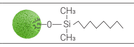
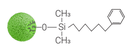
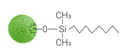
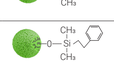
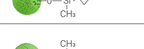
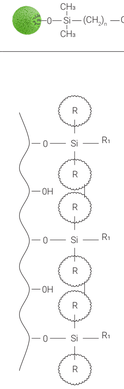
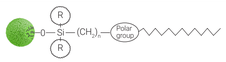
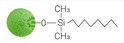
A Proven and Reliable Portfolio of Totally Porous HPLC Columns

The Agilent ZORBAX family offers all advantages of totally porous particle columns such as increased retention, loadability, and resistance to sample solvents. Easily scale your methods all the way from UHPLC to preparative LC.

Agilent InfinityLab

Agilent ZORBAX	Chemistry	Particle Sizes	Pore Size (Å)	Temperature Limit	pH Range	Endcapped	Carbon Load (%)	Surface Area	USP Designation	Benefits and Applications
Eclipse Plus C18		1.8, 3.5, 5	95	60 °C	2–9	Double	9	160 m^2/g	L1	General purpose Starting Point for LC method development
Eclipse Plus C8		1.8, 3.5, 5	95	60 °C	2–9	Double	7	160 m^2/g	L7	General purpose Lower retention of hydrophobic analytes vs. C18
Eclipse Plus Phenyl-Hexyl		1.8, 3.5, 5	95	60 °C	2–8	Double	9	160 m^2/g	L11	Alternative selectivity for aromatic compounds Enhanced pi-pi interactions when using methanol
Eclipse Plus PAH	Polymeric C18	1.8, 3.5, 5	95	60 °C	2–9	Double	14	160 m^2/g	L1	Application-specific Designed for the separation of PAHs in LC
Eclipse XDB C18		1.8, 3.5, 5	80	60 °C	2–9	Double	10	180 m^2/g	L1	General purpose, higher carbon load Higher hydrophobicity with alternative selectivity for lipophilic analytes
Eclipse XDB C8		1.8 (RRHT) 3.5, 5, 7	80	60 °C	2–9	Double	7.6	180 m^2/g	L7	General purpose, higher carbon load Higher hydrophobicity with alternative selectivity for lipophilic analytes but reduced retention vs. XDB-C18
Eclipse XDB Phenyl		3.5, 5	80	60 °C	2–9	Double	7.2	180 m^2/g	L11	Alternative selectivity for aromatic compounds Enhanced pi-pi interactions when using methanol
Eclipse XDB CN		3.5, 5	80	60 °C	2–9	Double	4.2	180 m^2/g	L10	Polar analytes in RP, low bleed Excellent peak shape of polar and mid-polar compounds
StableBond C18	 R_1=C18	1.8, 3.5, 5, 7	80	90 °C	0.8–8	No	10	180 m^2/g	L1	Low pH and high temperature Excellent stability and peak shape at highly acidic conditions
StableBond C8	R_1=C8	1.8, 3.5, 5, 7	80	80 °C	1–8	No	5.5	180 m^2/g	L7	Low pH and high temperature Lower retention of hydrophobic analytes vs. C18
StableBond C3	R_1=C3	1.8, 3.5, 5	80	80 °C	1–8	No	4	180 m^2/g	L56	Low pH and high temperature Reduced retention of hydrophobic analytes
StableBond Aq	Proprietary	1.8, 3.5, 5, 7	80	80 °C	1–8	No	Proprietary	180 m^2/g	L96	Polar analytes in RP Excellent peak shape and retention of polar compounds using reversed-phase LC, stable at 100% aqueous mobile phases
StableBond Phenyl	R_1=Phenylethyl	1.8, 3.5, 5, 7	80	80 °C	1–8	No	5.5	180 m^2/g	L11	Alternative selectivity for aromatic compounds Enhanced pi-pi interactions when using methanol
StableBond CN	R_1=$(CH_2)_3$-CN	1.8, 3.5, 5, 7	80	80 °C	1–8	No	4	180 m^2/g	L10	Polar molecules at low pH or high temperature, low bleed Excellent peak shape of polar and mid-polar compounds
Extend C18		1.8, 3.5, 5, 7	80	60 °C	2–11.5	Double	4	180 m^2/g	L1	High pH applications Robust performance and long lifetimes under high pH
Bonus-RP		1.8, 3.5, 5, 7	80	60 °C	2–9	Triple	9.5	180 m^2/g	L60	Alternative Selectivity to C18 Improved peak shape for basic compounds, stable in 100% aqueous conditions
HILIC Plus		1.8, 3.5	95	Only mobile phase limits apply	1–8	No	0	180 m^2/g	L3	Polar analytes in HILIC mode Excellent retention of polar compounds by HILIC
Rx C18		3.5, 5, 7	80	60 °C	2–8	No	12	180 m^2/g	L1	General purpose High carbon load for increased retention
Rx C8		3.5, 5	80	80 °C	1–8	No	5.5	180 m^2/g	L7	General purpose
Rx Sil		1.8 (RRHT) 5, 7	80	Only mobile phase limits apply	0.8–8	No	0	180 m^2/g	L3	Polar compounds in HILIC, NPLC and SFC mode Good starting point for method development

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Learn more about ZORBAX columns:
www.agilent.com/chem/ZORBAX

Choose the right ZORBAX chemistry

Application	Primary	Secondary	Alternative selectivity
General purpose Starting point for method development, standard conditions	Eclipse Plus C18 Eclipse Plus C8 Rx C18	Eclipse XDB C18 Eclipse XDB C8 Rx C8	Eclipse Plus Phenyl-Hexyl Eclipse XDB Phenyl
Basic compounds (pKa >6) High pH applications	Extend C18	Eclipse Plus C18	Bonus-RP
Acidic compounds (pKa <3) Low pH applications	StableBond C18 StableBond C8 StableBond C3	Eclipse Plus C18	StableBond Phenyl StableBond Aq
Polar compounds Reversed-phase or HILIC	StableBond Aq StableBond CN	Eclipse XDB CN	HILIC Plus Rx Sil
Application-specific Tuned for specific applications	**PAH analysis** Eclipse Plus PAH	**Carbohydrate analysis** ZORBAX Carbohydrate ZORBAX NH_2	

Which particle is best for my method?

UHPLC

1.8 µm ZORBAX RRHD: highest UHPLC performance
Maximum pressure: 1200 bar
Ideal for: Agilent 1290 Infinity II and III LC or Agilent 1260 Infinity II and III Prime LC

HPLC

1.8 ZORBAX RRHT: ultra-fast chromatography at up to 600 bar
Maximum pressure: 600 bar
Ideal for: 1260 Infinity II and III LC

HPLC

3.5 µm ZORBAX RR: Higher resolution of HPLC methods
Maximum Pressure: 400 bar
Update of traditional methods on general HPLC instruments

HPLC

5 µm ZORBAX: Proven and reliable for HPLC methods
Maximum Pressure: 400 bar
Used for traditional methods on general HPLC instruments and in preparative LC

1 bar = 14.5 PSI

psi	1450	2900	4350	5800	7250	8700	10,150	11,600	13,050	14,500	15,950	17,400	18,850	20,300
bar	100	200	300	400	500	600	700	800	900	1000	1100	1200	1300	1400

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

Interested in modernizing your LC methods?

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

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

Agilent InfinityLab is an optimized portfolio of LC instruments, columns, and supplies that work together seamlessly for maximum efficiency and performance— regardless of application area. Learn more: **www.agilent.com/chem/infinitylab**