

# More Chemistries, More Choices For Your Toughest Separation Challenges

## Agilent InfinityLab Poroshell 120 Columns




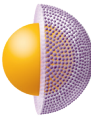
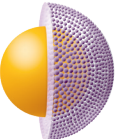
### Efficiently separate the widest variety of columns

Based on superficially porous particle technology, InfinityLab Poroshell 120 columns feature 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.

The InfinityLab Poroshell 120 family includes 18 chemistries—including new phases for chiral and HILIC separations. This ordering guide will help you choose the right particle size and bonded phase to achieve optimal separation for your samples.

## Which particle is best for my method?

InfinityLab Poroshell 120 columns are available in three particle dimensions. Choose the size that best fits your separation needs, and is most compatible with your LC systems.

UHPLC		1.9 µm: Highest UHPLC performance – Maximum pressure: 1300 bar – Ideal for: Agilent 1290 Infinity II LC
HPLC or UHPLC		2.7 µm: UHPLC performance at lower pressures – Maximum pressure: 600 bar (unless otherwise noted) – Ideal for: Agilent 1260 Infinity II LC or Agilent 1260 Infinity II Prime LC
HPLC		4 µm: Improved HPLC performance – Maximum pressure: 600 bar – Ideal for: Agilent 1220 Infinity II LC

## What column ID and length should I choose?

Format	Comment
Column ID	4.6 mm for legacy methods 3.0 mm for lower solvent use than 4.6 mm 2.1 mm for lowest solvent use and MS applications
Column length	Shorter 30 to 100 mm for fastest separations Longer 150 to 250 mm for increased resolution

## InfinityLab Poroshell 120 column specifications

InfinityLab Poroshell 120	Pore Size	Temperature Limit	pH Range	Endcapped	Carbon Load	Surface Area	USP Designation
EC-C18	120 Å	60 °C	2.0–8.0	Yes	10%	130 m <sup>2</sup> /g	L1
EC-C8	120 Å	60 °C	2.0–8.0	Yes	5%	130 m <sup>2</sup> /g	L7
SB-C18	120 Å	90 °C	1.0–8.0	No	9%	130 m <sup>2</sup> /g	L1
SB-C8	120 Å	80 °C	1.0–8.0	No	5.5%	130 m <sup>2</sup> /g	L7
HPH-C18	100 Å	60 °C	3.0–11.0	Yes	Proprietary	95 m <sup>2</sup> /g	L1
HPH-C8	100 Å	60 °C	3.0–11.0	Yes	Proprietary	95 m <sup>2</sup> /g	L7
Bonus-RP	120 Å	60 °C	2.0–8.0	Yes	9.5%	130 m <sup>2</sup> /g	L60
PFP	120 Å	60 °C	2.0–8.0	Yes	5.1%	130 m <sup>2</sup> /g	L43
Phenyl-Hexyl	120 Å	60 °C	2.0–8.0	Yes	9%	130 m <sup>2</sup> /g	L11
SB-Aq	120 Å	80 °C	1.0–8.0	No	Proprietary	130 m <sup>2</sup> /g	L96
EC-CN	120 Å	60 °C	2.0–8.0	Yes	3.5%	130 m <sup>2</sup> /g	L10
HILIC-Z	100 Å	80 °C	3.0–11.0	No	Proprietary	95 m <sup>2</sup> /g	L114
HILIC	120 Å	60 °C	0.0–8.0	No	NA	130 m <sup>2</sup> /g	L3
HILIC-OH5	120 Å	45 °C	1.0–7.0	Proprietary	Proprietary	130 m <sup>2</sup> /g	L86
Chiral-V	120 Å	45 °C	2.5–7.0	Proprietary	Proprietary	130 m <sup>2</sup> /g	L88
Chiral-T	120 Å	45 °C	2.5–7.0	Proprietary	Proprietary	130 m <sup>2</sup> /g	L63
Chiral-CD	120 Å	45 °C	3.0–7.0	Proprietary	Proprietary	130 m <sup>2</sup> /g	L45
Chiral-CF	120 Å	45 °C	3.0–7.0	Proprietary	Proprietary	130 m <sup>2</sup> /g	NA

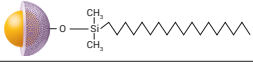
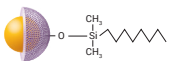
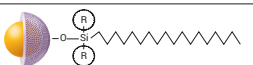
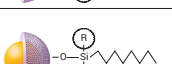
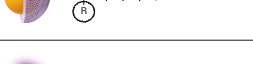
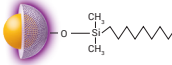
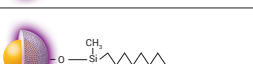
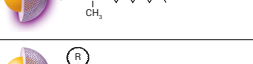
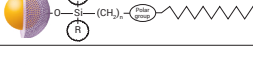
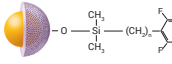
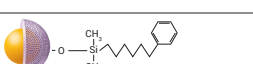
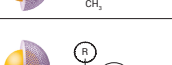

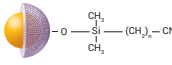
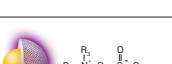
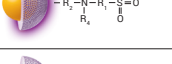

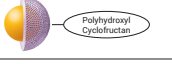
## What if I'm still using a legacy method?

InfinityLab Poroshell chemistries are aligned with traditional ZORBAX chemistries—making it easy to transfer your methods from fully porous to superficially porous particle columns.

InfinityLab Poroshell Chemistry	Aligned Chemistry
InfinityLab Poroshell 120 EC-C18	ZORBAX Eclipse Plus C18
InfinityLab Poroshell 120 EC-C8	ZORBAX Eclipse Plus EC-C8
InfinityLab Poroshell 120 Phenyl-Hexyl	ZORBAX Eclipse Plus Phenyl-Hexyl
InfinityLab Poroshell 120 SB-C18	ZORBAX StableBond SB-C18
InfinityLab Poroshell 120 SB-C8	ZORBAX StableBond SB-C8
InfinityLab Poroshell 120 Bonus-RP	ZORBAX Bonus-RP
InfinityLab Poroshell 120 SB-Aq	ZORBAX StableBond SB-Aq
InfinityLab Poroshell 120 EC-CN	ZORBAX Eclipse XDB-CN
InfinityLab Poroshell 120 HILIC	ZORBAX HILIC Plus

## Which bonded phase will help me perfect my separations?

With 18 different chemistries, InfinityLab Poroshell 120 columns provide a range of selectivities that makes your method development fast and easy.

InfinityLab Poroshell 120	Chemistry	Particle Sizes	Benefits and Applications
EC-C18		1.9 μm, 2.7 μm, 4 μm	General purpose Excellent peak shape and efficiency for acids, bases, and neutrals
EC-C8		1.9 μm, 2.7 μm, 4 μm	General purpose Lower retention of hydrophobic analytes vs. C18
SB-C18		2.7 μm	Low pH Excellent stability and peak shape in highly acidic conditions
SB-C8		2.7 μm	Low pH Excellent stability at low pH Lower retention of hydrophobic analytes vs. C18
HPH-C18		1.9 μm, 2.7 μm, 4 μm	High pH capable Robust performance and long lifetimes Improved retention, resolution, and peak shape of basic compounds
HPH-C8		2.7 μm, 4 μm	High pH capable Robust performance and long lifetimes Lower retention of hydrophobic analytes vs. C18
Bonus-RP		2.7 μm	Alternate selectivity to C18 Improved peak shape for basic compounds, stable in 100% aqueous conditions
PFP		1.9 μm, 2.7 μm, 4 μm	Alternate selectivity Excellent peak shape for polar and nonpolar analytes Unique selectivity for aromatic and halogenated compounds
Phenyl-Hexyl		1.9 μm, 2.7 μm, 4 μm	Alternate selectivity with aromatic groups Highly nonpolar bonded phase takes advantage of pi-pi interactions
SB-Aq		2.7 μm	Alternate selectivity Excellent peak shape and retention of polar compounds using reversed-phase LC Exceptional stability under high-aqueous conditions, including 100% water
EC-CN		2.7 μm	Alternate selectivity Use in reversed-phase for alternate selectivity of polar and mid-polar compounds Use in normal phase for excellent peak shape and retention of nonpolar analytes
HILIC-Z		2.7 μm	Polar analytes Excellent retention of highly polar or charged compounds by HILIC Rugged performance at high pH or high temperature
HILIC		1.9 μm, 2.7 μm, 4 μm	Polar analytes Excellent retention of polar compounds by HILIC
HILIC-OH5		2.7 μm	Polar analytes Fructan bonded phase offers alternate selectivity to other HILIC phases
Chiral-V		2.7 μm	Chiral separations Amines, profens, and complex basic and neutral compounds Reversed-phase, polar ionic, normal phase, or polar organic modes
Chiral-T		2.7 μm	Chiral separations Beta blockers, hydroxyl acids, amino acids, profens, benzodiazepines, and hydantoins Reversed-phase, polar ionic, or polar organic modes
Chiral-CD		2.7 μm	Chiral separations Stimulants, fungicides, and protected amino acids Reversed phase or polar organic modes
Chiral-CF		2.7 μm	Chiral separations Primary amines Polar organic or normal phase modes

Note: HILIC-OH5, and all four Chiral phases have a pressure limit of 400 bar.

For more information and helpful tools for Chiral testing, including the Chiral application eNotebook with more than 200 application examples, visit [www.agilent.com/chem/poroshell-120-chiral](http://www.agilent.com/chem/poroshell-120-chiral)

## Ordering information

### InfinityLab Poroshell 120 1.9 $\mu\text{m}$ 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  $\mu\text{m}$  columns are supplied with a pre-programmed Column ID.

### InfinityLab Poroshell 120 1.9 $\mu\text{m}$ 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 $\mu\text{m}$ 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 $\mu\text{m}$ 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
4.6 x 150	693975-912	693968-901	693975-408	683975-914	693975-905
4.6 x 100	695975-912	695968-901	695975-408	685975-914	695975-905
4.6 x 50	699975-912	699968-901	699975-408	689975-914	699975-905
3.0 x 150	693975-312	693968-301	693975-308	683975-314	693975-305
3.0 x 100	695975-312	695968-301	695975-308	685975-314	695975-305
3.0 x 50	699975-312	699968-301	699975-308	689975-314	699975-305
2.1 x 150	693775-912	693768-901	693775-408	683775-914	693775-905
2.1 x 100	695775-912	695768-901	695775-408	685775-914	695775-905
2.1 x 50	699775-912	699768-901	699775-408	689775-914	699775-905

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

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

### 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](http://www.agilent.com/chem/contactus)



## Reach infinite levels of efficiency and confidence

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.

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