C8, making method transfer simple.

Conditions:

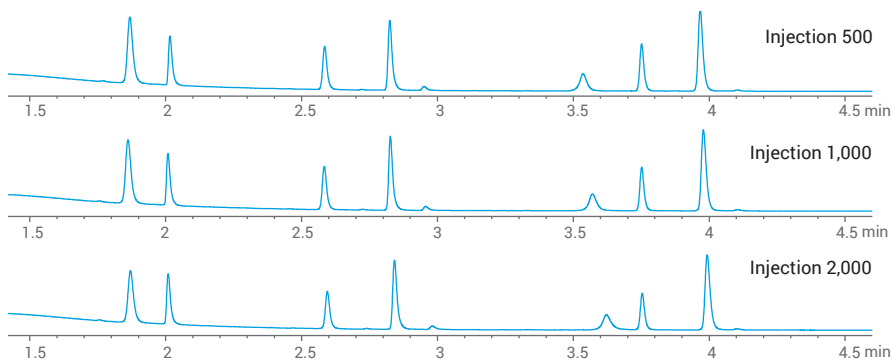
Instrument: 1260 Infinity II Binary LC
 Mobile phase: A: 10 mM Ammonium bicarbonate adjusted to pH 10.0 in water
 B: Acetonitrile
 Flow rate: 0.4 mL/min
 Gradient:

Time	% B
0	5
5	95
5.1	5

Sample:

1. Methyl salicylate
2. 4 Chlorocinnamic acid
3. Acetophenone
4. Quinine
5. Nortryptiline
6. Heptanophenone
7. Amitriptyline

InfinityLab Poroshell HPH-C18, 2.1 x 50 mm, 2.7 µm



After 2,000 injections at pH 10, InfinityLab Poroshell 120 HPH-C18 showed no change in performance.

A robust method development process is critical to ensuring that your method is long lasting, stable, and reliable. Because the retention and selectivity of ionizable compounds can change significantly with varying pH, it is becoming standard practice to employ low, medium, and high-pH analyses during method development.

Conditions:

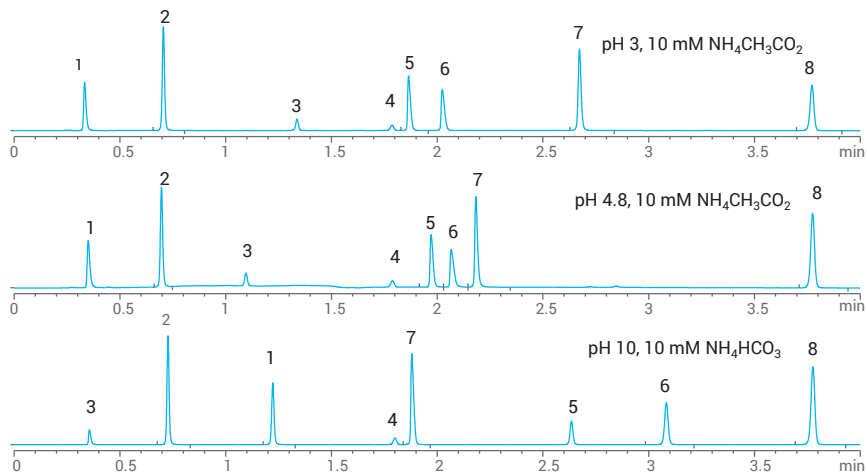
Flow rate: 2 mL/min
 UV detection: 254 nm
 Gradient:

Time	%Buffer	%MeCN
0	10	90
5	90	10
7	10	90

Sample:

1. Procainamide
2. Caffeine
3. Acetyl salicylic acid
4. Hexanophenone deg.
5. Dipyrimadole
6. Diltiazem
7. Diflunisal
8. Hexanophenone

InfinityLab Poroshell HPH-C18, 4.6 x 50 mm, 2.7 µm

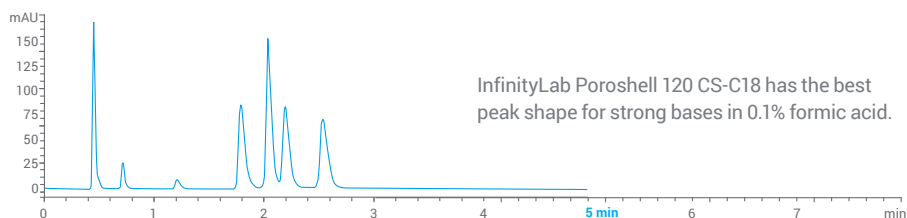


Here, a method using low, medium, and high pH separates the same mixture of acids, bases, and neutrals. The highest resolution for all compounds was obtained under higher-pH conditions; therefore, high pH would be the best choice going forward.

► New Best peak shape for bases in low pH mobile phases: InfinityLab Poroshell 120 CS-C18

Analyze basic compounds at low pH using common additives such as formic acid. The novel bonding process used in InfinityLab Poroshell 120 CS-C18 columns incorporates a charge to the surface of the particle, eliminating interactions with amine-containing compounds and reducing the need for ion pairing reagents such as TFA. Now, basic compounds can be analyzed at low pH with MS-friendly modifiers, including formic and acetic acid.

InfinityLab Poroshell 120 CS-C18 2.1 X 50 mm, 2.7 µm



Conditions:

Column: InfinityLab Poroshell 120 CS-C18, 2.1 X 50 mm, 2.7 µm

Mobile

phase: A: 0.1% Formic Acid in Water;
B: 0.1% Formic Acid in ACN;
A/B = 78:22

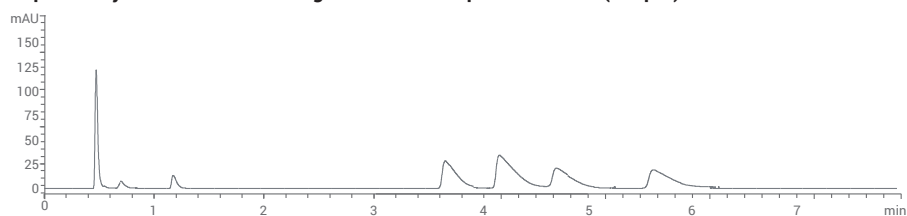
Injection

Volume: 0.3 µL
Temp.: 30 °C
Detection: UV 254 nm
Flow Rate: 0.25 mL/min

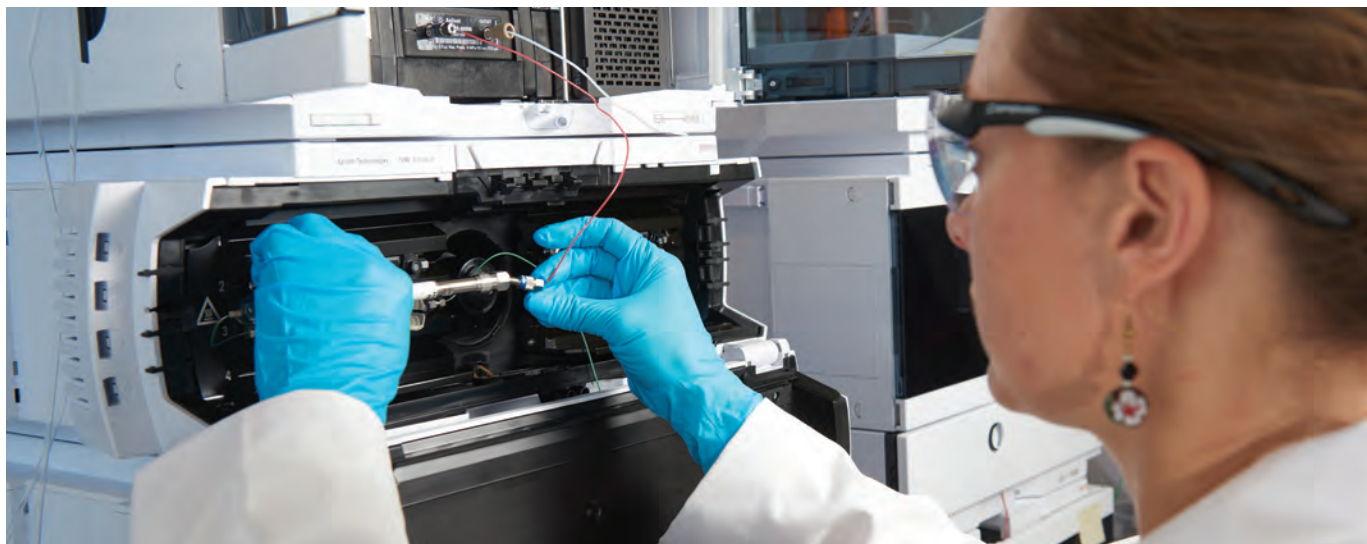
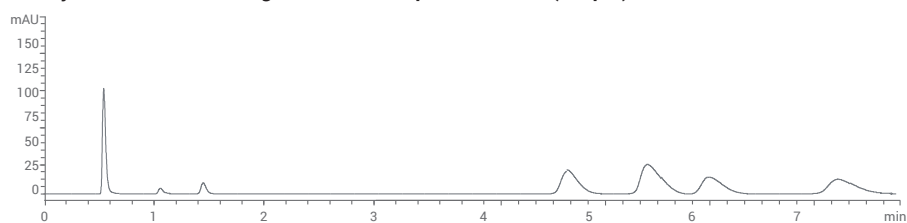
Sample:

1. Nortriptyline
2. Imipramine
3. Amitriptyline
4. Trimipramine

Superficially Porous Particle Charged Surface Competitor column (2.7 µm)



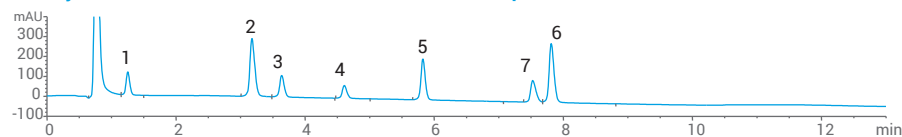
Totally Porous Particle Charged Surface Competitor column (2.5 µm)



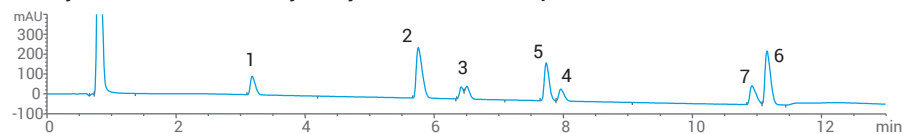
Best for alternative selectivity: InfinityLab Poroshell 120 Bonus-RP, PFP, and Phenyl-Hexyl

Alternate selectivities allow you to explore various conditions to find optimal separation of your analytes of interest. The Phenyl-Hexyl phase provides alternate selectivity to C18 phases, particularly for analytes containing aromatic groups. Bonus-RP provides unique mid-pH selectivity with an embedded amide linkage in the alkyl chain.

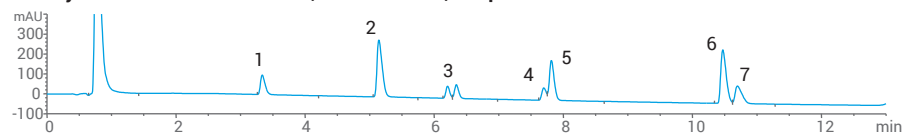
InfinityLab Poroshell 120 Bonus-RP, 2.1 x 100 mm, 2.7 μ m



InfinityLab Poroshell 120 Phenyl-Hexyl, 2.1 x 100 mm, 2.7 μ m



InfinityLab Poroshell 120 EC-C18, 2.1 x 100 mm, 2.7 μ m



Conditions:

Instrument: 1260 Infinity II Binary LC
 Mobile phase: A: 10 mM NH_4HCO_2 , pH 3.8
 B: MeOH
 Flow rate: 0.4 mL/min
 Temperature: 40 °C
 Detection: 260 nm
 Gradient: 10% B to 30% B/12 min

Sample:

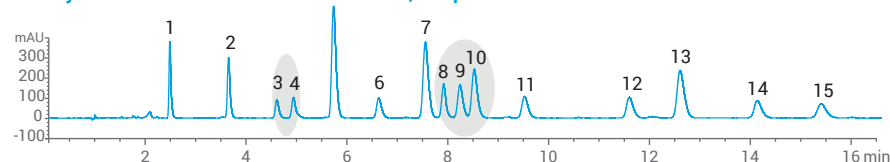
- | | |
|---------------|----------------|
| 1. Atenolol | 5. Acebutolol |
| 2. Pindolol | 6. Propranolol |
| 3. Nadolol | 7. Alprenolol |
| 4. Metoprolol | |

Analysis of beta blockers: a comparison of InfinityLab Poroshell 120 phases.

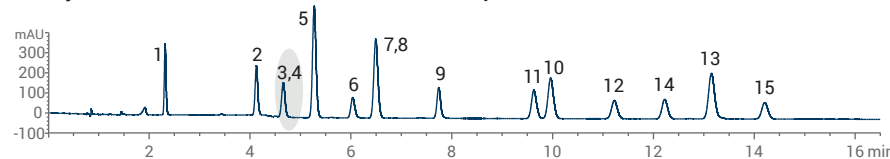
This challenging separation demonstrates different selectivities across bonded phases. Overall, the Bonus-RP phase delivered the best peak shape and resolution.

PFP is a pentafluorophenyl ligand, which provides an orthogonal separation mechanism with C18 chemistries. PFP phases can separate analytes based on small differences in structure, substitution, and steric access to polar moieties. The resulting selectivity for positional isomers, halogenated compounds, and polar analytes is particularly useful when analyzing complex mixtures.

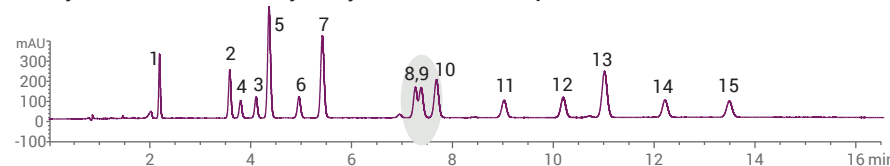
InfinityLab Poroshell 120 PFP 4.6 x 150 mm, 2.7 μ m



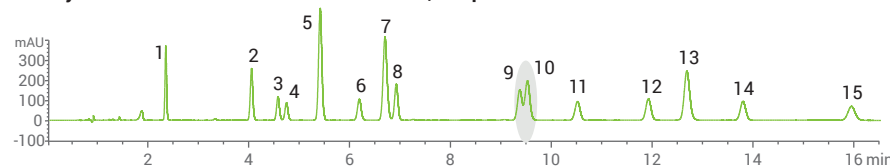
InfinityLab Poroshell 120 EC-C18 4.6 x 150 mm, 2.7 μ m



InfinityLab Poroshell 120 Phenyl-Hexyl 4.6 x 150 mm, 2.7 μ m



InfinityLab Poroshell 120 EC-C8 4.6 x 150 mm, 2.7 μ m



Conditions:

Mobile phase: A: Water (0.1% acetic acid)
 B: Acetonitrile
 Flow rate: 2 mL/min

Positional isomers (15 compounds)

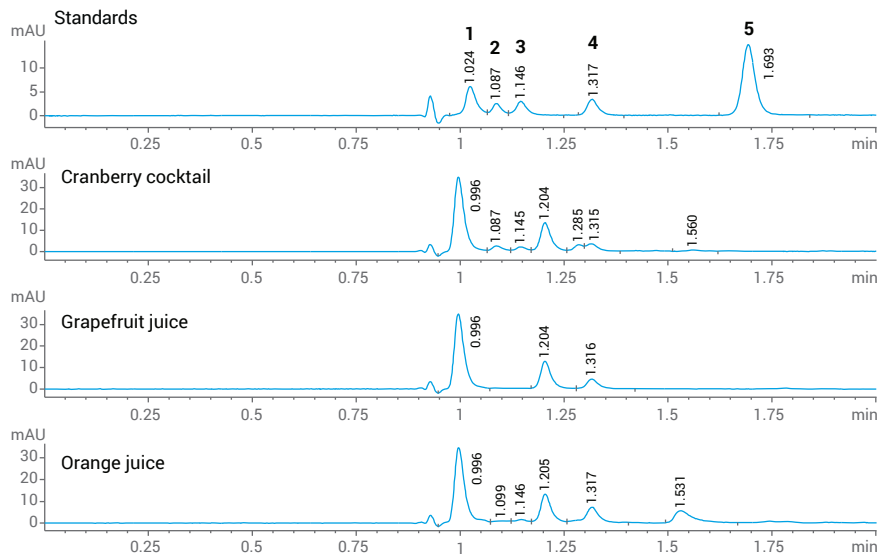
Sample:

- 3,4 Dimethoxyphenol
- 2,6 Dimethoxyphenol
- 3,5 Dimethoxyphenol
- 2,6 Difluorophenol
- 2,4 Difluorophenol
- 2,3 Difluorophenol
- 3,4 Difluorophenol
- Degradation product
2,6 dimethoxyphenol
- 3,5 Dimethylphenol
- 2,6 Dimethylphenol
- 2,6 Dichlorophenol
- 4 Chloro 3 methyl phenol
- 4 Chloro 2 methyl phenol
- 3,4 Dichlorophenol
- 3,5 Dichlorophenol

Alternate selectivity for polar compounds: InfinityLab Poroshell 120 SB-Aq

SB-Aq is a proprietary alkyl reversed-phase chemistry designed to retain hydrophilic and other compounds when using highly aqueous mobile phases—including 100% water.

InfinityLab Poroshell 120 SB-Aq, 3 × 100 mm, 2.7 μm



Conditions:

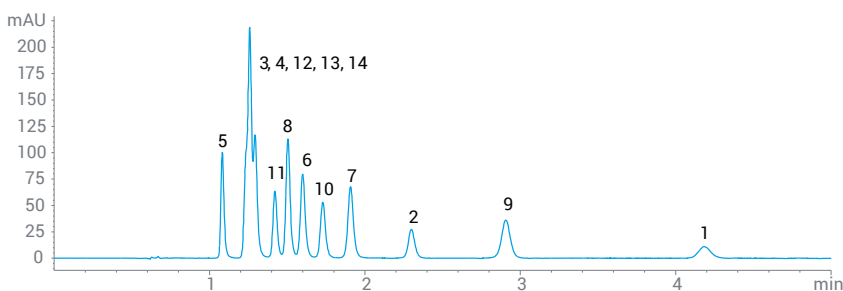
Eluent: 100 mM Potassium phosphate buffer, pH 2.5
 Injection volume: 5 μL
 Flow rate: 0.5 mL/min
 Temperature: 50 °C
 Detector: DAD, at 226 nm

Sample:

1. Tartaric acid
2. Quinic acid
3. Malic acid
4. Citric acid
5. Fumaric acid

Agilent InfinityLab Poroshell 120 EC-CN offers very different selectivity compared to C18 for mixtures of polar, mid-polar and non-polar compounds. The EC-CN phase can also be used in normal phase mode for retention of polar compounds.

InfinityLab Poroshell 120 EC-CN, 2.1 × 100 mm, 2.7 μm



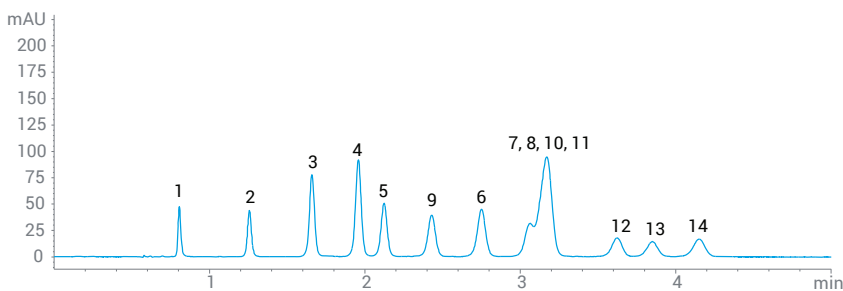
Conditions:

Instrument: Agilent 1290 Infinity LC
 Sample concentration: 20 μg/mL of each compound
 Eluent: A, H₂O; B, CH₃OH
 Injection volume: 1 μL
 Flow rate: 0.4 mL/min
 Isocratic: 50% B
 Temperature: 25 °C
 Detector: 254 nm

Sample:

- Explosive residues
1. HMX
 2. RDX
 3. 1,3,5-Trinitrobenzene
 4. 1,3-Dinitrobenzene
 5. Nitrobenzene
 6. 2,4,6-Trinitrotoluene
 7. 2-Amino-4,6-dinitrotoluene
 8. 2,4-Dinitrotoluene
 9. Tetryl
 10. 4-Amino-2,6-dinitrotoluene
 11. 2,6-Dinitrotoluene
 12. 2-Nitrotoluene
 13. 4-Nitrotoluene
 14. 3-Nitrotoluene

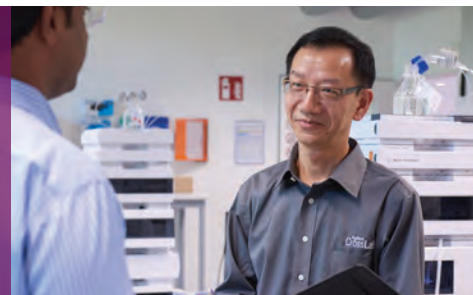
InfinityLab Poroshell 120 EC-C18, 2.1 × 100 mm, 2.7 μm



Alternate selectivity is observed when comparing InfinityLab Poroshell EC-CN and EC-C18 phases for the analysis of explosives using EPA 8330A method parameters.

Learn more at www.agilent.com/cs/library/applications/5991-7538EN.pdf

Analyze challenging polar compounds with confidence

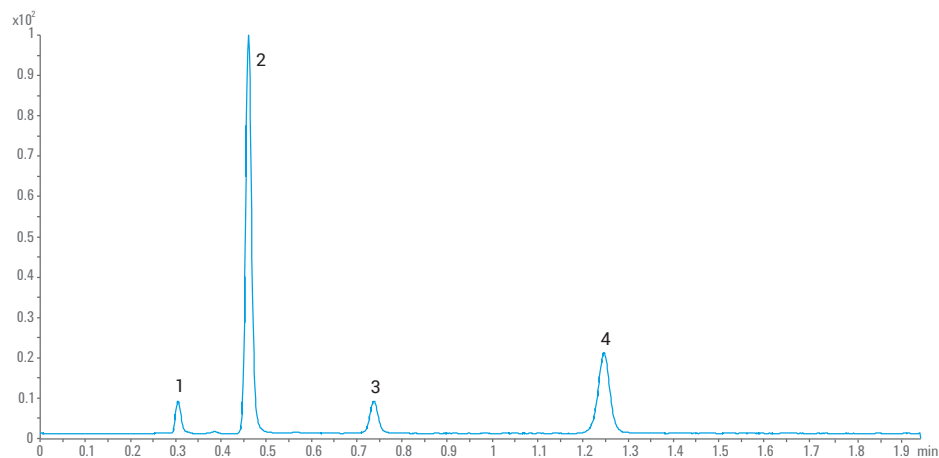


Hydrophilic interaction chromatography (HILIC) is gaining popularity due to its ability to retain and separate small polar analytes using a standard LC system and common reversed-phase solvents.

Advantages of this technique include:

- Simplicity: Just change the column and adjust the method to analyze highly polar compounds
- Better retention of polar analytes than reversed-phase methods
- MS-compatible eluents and easy setup
- Improved ionization and sensitivity in MS mode

InfinityLab Poroshell 120 HILIC, 2.1 x 100 mm, 2.7 μ m



Conditions:

Mobile phase: Acetonitrile: 100 mM NH_4HCO_2 , pH 3.2 (9:1)

Flow rate: 0.7 mL/min

Temperature: 25 °C

Pressure: 240 bar

System: 1290 Infinity II LC and 6410 Triple Quadrupole LC/MS

Sample:

1. 4 Aminobenzoic acid

2. Nicotinamide

3. Riboflavin

4. Nicotinic acid

InfinityLab Poroshell 120 HILIC eliminates the need for ion-pair reagents, such as the hexane sulfonic acid that is typically used in mobile phases for separating B vitamins. It also improves LC/MS compatibility and retention.

Retain highly charged compounds, including inorganic salts:

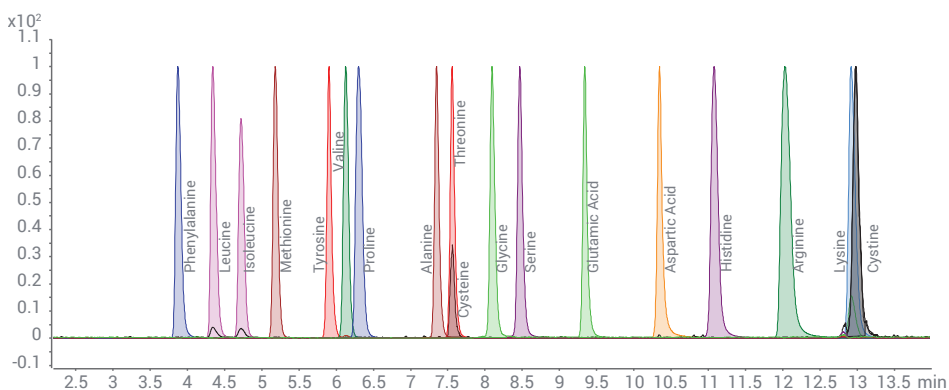
► New InfinityLab Poroshell 120 HILIC-Z

This Agilent column innovation features a novel zwitterionic stationary phase bonded to Poroshell 120 particles.

Advantages include:

- High peak capacity and wide polarity range
- A PEEK-lined column option for excellent peak shape and recovery of challenging compounds
- Robust performance
 - High pH stability: Up to pH 12 at 35 °C; Temperature stability to 80 °C at pH 7
 - Tolerates samples with high salt or buffer content
 - Compatible with MS-friendly buffers (<10 mM salt content); low MS bleed

InfinityLab Poroshell HILIC-Z 2.1 x 100 mm, 2.7 µm



Conditions:

- Mobile phase: A: 20 mM ammonium formate in H₂O, pH3
B: 90:10 ACN/H₂O with 20 mM ammonium formate, pH3
- Gradient: 100% B to 70% B over 10 min, return to 100% B
- Flow rate: 0.8 mL/min
- Temp: 30 °C
- MS detection: Agilent MS-QQQ, MS2 SIM mode

Excellent retention, peak shape, and sensitivity for underivatized amino acids by LC/MS.



Perform fast, high-resolution chiral separations



Now you don't have to compromise on your chiral separations

► New InfinityLab Poroshell 120 Chiral columns

Agilent chiral columns combine superficially porous particles with innovative chiral stationary phases to deliver:

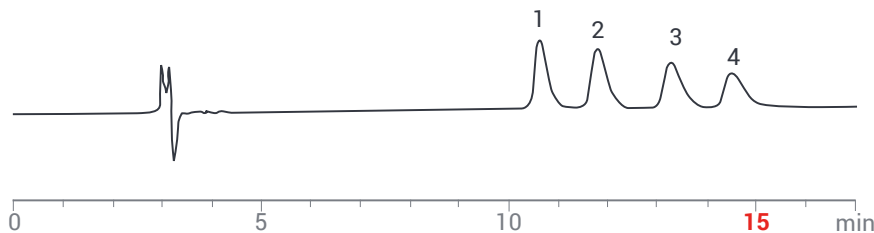
- Higher performance and speed, compared to totally porous chiral stationary phases
- Ruggedness and reliability with proven Agilent Poroshell 120 particle technology
- Increased sample throughput and lab productivity with more efficient chiral separations

Perform chiral separations in less than 5 minutes using your existing LC systems

Superficially porous particles provide higher efficiency and sharper peak shapes. Throughput is dramatically improved with shorter runtimes, compared to fully porous particle columns.

Traditional Chiral Separation—totally porous particle

Chirobiotic V2 (4.6 x 250 mm, 5 µm)



Conditions:

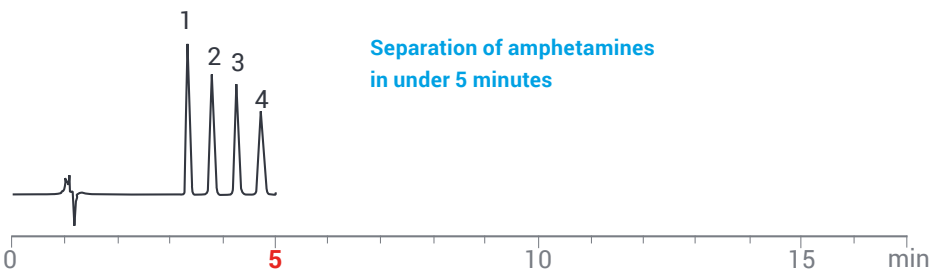
Eluent: 100/0.1/0.02, MeOH/HOAc/NH₄OH
Flow Rate: 1.0 mL/min
Detector: UV at 220 nm

Sample:

1. D-(+)-Amphetamine
2. L(-)-Amphetamine
3. D-(+)-Methamphetamine
4. L(-)-Methamphetamine

Agilent Poroshell 120 Chiral Separation—superficially porous particle

InfinityLab Poroshell 120 Chiral-V (4.6 x 100 mm, 2.7 µm)



Conditions:

Eluent: 100/0.1/0.02, MeOH/HOAc/NH₄OH
Flow Rate: 1.0 mL/min
Detector: UV at 220 nm

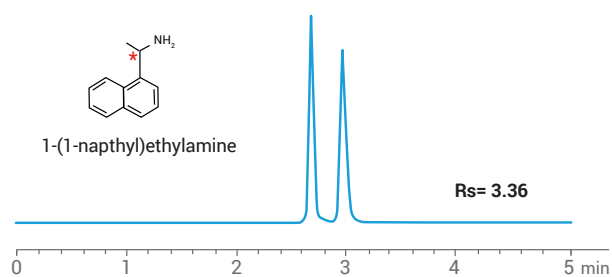
Sample:

1. D-(+)-Amphetamine
2. L(-)-Amphetamine
3. D-(+)-Methamphetamine
4. L(-)-Methamphetamine

Separate nearly any chiral compound: Four chemistries across four different LC modes offer a wide range of selectivities

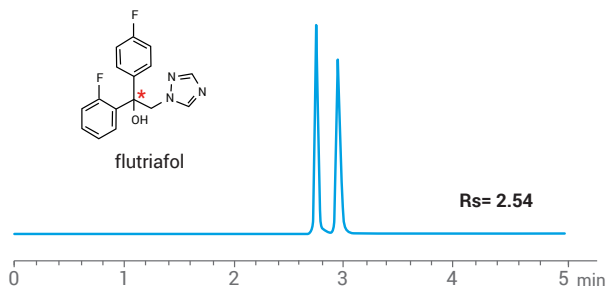
Column Chemistry	Chiral Selector (bonded chemistry)	Typical LC Mode	Typical Applications
InfinityLab Poroshell 120 Chiral-CF	Derivatized cyclofructan (CF6)	Polar Organic (PO)	Primary amines
		Normal Phase (NP)	Primary amines
InfinityLab Poroshell 120 Chiral-CD	Hydroxypropylated- β -cyclodextrin	Reversed Phase (RP)	Stimulants, fungicides, t-boc amino acids
		Polar Organic (PO)	Complex molecules
InfinityLab Poroshell 120 Chiral-V	Vancomycin (macrolide antibiotic)	Polar Ionic (PI)	Basic pharmaceuticals (various)
		Reversed Phase (RP)	Amines, profens
		Polar Organic (PO)	Complex neutral molecules
InfinityLab Poroshell 120 Chiral-T	Teicoplanin (macrolide antibiotic)	Polar Ionic (PI)	Beta blockers, hydroxyl acids
		Reversed Phase (RP)	Amino acids, hydroxyl acids, profens
		Polar Organic (PO)	Hydantoins, benzodiazepines

InfinityLab Poroshell 120 Chiral-CF



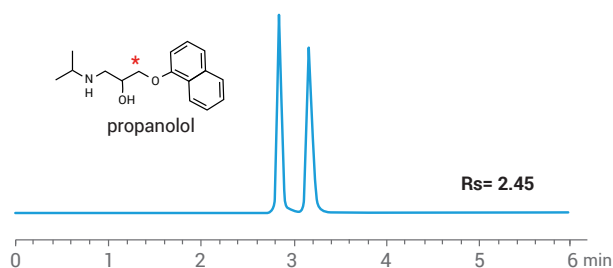
Column: 4.6 x 100 mm, 2.7 μ m
 Mobile phase: 60/40/0.3/0.2: Acetonitrile/Methanol/Acetic Acid/TEA
 Flow Rate: 1.0 mL/min
 Detection: UV 280 nm

InfinityLab Poroshell 120 Chiral-CD



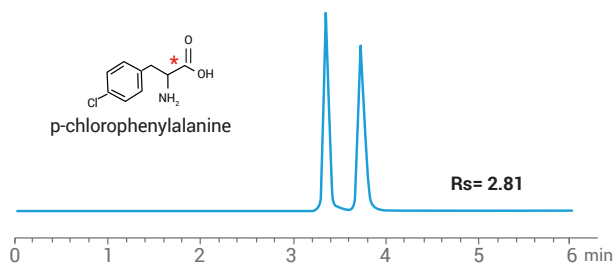
Column: 4.6 x 150 mm, 2.7 μ m
 Mobile phase: 30/70: Acetonitrile/ 50 mM Ammonium Formate (pH 3.6)
 Flow Rate: 1.0 mL/min
 Detection: UV 230 nm

InfinityLab Poroshell 120 Chiral-V



Column: 4.6 x 100 mm, 2.7 μ m
 Mobile phase: 100/0.2/0.05: Methanol/Acetic Acid/ Ammonium Hydroxide
 Flow Rate: 1.0 mL/min
 Detection: UV 230 nm

InfinityLab Poroshell 120 Chiral-T



Column: 4.6 x 100 mm, 2.7 μ m
 Mobile phase: 30/70: Acetonitrile/ 50 mM Ammonium Formate (pH 3.6)
 Flow Rate: 0.5 mL/min
 Detection: UV 220 nm

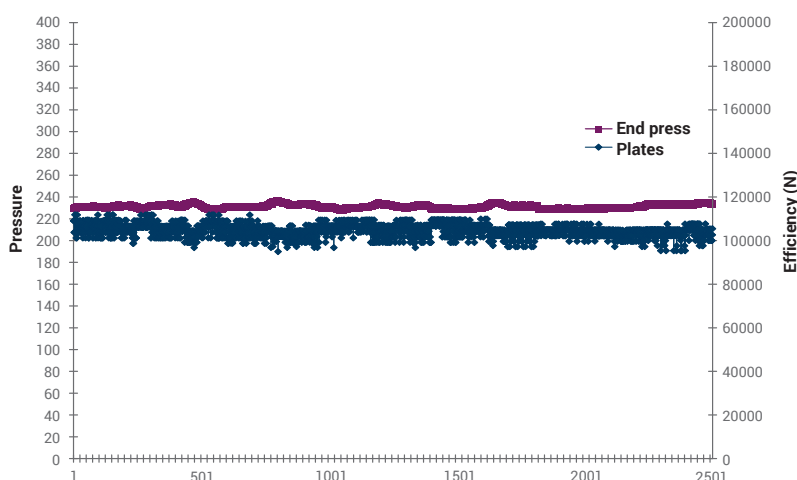
Make every LC work harder



Long column lifetimes provide added value

You can count on InfinityLab Poroshell 120 particles to be robust under the most demanding operating conditions. In addition, InfinityLab Poroshell 2.7 μm and 4 μm columns are manufactured with 2 μm inlet frits to resist plugging, even with the dirtiest samples.

InfinityLab Poroshell 120 EC-C18 3.0 x 50 mm, 2.7 μm



Conditions:

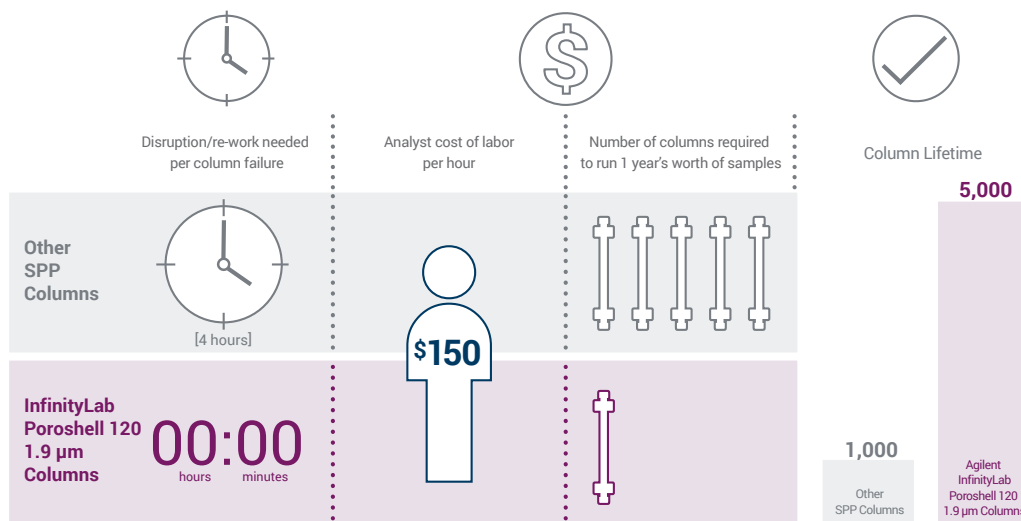
Instrument:	1200 Infinity RRLC (SL)		
Injection volume:	1 μL		
Solvent A:	Water with 0.1 % TFA		
Solvent B:	MeCN with 0.08 % TFA		
Flow Rate:	1 mL/min	Time	%B
		0	20
		0.5	90
		0.6	90
		1.1	20
		2.5	20

Sample:

Precipitated plasma: 2 parts plasma, 7 parts 20:80 water:
MeCN with 1.0% formic acid with 1 part diflunisal in 50:50
water: MeCN 10 $\mu\text{g}/\text{mL}$ (final concentration diflunisal
1 $\mu\text{g}/\text{mL}$) shaken and allowed to settle 10 minutes.
1.0% formic acid aids in the precipitation process.

Not centrifuged and not filtered

Robust InfinityLab Poroshell 120 1.9 μm columns last up to five times longer than other SPP columns. Longer column lifetimes reduce operating costs by preventing expensive disruption and re-work due to column failure.



Learn more at www.agilent.com/cs/library/brochures/Poroshell120_5991-7352EN.pdf

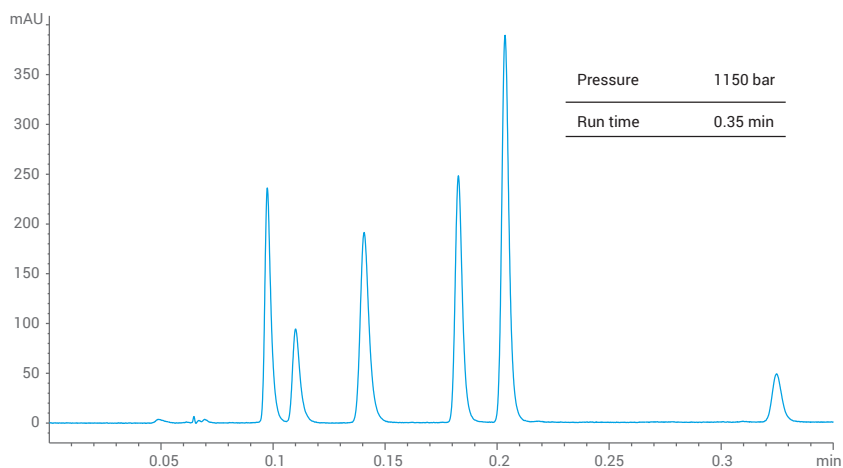
Get more from every LC system in your lab

System	Max pressure (bar)	Typical LC instrument	We recommend
UHPLC (very low dispersion)	600-1000+	Agilent 1290 Infinity II	InfinityLab Poroshell 1.9 μm InfinityLab Poroshell 2.7 μm
UHPLC (moderate-low dispersion)	600-1000	Agilent 1260 Infinity II Agilent 1260 Infinity II Prime	InfinityLab Poroshell 2.7 μm InfinityLab Poroshell 4 μm
HPLC	400 -600	Agilent 1220 Infinity II	InfinityLab Poroshell 4 μm InfinityLab Poroshell 2.7 μm

Ultrafast separations: InfinityLab Poroshell 120 1.9 μm

InfinityLab Poroshell 120 1.9 μm columns generate lower pressures than many other sub-2 μm superficially porous columns. That means you can use high flow rates to drive ultrafast separations without exceeding the pressure rating of your UHPLC instruments.

InfinityLab Poroshell 120 EC-C18, 2.1 x 50 mm, 1.9 μm



Conditions:

Instrument: Agilent 1290 Infinity II
 Mobile phase: A: 0.2% formic acid in water
 B: Acetonitrile
 Gradient: 8-26% B in 0.3 min
 Flow rate: 2.2 mL/min
 Temperature: 60 °C
 Detection: 280 nm @ 160 Hz
 Sample: 5 μL of 0.01 mg/mL each of protocatechuic acid, DOPAC, PABA, vanillic acid, syringic acid, salicylic acid

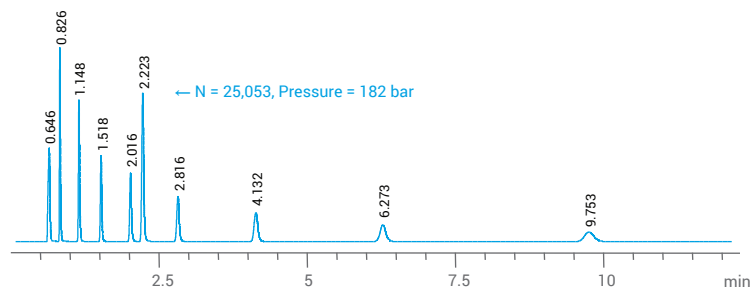
An ultrafast UHPLC separation with baseline resolution of 6 aromatic acids using an InfinityLab Poroshell 1.9 μm column together with a high flow rate.



UHPLC performance at HPLC pressures: InfinityLab Poroshell 120 2.7 μm

Achieve up to 90% or more of the efficiency you would expect from a sub-2 μm totally porous particle column, but at HPLC pressures. This enables you to maximize the separation performance and analytical throughput of your HPLC systems. You can also use shorter columns at higher flow rates to achieve fast separations—dramatically enhancing productivity and decreasing cost per sample.

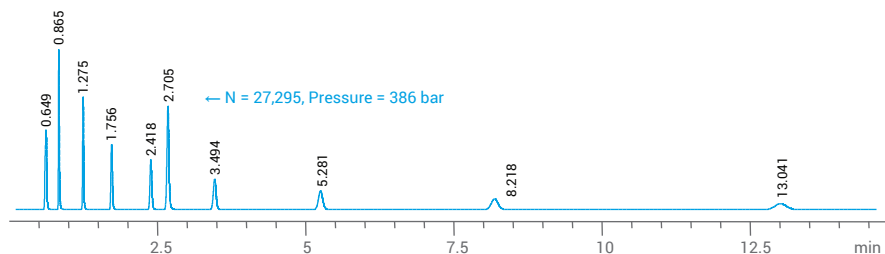
InfinityLab Poroshell 120 EC-C18, 3.0 x 100 mm, 2.7 μm



Conditions:

Mobile phase: 60% Acetonitrile, 40% water
 Flow rate: 0.58 mL/min
 Injection volume: 4 μL
 Temperature: 26 $^{\circ}\text{C}$
 Detection: DAD Sig = 254,4 nm
 Ref = 360,100 nm
 Sample: RRLC checkout sample (p/n 5188-6529) spiked with 50 μL 2 mg/mL thiourea in water: acetonitrile (65:35)

ZORBAX Eclipse Plus C18, 3.0 x 100 mm, 1.8 μm

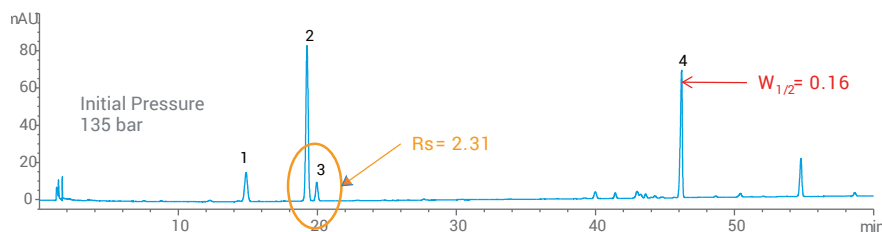


Use a 2.7 μm Poroshell particle column to obtain >90% of the efficiency at half the pressure of a 1.8 μm totally porous particle column.

Improved HPLC performance: InfinityLab Poroshell 120 4 μm

InfinityLab Poroshell 120 4 μm columns offer nearly double the efficiency of totally porous 5 μm particles. That means you can improve separations performance by simply replacing the 5 μm totally porous column of your legacy methods, without changing column dimensions or requiring significant method development. What's more, alignment between ZORBAX and Poroshell chemistries makes this an easy transition for immediate improvement in your analysis.

InfinityLab Poroshell 120 EC-C18, 4.6 x 150 mm, 4 μm



Conditions:

Mobile phase: A: Water
 B: Acetonitrile
 Gradient for 4.6 x 150 mm columns:

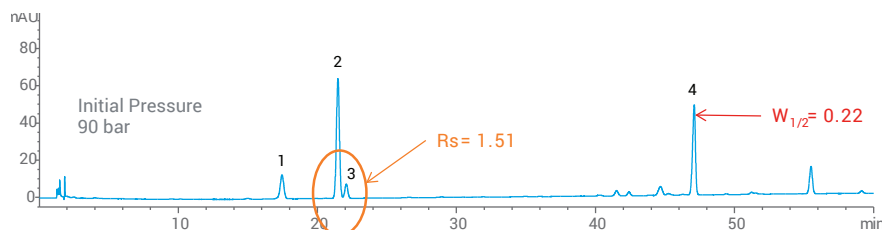
Time (min)	%A
0	81
12	81
60	64
61	10
65	10
66	81
70	81

 Temperature: 30 $^{\circ}\text{C}$
 Flow rate: 1.0 mL/min
 Injection volume: 10 μL
 Detection: UV, 203 nm

Sample:

1. Notoginsenoside R1
 2. Ginsenoside Rg1
 3. Ginsenoside Re
 4. Ginsenoside Rb1

ZORBAX Eclipse Plus C18, 4.6 x 150 mm, 5 μm



Improved results with no change to the method conditions, other than the column used. In this example, direct replacement with an InfinityLab Poroshell 120 4 μm column decreased peak width by 50% and improved resolution compared to the 5 μm totally porous column.

Agilent InfinityLab

Agilent InfinityLab is designed to provide you with the highest efficiency in your LC and LC/MSD workflows—regardless of application area. InfinityLab is an optimized portfolio of LC instruments, mass selective detectors, columns, and supplies designed to work together in perfect harmony.

Combined with Agilent OpenLAB software and Agilent CrossLab Services, Agilent provides you with end-to-end solutions and support to make every day more productive.

More at: www.agilent.com/chem/infinitylab



Agilent 1220
Infinity II LC

Agilent 1260
Infinity II LC

Agilent 1290
Infinity II LC

InfinityLab LC Series

From routine analysis to cutting-edge research, the Agilent InfinityLab LC Series provides the broadest portfolio of LC systems and solutions for any application and budget to achieve highest efficiency.

Affordable efficiency

The Agilent 1220 Infinity II LC is an affordable, high-quality integrated LC system, putting you on the fast track to efficiency.

Everyday efficiency in every way

The Agilent 1260 Infinity II LC is the trusted platform with the broadest instrument choice, taking you to the next level of efficiency.

The benchmark in efficiency

The Agilent 1290 Infinity II LC embodies the next generation of LC, giving you the ultra-high performance to achieve maximum efficiency.



InfinityLab Supplies

Save time and minimize troubleshooting

InfinityLab Quick Connect fittings

Now you can be sure you're getting a perfect column connection, from every user, every time with simple-to-use, finger-tight connections. Quick-Connect fittings are reusable for more than 200 reconnections and stable up to 1300 bar.

InfinityLab Quick Turn fittings

For instrument connections that are in confined spaces, you can rely on spring-loaded, Agilent InfinityLab Quick Turn fittings for a perfect connection, every time.

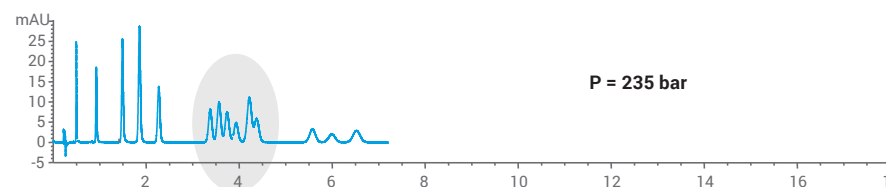
Flexible method handling from UHPLC... to legacy... to LC/MS



Flexibility to choose longer columns for higher resolution

As the column gets longer, resolution improves and pressure increases. Maximize resolution by running longer columns on an Agilent InfinityLab Series 1260 or 1290 UHPLC system with InfinityLab Poroshell 120 columns rated to 600, 1000 or 1300 bar.

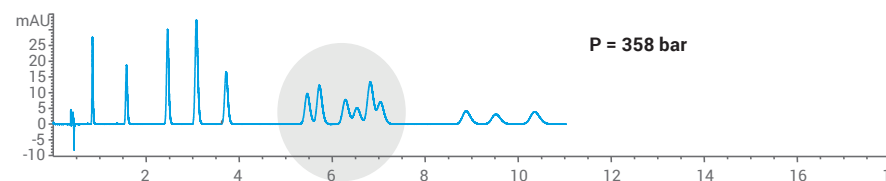
InfinityLab Poroshell 120 EC-C18, 4.6 x 50 mm, 2.7 μm



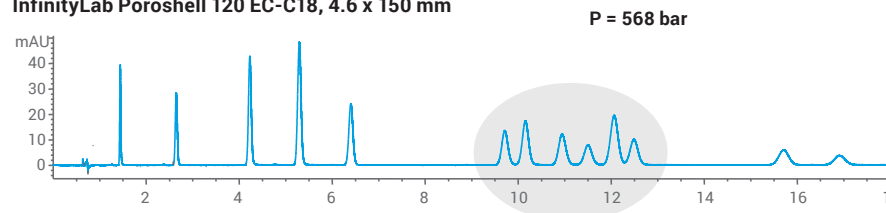
Conditions:

Mobile phase: 25% Methanol, 75% water
Flow rate: 1 mL/min
Temperature: 44 °C

InfinityLab Poroshell 120 EC-C18, 4.6 x 100 mm



InfinityLab Poroshell 120 EC-C18, 4.6 x 150 mm



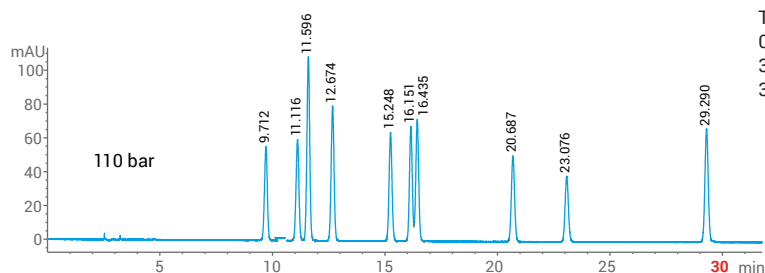
Balancing column length, resolution, and analysis time are important for any separation to obtain the optimal separation in the fastest runtime, thereby maximizing lab throughput and productivity.



Simple transfer of legacy methods

Easily transfer legacy methods to InfinityLab Poroshell 120 to gain the separation and throughput benefits of superficially porous particles. Alignment between ZORBAX and Poroshell chemistries simplifies this transition. In the example below, comparable chemistries are used and all method conditions were kept the same, except the gradient time which was adjusted for the shorter column.

ZORBAX Eclipse Plus C18, 4.6 x 250 mm, 5 µm



Time	%B
0	8
33	33
35	33

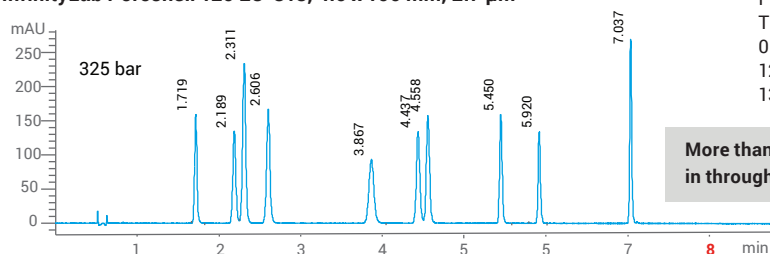
Conditions:

Mobile phase:
A: 0.1% Formic acid in water
B: 0.1% Formic acid in acetonitrile

Sample:

1. Sulfadiazine
2. Sulfathiazole
3. Sulfapyridine
4. Sulfamerazine
5. Sulfamethazine
6. Sulfamethazole
7. Sulfamethoxyipyridazine
8. Sulfachloropyridazine
9. Sulfamethoxazole
10. Sulfadimethoxine

InfinityLab Poroshell 120 EC-C18, 4.6 x 100 mm, 2.7 µm



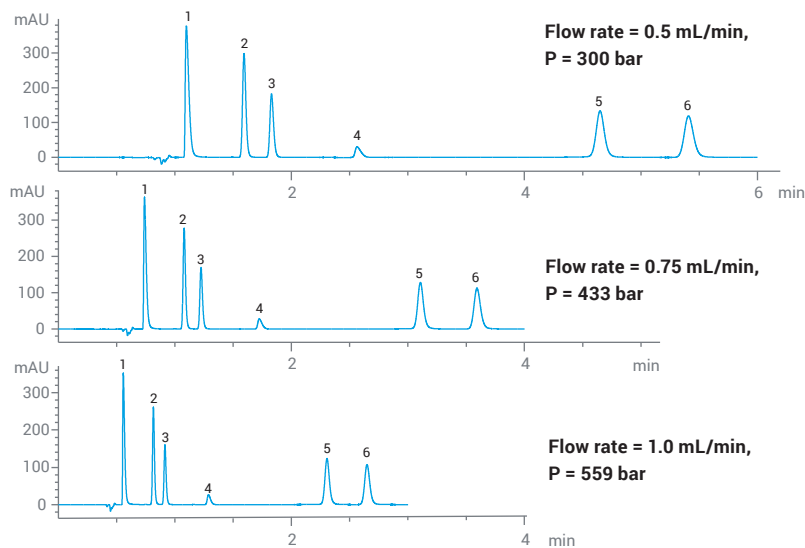
Time	%B
0	8
12	33
13.2	33

In this example, a legacy method is transitioned from a ZORBAX Eclipse Plus C18 column to a comparable Poroshell EC-C18 phase. Comparable resolution is achieved in a much shorter runtime on the InfinityLab Poroshell column, improving analytical throughput by 4x.

Increase flow rate for fast UHPLC separations

Take advantage of the pressure capabilities of InfinityLab Poroshell columns to speed up your separations. 1.9 µm and 2.7 µm InfinityLab Poroshell columns have lower backpressure than competitive columns, allowing you to increase the flow rates to maximize throughput. Upper pressure limits of 600 bar, 1000 bar and 1300 bar for InfinityLab Poroshell columns allow you to get the most out of your UHPLC instruments.

InfinityLab Poroshell 120 EC-C18 3.0 x 100 mm, 2.7 µm



Conditions:

Mobile phase: A: 65%, 0.2% Formic acid
B: 35% Methanol isocratic
Flow rate: see chromatograms
Injection volume: 1 µL
Temperature: 26 °C
Detection: Sig = 220, 4 nm, Ref = Off

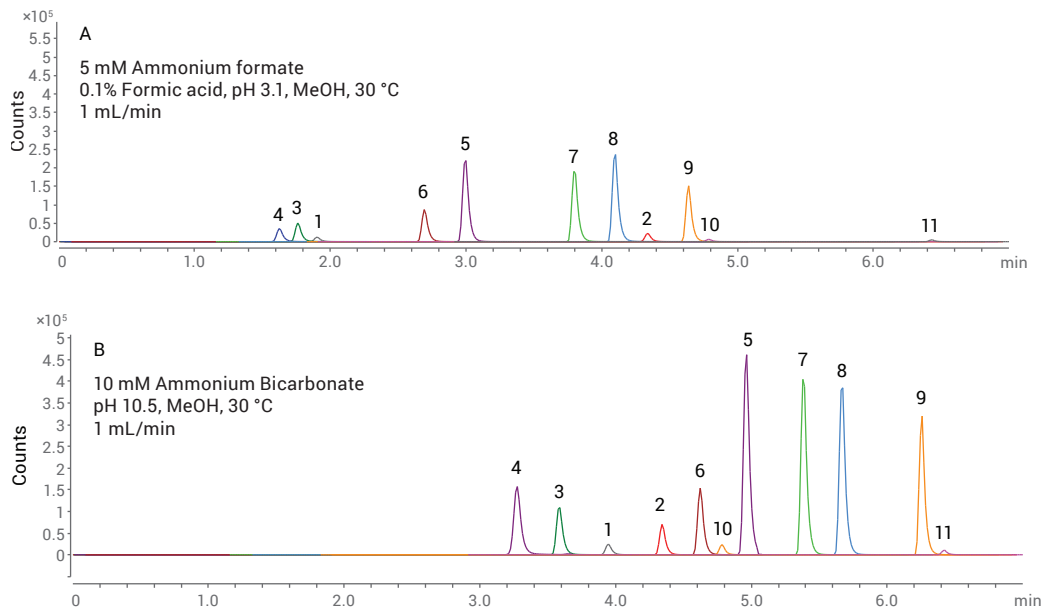
Sample:

1. Saccharin
2. Caffeine
3. p-Hydroxybenzoic acid
4. Aspartame
5. Dehydroacetic acid
6. Benzoic acid

Get the best performance from your LC/MS methods

High-efficiency InfinityLab Poroshell 120 columns are ideally suited to improve the resolution and sensitivity of your LC/MS methods. Use a 2.1 or 3 mm internal diameter (ID) column for the best flow rate compatibility with your MS.

InfinityLab Poroshell HPH-C18, 3.0 x 100 mm, 4 µm



Time	% B
0	10
0.5	15
3	50
6	95
8	95
8.5	10
9	10

- Sample:
1. Strychnine
 2. Alprazolam
 3. MDMA
 4. Amphetamine
 5. Trazodone
 6. Meperidine
 7. Verapamil
 8. Methadone
 9. Proadifen
 10. Diazepam
 11. THC

Excellent resolution for a separation of drugs of abuse by LC/MS using the InfinityLab Poroshell HPH column.

The high-pH stability of HPH allows the method to be run at pH 10.5—where an increase in retention and MS response for basic analytes is observed.

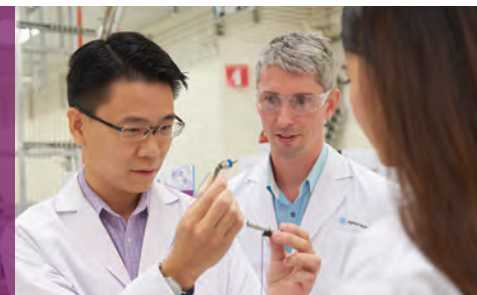


LC Column Navigator tool

Find a more efficient replacement for your current column—or get recommendations for a new column, based on method parameters.

www.agilent.com/chem/navigator

USP method transfer, made simpler



Modernize a USP method for naproxen tablets: 4.5x faster analysis on Agilent InfinityLab Poroshell 120 columns at HPLC pressures

This naproxen separation demonstrates how easy it can be to convert a method to InfinityLab Poroshell 120 columns without changing the flow rate or mobile phase.

The first chromatogram shows a USP analysis on an Agilent ZORBAX Eclipse Plus C18 column.

In the second and third chromatograms, the InfinityLab Poroshell 120 EC-C18 4 μm columns (150 mm and 100 mm) provide greater efficiency and speed than the original method as easy, drop-in replacements with reasonable pressures for HPLC.

In the fourth chromatogram, the InfinityLab Poroshell 120 EC-C18 2.7 μm column (100 mm) provides greater efficiency and resolution at nearly 2 times the speed of the original method. A shorter InfinityLab Poroshell 120 EC-C18 column (50 mm) in the fifth chromatogram still meets the requirements for efficiency and resolution, but is 4.5 times faster than the 5 μm column.

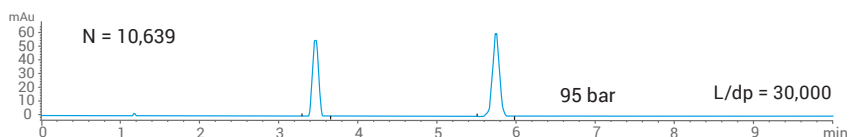
Conditions:

System suitability method requirement: $N > 4,000$, $R_s > 11.5$
 Mobile phase: 50:49:1 MeCN:H₂O:acetic acid
 Flow rate: 1.2 mL/min

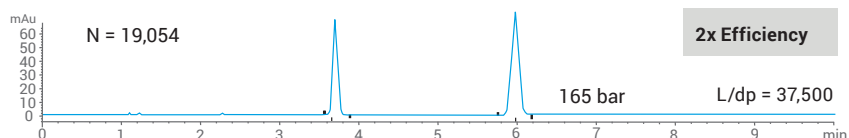
Sample:

1. Naproxen
2. Butyrophenone

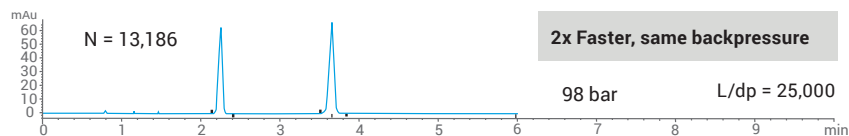
ZORBAX Eclipse Plus C18, 4.6 x 150 mm, 5 μm USP Prescribed Column



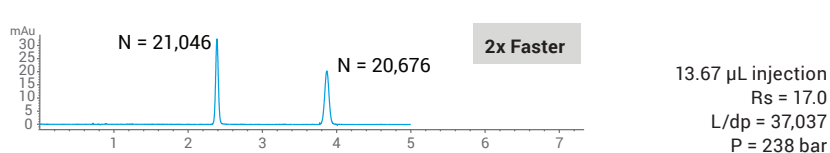
InfinityLab Poroshell 120, 4.6 x 150 mm (L1) 4 μm



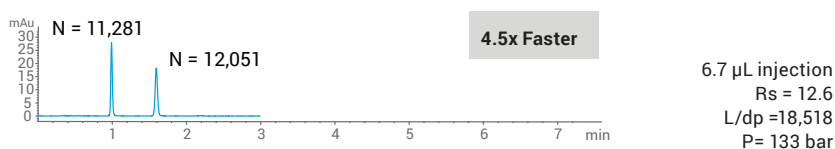
InfinityLab Poroshell 120, 4.6 x 100 mm (L1), 4 μm



InfinityLab Poroshell 120 EC-C18, 4.6 x 100 mm (L1), 2.7 μm



InfinityLab Poroshell 120 EC-C18, 4.6 x 50 mm (L1), 2.7 μm



Alignment of InfinityLab Poroshell 120 and ZORBAX chemistries means that selectivities are very similar between column families—making it easy to transfer your legacy methods.

Transfer of USP methods

USP methods are widely used in pharmaceutical drug products and raw materials testing. These methods can be updated by making adjustments that follow the recommendations in USP chapter <621> (updated August 2014). Modifications outside these ranges are considered method changes, and typically require method revalidation.

Parameters for System Suitability	USP37-NF32S1
Particle size (dp)	L/dp: -25% to +50%
Column length (L)	or N: -25% to +50%
Column inner diameter	Flexible, w/ constant linear velocity
Flow rate	Based on dp Additional adjustments: ±50%, provided N decreases ≤20%
Injection volume	May be adjusted as far as is consistent with precision and detection limits
Column temperature	±10 °C
Mobile phase pH	±0.2 units
Salt concentration	Within ±10% if the permitted pH variation is met
Ratio of components in mobile phase	Minor component (≤50%): ±30% relative, but cannot exceed ±10% absolute May only adjust 1 minor component in ternary mixtures
Wavelength of UV-Visible detector	No changes allowed

L (mm)	dp (µm)	L/dp	%	N	%	621 compliant
150	5	30,000	100%	10,639	100%	Yes
150	4	37,500	125%	19,054	179%	Yes
100	4	25,000	83%	13,186	124%	Yes
100	2.7	37,037	123%	21,046	198%	Yes
50	2.7	18,519	62%	11,281	106%	Yes

L1	L3	L7	L10	L11	L43	L60	L96
EC-C18	HILIC	EC-C8	EC-CN	Phenyl-Hexyl	PFP	Bonus-RP	SB-Aq
SB-C18		SB-C8					
HPH-C18		HPH-C8					

Ordering information



InfinityLab Poroshell 120 column specifications

InfinityLab Poroshell Family		Pore Size	Temp. Limits	pH Range	Endcapped	Carbon Load	Surface Area
Best all around	EC-C18	120Å	60°C	2.0-8.0	Double	10%	130 m ² /g
	EC-C8	120Å	60°C	2.0-8.0	Double	5%	130 m ² /g
Best for low-pH mobile phases	SB-C18	120Å	90°C	1.0-8.0	No	9%	130 m ² /g
	SB-C8	120Å	80°C	1.0-8.0	No	5.5%	130 m ² /g
Best for high-pH mobile phases	HPH-C18	100Å	60°C	3.0-11.0	Double	Proprietary	95 m ² /g
	HPH-C8	100Å	60°C	3.0-11.0	Double	Proprietary	95 m ² /g
Best for basic compounds at low pH	CS-C18	120Å	60°C	2.0-8.0	Double	Proprietary	95 m ² /g
Best for polar compounds (HILIC)	HILIC	120Å	60°C	0.0-8.0	N/A	N/A	130 m ² /g
	HILIC-Z	120Å	80°C	3.0-11.0	Proprietary	Proprietary	130 m ² /g
	HILIC-OH5	120Å	45°C	1.0-7.0	Double	Proprietary	130 m ² /g
Best for alternative selectivity	Bonus-RP	120Å	60°C	2.0-9.0	Triple	9.5%	130 m ² /g
	PFP	120Å	60°C	2.0-8.0	Double	5.1%	130 m ² /g
	Phenyl-Hexyl	120Å	60°C	2.0-8.0	Double	9%	130 m ² /g
	SB-Aq	120Å	80°C	1.0-8.0	No	Proprietary	130 m ² /g
	EC-CN	120Å	60°C	2.0-8.0	Double	3.5%	130 m ² /g
Best for Chiral separations	Chiral-T	120Å	45°C	2.5-7.0	Proprietary	Proprietary	130 m ² /g
	Chiral-V	120Å	45°C	2.5-7.0	Proprietary	Proprietary	130 m ² /g
	Chiral-CD	120Å	45°C	3.0-7.0	Proprietary	Proprietary	130 m ² /g
	Chiral-CF	120Å	45°C	3.0-7.0	Proprietary	Proprietary	130 m ² /g

Specifications represent typical values only

Particle	Pressure Limit
1.9 µm	1300 bar
2.7 µm	600 bar*
4 µm	600 bar

* unless otherwise noted



Easy-to-use InfinityLab UHPLC Fast Guards

High-performance Agilent InfinityLab UHPLC Fast Guards are designed for use with fast LC columns. They connect directly to the column inlet; no extra hardware is needed.

Agilent UHPLC Fast Guards are available in most InfinityLab Poroshell 120 chemistries—giving you confidence that the guard column will not adversely affect your separations.

InfinityLab Poroshell 120 1.9 µm columns: Highest UHPLC performance

Size (mm)	EC-C18	EC-C8	Phenyl-Hexyl	HPH-C18	PFP	HILIC
3.0 x 150	693675-302	693675-306	693675-312	693675-502	693675-308	693675-301
3.0 x 100	695675-302	695675-306	695675-312	695675-502	695675-308	695675-301
3.0 x 50	699675-302	699675-306	699675-312	699675-502	699675-308	699675-301
2.1 x 150	693675-902	693675-906	693675-912	693675-702	693675-408	693675-901
2.1 x 100	695675-902	695675-906	695675-912	695675-702	695675-408	695675-901
2.1 x 50	699675-902	699675-906	699675-912	699675-702	699675-408	699675-901

Note: All InfinityLab Poroshell 120 1.9 µm columns are supplied with a pre-programmed Column ID.

InfinityLab Poroshell 120 1.9 µm UHPLC Fast Guards: Extend column lifetime even further

Size (mm)	EC-C18	EC-C8	Phenyl-Hexyl	HPH-C18	PFP	HILIC
3.0 x 5	823750-940	823750-941	823750-943	823750-945	823750-942	823750-944
2.1 x 5	821725-940	821725-941	821725-943	821725-945	821725-942	821725-944

Note: Guards supplied as 3/pk.

InfinityLab Poroshell 120 2.7 µm Chiral columns: High-resolution separations of chiral compounds

Size (mm)	Chiral-CF	Chiral-CD	Chiral-V	Chiral-T
2.1 x 50	689775-609	689775-607	689775-604	689775-603
2.1 x 100	685775-609	685775-607	685775-604	685775-603
2.1 x 150	683775-609	683775-607	683775-604	683775-603
4.6 x 50	689975-609	689975-607	689975-604	689975-603
4.6 x 100	685975-609	685975-607	685975-604	685975-603
4.6 x 150	683975-609	683975-607	683975-604	683975-603

Note: Rated to 400 bar. InfinityLab Poroshell 120 Chiral columns are not available with pre-programmed column ID tags.

InfinityLab Poroshell 120 2.7 µm HILIC columns: Best for polar separations

Size (mm)	HILIC	HILIC-OH5	HILIC-Z	HILIC-Z (PEEK-lined)
2.1 x 50	699775-901	689775-601	689775-924	679775-924
2.1 x 100	695775-901	685775-601	685775-924	675775-924
2.1 x 150	693775-901	683775-601	683775-924	673775-924
3.0 x 50	699975-301		689975-324	
3.0 x 100	695975-301		685975-324	
3.0 x 150	693975-301		683975-324	
4.6 x 50	699975-901	689975-601	689975-924	
4.6 x 100	695975-901	685975-601	685975-924	
4.6 x 150	693975-901	683975-601	683975-924	

Note: InfinityLab Poroshell 120 HILIC-OH5 has a 400 bar maximum pressure limit and is not available with a pre-programmed Column ID.

InfinityLab Poroshell 120 2.7 µm columns: UHPLC performance at lower pressures

Size (mm)	EC-C18	EC-C8	SB-C18	SB-C8	HPH-C18	HPH-C8
4.6 x 150	693975-902	693975-906	683975-902	683975-906	693975-702	693975-706
4.6 x 100	695975-902	695975-906	685975-902	685975-906	695975-702	695975-706
4.6 x 75	697975-902	697975-906	687975-902			
4.6 x 50	699975-902	699975-906	689975-902	689975-906	699975-702	699975-706
4.6 x 30	691975-902	691975-906	681975-902			
3.0 x 150	693975-302	693975-306	683975-302	683975-306	693975-502	693975-506
3.0 x 150	693575-302*					
3.0 x 100	695975-302	695975-306	685975-302	685975-306	695975-502	695975-506
3.0 x 100	695575-302*					
3.0 x 75	697975-302	697975-306	687975-302			
3.0 x 50	699975-302	699975-306	689975-302	689975-306	699975-502	699975-506
3.0 x 30	691975-302	691975-306	681975-302			
2.1 x 150	693775-902	693775-906	683775-902	683775-906	693775-702	693775-706
2.1 x 150	693575-902*					
2.1 x 100	695775-902	695775-906	685775-902	685775-906	695775-702	695775-706
2.1 x 100	695575-902*					
2.1 x 75	697775-902	697775-906	687775-902			
2.1 x 50	699775-902	699775-906	689775-902	689775-906	699775-702	699775-706
2.1 x 30	695175-902	691775-906	681775-902			
Size (mm)	Phenyl-Hexyl	Bonus-RP	PFP	SB-Aq	EC-CN	CS-C18
4.6 x 150	693975-912	693968-901	693975-408	683975-914	693975-905	693975-942
4.6 x 100	695975-912	695968-901	695975-408	685975-914	695975-905	695975-942
4.6 x 50	699975-912	699968-901	699975-408	689975-914	699975-905	699975-942
3.0 x 150	693975-312	693968-301	693975-308	683975-314	693975-305	693975-342
3.0 x 100	695975-312	695968-301	695975-308	685975-314	695975-305	695975-342
3.0 x 50	699975-312	699968-301	699975-308	689975-314	699975-305	699975-342
2.1 x 150	693775-912	693768-901	693775-408	683775-914	693775-905	693775-942
2.1 x 100	695775-912	695768-901	695775-408	685775-914	695775-905	695775-942
2.1 x 50	699775-912	699768-901	699775-408	689775-914	699775-905	699775-942

Note: InfinityLab Poroshell 120 2.7 µm columns have a 600 bar/9,000 psi pressure limit unless otherwise noted. InfinityLab Poroshell 120 2.7 µm columns are not supplied with a pre-programmed Column ID as standard. To order with Column ID, suffix the part number with "T" (example 693975-902T).

*These columns have a maximum pressure limit of 1,000 bar


InfinityLab Poroshell 120 2.7 µm Fast Guards: Extend column lifetime even further

Size (mm)	EC-C18	EC-C8	Phenyl-Hexyl	SB-C18	SB-C8	HPH-C18	HPH-C8
4.6 x 5	820750-911	820750-913	820750-914	820750-912	820750-923	820750-928	820750-922
3.0 x 5	823750-911	823750-913	823750-914	823750-912	823750-923	823750-928	823750-922
2.1 x 5	821725-911	821725-913	821725-914	821725-912	821725-923	821725-928	821725-922
Size (mm)	Bonus-RP	PFP	SB-Aq	CS-C18	EC-CN	HILIC	HILIC-Z
4.6 x 5	820750-925	820750-915	820750-924	820750-939	820750-927	820750-926	821725-947
3.0 x 5	823750-925	823750-915	823750-924	823750-949	823750-927	823750-926	823750-948
2.1 x 5	821725-925	821725-915	821725-924	821725-953	821725-927	821725-926	820750-933

Note: Guards supplied as 3/pk.

InfinityLab Poroshell 120 4 µm columns: Improved HPLC performance

Size (mm)	EC-C18	EC-C8	Phenyl-Hexyl	HPH-C18	HPH-C8	PFP	HILIC
4.6 x 250	690970-902	690970-906	690970-912	690970-702	690970-706	690970-408	690970-901
4.6 x 150	693970-902	693970-906	693970-912	693970-702	693970-706	693970-408	693970-901
4.6 x 100	695970-902	695970-906	695970-912	695970-702	695970-706	695970-408	695970-901
4.6 x 50	699970-902	699970-906	699970-912	699970-702	699970-706	699970-408	699970-901
3.0 x 250	690970-302	690970-306	690970-312	690970-502	690970-506	690970-308	690970-301
3.0 x 150	693970-302	693970-306	693970-312	693970-502	693970-506	693970-308	693970-301
3.0 x 100	695970-302	695970-306	695970-312	695970-502	695970-506	695970-308	695970-301
3.0 x 50	699970-302	699970-306	699970-312	699970-502	699970-506	699970-308	699970-301
2.1 x 250	650750-902	650750-906	650750-912	690770-702	690770-706	650750-408	650750-901
2.1 x 150	693770-902	693770-906	693770-912	693770-702	693770-706	693770-408	693770-901
2.1 x 100	695770-902	695770-906	695770-912	695770-702	695770-706	695770-408	695770-901
2.1 x 50	699770-902	699770-906	699770-912	699770-702	699770-706	699770-408	699770-901

Note: InfinityLab Poroshell 120 4 µm columns have a 600 bar/9,000 psi pressure limit. InfinityLab Poroshell 120 4 µm columns are not supplied with a pre-programmed Column ID as standard. To order with Column ID, suffix the part number with "T" (example 690970-902T)

InfinityLab Poroshell 120 4 µm Fast Guards:

Extend column lifetime even further

Size (mm)	EC-C18	HPH-C18	HPH-C8
4.6 x 5	820750-916	820750-928	820750-929
3.0 x 5	823750-916	823750-928	823750-929
2.1 x 5	821725-916	821725-928	821725-929

Note: Guards supplied as 3/pk.



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Agilent AdvanceBio LC Columns: Part of the InfinityLab Family

The flexibility to achieve full biomolecule characterization requires a tool box of columns appropriate for large molecule separations. Whether you are analyzing intact proteins, protein fragments, peptide digests, amino acids, or oligonucleotides, Agilent offers a comprehensive range of columns in different pore sizes and particle morphologies designed for these complex separations. All are supported by expert technical support and application chemists around the globe. Agilent AdvanceBio LC columns enhance the accuracy and speed of your biomolecule characterization.

Method Validation Kits

Contain 3 HPLC columns with the same column type (bonded phase, particle size, configuration), but from different manufacturing lots.

Size (mm)	Particle Size (µm)	EC-C18	EC-C8	Phenyl-Hexyl	SB-C18	SB-C8	SB-Aq	Bonus-RP
4.6 x 150	2.7	693975-902K	693975-906K	693975-912K	683975-902K	683975-906K	683975-914K	693968-901K
4.6 x 100	2.7	695975-902K	695975-906K	695975-912K	685975-902K	685975-906K	685975-914K	695968-901K
4.6 x 50	2.7	699975-902K	699975-906K	699975-912K	689975-902K	689975-906K	689975-914K	699968-901K
3.0 x 150	2.7	693975-302K	693975-306K	693975-312K	683975-302K	683975-306K	683975-314K	693968-301K
3.0 x 100	2.7	695975-302K	695975-306K	695975-312K	685975-302K	685975-306K	685975-314K	695968-301K
3.0 x 50	2.7	699975-302K	699975-306K	699975-312K	689975-302K	689975-306K	689975-314K	699968-301K
2.1 x 150	2.7	693775-902K	693775-906K	693775-912K	683775-902K	683775-906K	683775-914K	693768-901K
2.1 x 100	2.7	695775-902K	695775-906K	695775-912K	685775-902K	685775-906K	685775-914K	695768-901K
2.1 x 50	2.7	699775-902K	699775-906K	699775-912K	689775-902K	689775-906K	689775-914K	699768-901K

Size (mm)	Particle Size (µm)	EC-C18	EC-C8	Phenyl-Hexyl	PFP	HILIC
4.6 x 250	4	690970-902K	690970-906K	690970-912K	690970-408K	690970-901K
4.6 x 150	4	693970-902K	693970-906K	693970-912K	693970-408K	693970-901K
4.6 x 100	4	695970-902K	695970-906K	695970-912K	695970-408K	695970-901K
4.6 x 50	4	699970-902K	699970-906K	699970-912K	699970-408K	699970-901K
3.0 x 250	4	690970-302K	690970-306K	690970-312K	690970-308K	690970-301K
3.0 x 150	4	693970-302K	693970-306K	693970-312K	693970-308K	693970-301K
3.0 x 100	4	695970-302K	695970-306K	695970-312K	695970-308K	695970-301K
3.0 x 50	4	699970-302K	699970-306K	699970-312K	699970-308K	699970-301K
2.1 x 250	4	650750-902K	650750-906K	650750-912K	650750-408K	650750-901K
2.1 x 150	4	693770-902K	693770-906K	693770-912K	693770-408K	693770-901K
2.1 x 100	4	695770-902K	695770-906K	695770-912K	695770-408K	695770-901K
2.1 x 50	4	699770-902K	699770-906K	699770-912K	699770-408K	699770-901K

Don't see a validation kit for your column part number?

Validation kits can be assembled for most columns in the Agilent LC column portfolio. Simply contact your Agilent sales specialist or send your request to the Agilent customer center in your country, indicating the part number for which you need a validation kit. An Agilent representative will send you a quote within 1-2 business days. www.agilent.com/chem/contactus



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