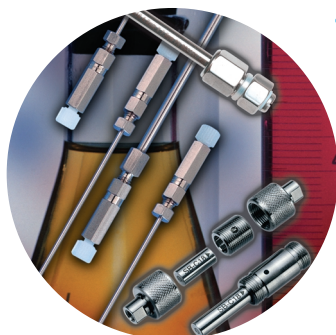
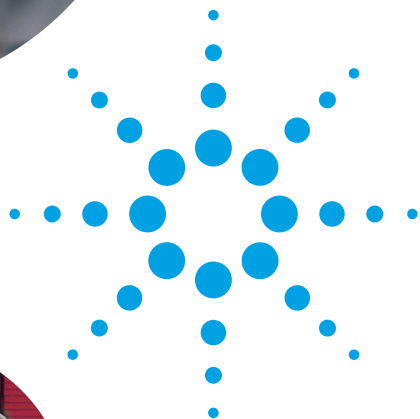




New ZORBAX Product Update HPLC Columns



- ZORBAX MicroBore and Capillary HPLC Columns
- ZORBAX Extend-C18 Columns
- ZORBAX 300Extend-C18 Columns
- ZORBAX SB-Aq Columns
- ZORBAX Eclipse AAA Columns
- ZORBAX Eclipse XDB Columns
- ZORBAX Eclipse dsDNA Columns
- ZORBAX Rapid Resolution Columns for LC/MS

This brochure is a quick reference to the newest and most popular Agilent HPLC columns.

For additional information on any product listed here, contact Agilent Customer Assist within the U.S., at 800-227-9770 and ask for HPLC Column Support. For areas outside of the U.S., contact your local distributor or sales office. We are happy to answer any questions you might have, and we can provide additional technical information.

Look for all these products and more on the Agilent web site www.agilent.com.



Agilent Technologies

Innovating the HP Way



Agilent MicroBore and Capillary HPLC Columns

- High sensitivity for smallest sample sizes
- Compatibility with several LC/MS interfaces
- Several internal diameters: 1.0 mm, 0.5 mm, 0.3 mm
- Variety of bonded-phases

MicroBore and capillary columns, 1.0 mm and smaller internal diameter, are often the best choice when sample sizes are limited. MicroBore columns will improve sensitivity 5X over 2.1 mm i.d. columns, and capillary columns can increase sensitivity 20 – 50X over 2.1 mm i.d. columns when the same sample size is used. This increase in sensitivity can be critical. MicroBore and capillary columns use very low flow rates — from 1 – 50 $\mu\text{L}/\text{min}$. Therefore, these columns are ideal for use with detectors requiring the lowest flow rates, including particle beam and electrospray LC/MS detectors.

Agilent MicroBore and capillary columns are available in three different internal diameters and several lengths, so the ideal configuration is available for your sample limited applications. The 1.0 mm columns are packed in stainless steel, and the capillary columns are packed into glass-lined, stainless steel columns. These columns perform optimally with HPLC systems adjusted for microbore and capillary column use. Several bonded-phases are available, including StableBond SB-C18 and SB-C8, Eclipse XDB-C18 and C8, Bonus-RP, Extend-C18, 300SB-C18 and Hypersil ODS.

For more information on the new Agilent Capillary LC system, visit our web site at www.agilent.com.

ZORBAX MicroBore HPLC Column Ordering Information

Column Description	Dimension (mm)	Particle Size (μm)	SB-C18 USP L1	SB-C8 USP L7	300SB-C18	300SB-C8	Eclipse XDB-C18 USP L7	Eclipse XDB-C8 USP L7	Bonus-RP	Extend-C18
MicroBore RR [†]	1.0 x 150	3.5	863600-902	863600-906	863630-902	863630-906	963600-902	963600-906	863608-901	763600-902
MicroBore RR	1.0 x 50	3.5	865600-902	865600-906	865630-902	865630-906	965600-902	965600-906	865608-901	765600-902
MicroBore RR	1.0 x 30	3.5	861600-902	861600-906			961600-902	961600-906	861608-901	761600-902

Agilent HPLC Capillary Columns Ordering Information

Column*	Dimension	μm	SB-C18	300SB-C18	Eclipse XDB-C18	Hypersil ODS
Capillary	0.5 x 250	5	5064-8258	5064-8266	5064-8286	5064-8278
Capillary	0.5 x 150	5	5064-8256	5064-8264	5064-8287	5064-8289
Guard	0.5 x 35	5	5064-8254	5064-8294	5064-8296	5064-8282
RR Capillary	0.5 x 150	3.5	5064-8262	5064-8268	5064-8288	5064-8275**
RR Capillary	0.5 x 35	3.5	5064-8260		5064-8298	5064-8299**
Capillary	0.3 x 250	5	5064-8257	5064-8265	5064-8269	5064-8276
Capillary	0.3 x 150	5	5064-8255	5064-8263	5064-8291	5064-8290
Guard	0.3 x 35	5	5064-8253	5064-8295	5064-8297	5064-8279
RR Capillary	0.3 x 150	3.5	5064-8261	5064-8267	5064-8271	5064-8277**

*Glass-lined capillary columns

** 3 μm particles

[†]RR: Rapid Resolution 3.5 μm columns.

To order or for technical assistance, call Agilent Technologies at 800-227-9770, or contact your local authorized Agilent distributor.

ZORBAX Extend-C18 Columns



- New silica-based, bidentate bonding technology offers high efficiency and long life at high pH — up to pH 11.5
- Obtain more retention for polar basic compounds
- Achieve high sensitivity for LC/MS separations of peptides and proteins

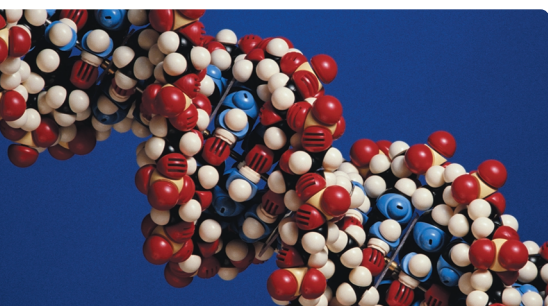
The Agilent ZORBAX Extend-C18 HPLC column incorporates the unique, patented bidentate technology — coupled with a double-encapping process to protect the silica support from dissolution at high pH . . . up to pH 11.5. Now compounds that are

- basic in nature and have little retention at low pH or
- more stable in high pH solutions or
- more soluble in high pH solutions

can be easily separated using this highly efficient, selective reversed-phase HPLC column. In addition, use this column to analyze peptides and small molecules by LC/MS with improved sensitivity using a pH 10.5 ammonium hydroxide mobile phase. Try it!

ZORBAX Extend-C18 Ordering Information

Column Description	Dimension (mm)	Particle Size (µm)	Part Number
Analytical	4.6 x 250	5	770450-902
Analytical	4.6 x 150	5	773450-902
Analytical	4.6 x 50	5	746450-902
Narrow Bore	2.1 x 150	5	773700-902
Narrow Bore	2.1 x 50	5	760450-902
Rapid Resolution	4.6 x 150	3.5	763953-902
Rapid Resolution	4.6 x 75	3.5	766953-902
Rapid Resolution	4.6 x 50	3.5	735953-902
Rapid Resolution	2.1 x 50	3.5	735700-902
Analytical Guard Cartridge (4/pk)	4.6 x 12.5	5	820950-930
Narrow Bore Guard Cartridge (4/pk)	2.1 x 12.5	5	821125-930
Guard Hardware Kit			820777-901



ZORBAX 300Extend-C18 is a wide-pore HPLC column for the high efficiency separations of proteins and peptides from pH 2 – 11.5. The unique Extend-C18 bonded phase (described above) provides excellent lifetime and reproducibility at high and low pH. At high pH, retention and selectivity of proteins and peptides can change dramatically as a result of changes in charge on the protein molecule. Excellent recoveries of hydrophobic proteins have been achieved at room temperature and high pH. LC/MS sensitivity of proteins and peptides can also be improved at high pH using a simple ammonium hydroxide containing mobile phase.

ZORBAX 300Extend-C18 Columns

- Rugged, high and low pH separations of proteins and peptides (pH 2 – 11.5)
- High efficiency, good selectivity and recovery of hydrophobic proteins at high pH
- Ideal for LC/MS with ammonium hydroxide mobile phase

ZORBAX 300Extend-C18 Column Ordering Information

Column Description	Dimensions (mm)	Particle Size (µm)	Part Number
Analytical	4.6 x 250	5	770995-902
Analytical	4.6 x 150	5	773995-902
Rapid Resolution	4.6 x 150	3.5	763973-902
Rapid Resolution	4.6 x 50	3.5	765973-902
Narrow Bore	2.1 x 150	3.5	763750-902
Narrow Bore	2.1 x 50	3.5	765750-902
Guard Cartridges (4/pk)	4.6 x 12.5	5	820950-932
Guard Cartridges (4/pk)	2.1 x 12.5	5	821125-932
Guard Hardware Kit			820777-901

NOTE

All configurations not shown are available upon request.

ZORBAX StableBond SB-Aq Columns

- Recommended for analysis of highly polar compounds
- Provide high retention in highly aqueous mobile phases
- Provide reproducible retention without phase collapse
- Provide exceptional durability at low pH

ZORBAX SB-Aq columns are an ideal choice to increase the retention of many difficult acidic, basic and polar compounds — more retention than many conventional ODS HPLC columns. These compounds can be analyzed with excellent reproducibility and peak shape, because the SB-Aq columns have a hydrophilic surface that ensures no phase collapse, even with 100% aqueous mobile phases. ZORBAX StableBond technology provides exceptional durability and stability at low pH and high temperature — up to 80°C with the SB-Aq column.



ZORBAX StableBond Aq (SB-Aq) Column Ordering Information

Column Description	Dimension (mm)	Particle Size (µm)	Part Number
Analytical	4.6 x 250	5	880975-914
Analytical	4.6 x 150	5	883975-914
Analytical	4.6 x 50	5	846975-914
Narrow Bore	2.1 x 50	5	860975-914
Guard Cartridges (4/pk)	4.6 x 12.5	5	820950-933
Guard Cartridges (4/pk)	2.1 x 12.5	5	821125-933
Guard Hardware Kit			820777-901

NOTE

All configurations not shown are available upon request.



ZORBAX Eclipse AAA (Amino Acid Analysis) Columns

- High resolution and rapid analysis of 24 amino acids
- Use tested for Amino Acid Analysis
- Uses well known OPA and FMOC derivatization chemistry
- Easily automated using a detailed on-line, derivatization protocol available for use with Agilent 1100 Autosampler

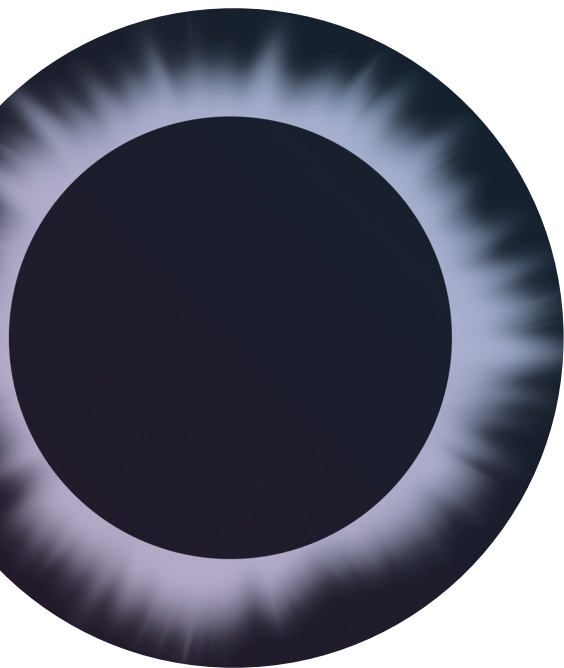
ZORBAX Eclipse AAA Ordering Information

Column Description	Dimension (mm)	Particle Size (µm)	Part Number
Solvent Saver high sensitivity, high-resolution	3.0 x 150	3.5	961400-302
Analytical routine sensitivity, high-resolution	4.6 x 150	5	993400-902
Analytical high sensitivity, high-resolution work using the FLD	4.6 x 150	3.5	963400-902
Analytical routine sensitivity, high-throughput	4.6 x 75	3.5	966400-902
Guard Cartridges (4/pk)	4.6 x 12.5	5	820950-931
Guard Hardware Kit			820777-901

Part numbers for amino acid standards, derivatization reagents and sample vials can also be found on the Agilent web site. Agilent Chemstation-Methods for AAA-protocol, custom amino-acid report and macro, and any additional documentation can also be downloaded from the Agilent web site at www.agilent.com.

The new ZORBAX Eclipse AAA high efficiency HPLC column rapidly separates amino acids following an updated and improved protocol. Total analysis from injection to injection can be achieved in as little as 14 min (10 min. analysis time) on the short, 7.5 cm length column and 24 min (16 min. analysis time) on the 15 cm column length. Exceptional sensitivity (5 – 50 pmol with DAD, FLD) and reliability are achieved using both OPA and FMOC derivatization chemistries in one fully automated procedure when using the Agilent 1100 HPLC instrument.





ZORBAX Eclipse XDB Columns

- Excellent peak shape for bases, acids and neutrals
- Long lifetime at mid pH with extra dense bonding and double endcapping
- Extended pH range — pH 2 – 9

ZORBAX Eclipse XDB columns — C18, C8, and Phenyl — provide superior peak shape, high efficiency and long column lifetime over an extended pH range (2 – 9). Mobile phase pH is a critical parameter in method development, and Eclipse XDB columns are an outstanding choice for this because of the wide usable pH range. The extra dense bonding and double endcapping extends column lifetime at mid pH while improving peak shape in this pH region. The Eclipse XDB-C18 and -C8 columns will provide superior resolution for many complex samples, and the Eclipse XDB-Phenyl offers an alternate selectivity for difficult separations.

To order or for technical assistance, call Agilent Technologies at 800-227-9770, or contact your local authorized Agilent distributor.

NOTE

All configurations not shown are available upon request.

ZORBAX Eclipse XDB Column Ordering Information

Column Description	Size (mm)	Particle Size (µm)	XDB-C18 USP L1	XDB-C8 USP L7	XDB-Phenyl USP L11
Standard Columns and Bulk Packings					
Semi-Prep	9.4 x 250	5	990967-202	990967-206	990967-212
Analytical	4.6 x 250	5	990967-902	990967-906	990967-912
Analytical	4.6 x 150	5	993967-902	993967-906	993967-912
Analytical	4.6 x 50	5	946975-902	946975-906	
Solvent Saver	3.0 x 250	5	990967-302	990967-306	990967-312
Solvent Saver	3.0 x 150	5	993967-302	993967-306	993967-312
Narrow Bore	2.1 x 150	5	993700-902	993700-906	993700-912
Narrow Bore for LC/MS	2.1 x 50	5	960967-902	960967-906	960967-912
Rapid Resolution	4.6 x 150	3.5	963967-902	963967-906	963967-912
Rapid Resolution	4.6 x 75	3.5	966967-902	966967-906	966967-912
Rapid Resolution	4.6 x 50	3.5	935967-902	935967-906	935967-912
Solvent Saver Plus	3.0 x 150	3.5	963954-302	963954-306	963954-312
Rapid Resolution	2.1 x 150	3.5	930990-902	930990-906	
Rapid Resolution	2.1 x 50	3.5	971700-902	971700-906	
MicroBore RR	1.0 x 150	3.5	963600-902	963600-906	
MicroBore RR	1.0 x 50	3.5	965600-902	965600-906	
MicroBore RR	1.0 x 30	3.5	961600-902	961600-906	
Bulk Packing, 2 grams		5	920966-902	920966-906	920966-912
Guard Cartridges (4/pk)	4.6 x 12.5	5	820950-925	820950-926	820950-927
Guard Cartridges (4/pk)	2.1 x 12.5	5	821125-926	821125-926	821125-926
Guard Hardware Kit			820777-901	820777-901	820777-901
Agilent Cartridge Columns					
Analytical	4.6 x 250	5	7995118-585	7995108-585	
Analytical	4.6 x 150	5	7995118-595	7995108-595	
Rapid Resolution	4.6 x 75	3.5	7995118-344	7995108-344	
Guard Cartridges (10/pk)	4.0 x 4	5	7995118-504	7995118-504	
Cartridge Holder			5021-1845	5021-1845	
High Throughput Cartridge Columns (requires Hardware Kit 820222-901)					
Rapid Resolution Cartridge	4.6 x 30	3.5	933975-902	933975-906	
Rapid Resolution Cartridge (3/pk)	4.6 x 30	3.5	933975-932	933975-936	
Rapid Resolution Cartridge	4.6 x 15	3.5	931975-902	931975-906	
Rapid Resolution Cartridge (3/pk)	4.6 x 15	3.5	931975-932	931975-936	
Rapid Resolution Cartridge	2.1 x 30	3.5	973700-902	973700-906	
Rapid Resolution Cartridge (3/pk)	2.1 x 30	3.5	973700-932	973700-936	
Rapid Resolution Cartridge	2.1 x 15	3.5	975700-902	975700-906	
Rapid Resolution Cartridge (3/pk)	2.1 x 15	3.5	975700-932	975700-936	
Hardware Kit for High Throughput Columns			820222-901	820222-901	
CombiHT Columns (end fittings required)					
CombiHT	21.2 x 150	5	970150-902	970150-906	
CombiHT	21.2 x 100	5	970100-902	970100-906	
CombiHT	21.2 x 50	5	970050-902	970050-906	
End Fittings (2) (required for use)			820400-901	820400-901	



ZORBAX Eclipse dsDNA Analysis Columns

- High sensitivity and resolution for dsDNA fragments
- Separate from 20 - 1500 base pairs
- 20-50X the capacity of non-porous columns

The ZORBAX Eclipse dsDNA analysis column provides high-resolution, automated, quantitative separations of dsDNA fragments by HPLC. Up to 1 bp resolution can be achieved depending on fragment length and gradient analysis time. For high sensitivity, load up to 10 µg and detect less than 1 ng/band using the 2.1 mm i.d. columns. Or, inject up to 40 µg on the 4.6 mm i.d. columns for higher capacity quantitative separations. This column is useful for applications such as PCR fragment separations, restriction digest separations, DHPLC, RFLP and RAPD.

ZORBAX Eclipse dsDNA Ordering Information

Column Description	Dimension (mm)	Particle Size (µm)	Part Number
Analytical	2.1 x 75	3.5	945750-902
Analytical	2.1 x 150	3.5	993850-902
Analytical	3.0 x 75	3.5	945750-302
Preparative	4.6 x 75	3.5	992750-902
Guard Cartridge (4/pk)	2.1 x 12.5	3.5	821125-929
Guard Cartridge (4/pk)	4.6 x 12.5	3.5	820950-929
Guard Hardware Kit			820777-901

ZORBAX Rapid Resolution HPLC Columns for LC/MS

- Ultra-short cartridges for ultra-fast screening
- Easy-to-use cartridge assembly
- Column lengths from 15 to 150 mm

Rapid Resolution LC/MS cartridge columns are available in ultra-short column lengths and 3.5 µm packings to minimize analysis time while still resolving sample mixtures. These ultra-short cartridge columns are made in two lengths — 15 and 30 mm — and two inner diameters — 4.6 and 2.1 mm i.d. — for best sensitivity and compatibility with different LC/MS interfaces. Longer lengths, e.g., 50 and 150 mm, are also used for LC/MS applications with complex samples and matrices, and are available in fully configured analytical columns. The exceptional stability of StableBond at low pH (1 – 3) and the extended pH range (2 – 9) of Eclipse XDB provide superior bonded-phase choices for optimum selectivity and long column life.



LC/MS Rapid Resolution

StableBond and Eclipse XDB Columns Ordering Information

Column Description	Dimension (mm)	Particle Size (µm)	SB-C18	SB-C8	Eclipse XDB-C18	Eclipse XDB-C8	Bonus-RP	Extend-C18
Narrow Bore	2.1 x 150	3.5	830990-902	830990-906	930990-902	930990-906		
Narrow Bore	2.1 x 50	3.5	871700-902	871700-906	971700-902	971700-906	861700-901	735700-902
Narrow Bore	2.1 x 150	5	883700-902	883700-906	993700-902	993700-906	883725-901	773700-902
Rapid Resolution Cartridges								
Analytical	4.6 x 30	3.5	833975-902	833975-906	933975-902	933975-906		
Analytical (3/pk)	4.6 x 30	3.5	833975-932	833975-936	933975-932	933975-936		
Analytical	4.6 x 15	3.5	831975-902	831975-906	931975-902	931975-906		
Analytical (3/pk)	4.6 x 15	3.5	831975-932	831975-936	931975-932	931975-936		
Narrow Bore	2.1 x 30	3.5	873700-902	873700-906	973700-902	973700-906		
Narrow Bore (3/pk)	2.1 x 30	3.5	873700-932	873700-936	973700-932	973700-936		
Narrow Bore	2.1 x 15	3.5	875700-902	875700-906	975700-902	975700-906		
Narrow Bore (3/pk)	2.1 x 15	3.5	875700-932	875700-936	975700-932	975700-936		
Hardware Kit			820222-901	820222-901	820222-901	820222-901		

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