

Packed by Phenomenex

- High efficiency
- Guaranteed quality

Phenomenex columns packed with Zorbax® 7 µm materials offer the advantages of lower cost as well as lower operating backpressures, which result in long column lifetimes.

If any Phenomenex-packed Zorbax column does not provide equal or better results than other manufactured columns using Zorbax material of 7 µm particle size with the same phase and comparable dimensions, return the column with comparative data within 45 days for a FULL REFUND.

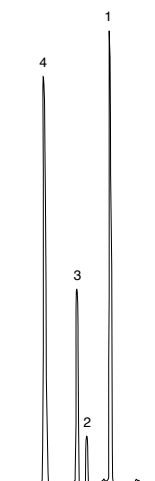
Material Characteristics

Packing Material	Particle Shape/Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load %	Calculated Bonded Phase Coverage (µmole/m ²)	End Capping
Zorbax ODS	Spher. 3, 5, 7	70	300	20, Monomeric	3.47	Yes
Zorbax C8	Spher. 3, 5, 7	70	300	12, Monomeric	2.99	Yes
Zorbax CN	Spher. 3, 5, 7	70	300	7, Monomeric	2.41	Yes

Reversed Phase Test Mix

App ID 5659

Column: Zorbax 7 µm ODS
Dimension: 250 x 4.6 mm ID
Part No.: 00G-0088-E0
Solvent: Acetonitrile/Water (75:25)
Flow Rate: 1.5 mL/min
Pressure: 800 psi
Detection: UV @ 254 nm
Injection Size: 1.0 µL
Sample:
 1. Benzamide
 2. Benzene
 3. Benzophenone
 4. Biphenyl



ORDERING INFORMATION

SecurityGuard™ Analytical Cartridges require universal holder Part No.: KJO-4282

Phases	7 µm Analytical Columns (mm)		SecurityGuard™ Cartridges	
	150 x 4.6	250 x 4.6	4 x 2.0 mm /10pk	4 x 3.0 mm /10pk
Silica	00F-0086-E0	00G-0086-E0	AJO-4347	AJO-4348
C8	00F-0087-E0	00G-0087-E0	AJO-4289	AJO-4290
ODS	00F-0088-E0	00G-0088-E0	AJO-4286	AJO-4287
CN	00F-0089-E0	—	AJO-4304	AJO-4305

for ID: 2.0-3.0 mm 3.2-8.0 mm



Other column dimensions available upon request.

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Extend and Bonus RP also available. Please call and inquire.

- **SB**
- **Rx**
- **XDB**
- **Traditional**
- **Ultron-Chiral**

Material Characteristics

Packing Material	Particle Shape/Size (µm)	Pore Size (Å)	Surface Area (m ² /g)	Carbon Load (%)	End Capping
ODS	Spher. 3,5,7	70	300	20	yes
C8	Spher. 3,5,7	70	300	12	yes
Phenyl	Spher. 3,5,7	70	300	12	yes
CN	Spher. 3,5,7	70	300	7	yes
TMS	Spher. 5	70	300	4	yes
NH ₂	Spher. 5,7	70	300	4	no
Silica	Spher. 3,5,7	70	300	—	no*
Rx C18	Spher. 3,5,5,7	80	180	12	no*
Rx C8	Spher. 3,5,5,7	80	180	5.5	no*
SB-C18	Spher. 3,5,5,7	80	180	12	no*
SB-C18	Spher. 3,5,5,7	300	45	2.8	no*
SB-C8	Spher. 3,5,5,7	80	180	5.5	no*
SB-C8	Spher. 3,5,5,7	300	45	1.5	no*
SB-Phenyl	Spher. 3,5,5,7	80	180	5.5	no*
SB-CN	Spher. 3,5,5,7	80	180	4	no*
SB-CN	Spher. 3,5,5,7	300	45	1.2	no*
SB-C3	Spher. 3,5,5,7	80	180	4	no*
SB-C3	Spher. 3,5,5,7	300	45	1.1	no*
XDB-C8	Spher. 3,5,5	80	180	7.6	yes**
XDB-C18	Spher. 3,5,5	80	180	9.5	yes**

* sterically protected (no end-capping) ** double end-capped

Eclipse XDB

- **80 Å reversed phase HPLC columns**
- **Easy method development**
- **Symmetrical peaks**
- **Wide usable pH range**

Eclipse XDB columns are available as Eclipse XDB-C18 and Eclipse XDB-C8. The Eclipse XDB-C18 column will provide very high retention for many polar and non-polar compounds. Eclipse XDB-C8 columns are excellent for initial method development because they provide excellent retention and selectivity for mixtures of polar and moderately polar compounds.

ORDERING INFORMATION

Eclipse XDB Columns					
Column	µm	Size (mm)	XDB-C18 (L1)	XDB-C8 (L7)	Price
Analytical	5	250 x 4.6	990967-902	990967-906	
Analytical	5	150 x 4.6	993967-902	993967-906	
Rapid Resolution	3.5	150 x 4.6	963967-902	963967-906	
Rapid Resolution	3.5	75 x 4.6	966967-902	—	
Solvent Saver Plus	3.5	150 x 3.0	963954-302	—	
Narrow-Bore	5	150 x 2.1	993700-902	—	
Narrow-Bore LC/MS	5	50 x 2.1	960967-902	960967-906	
Guard Cartridge ¹ (4pk)	5	12.5 x 4.6	820950-925	820950-926	



¹Guard cartridges require a reusable hardware kit, Part No. 820888-901. (see ordering information on p. 271)

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StableBond™

- Low pH stability
- High temperature stability
- Great for the analysis of basic compounds

StableBond (SB) HPLC columns provide low pH stability because they are made from patented, sterically-protecting silanes. The diisobutyloctadecylsilane (SB-C18) and diisopropylsilanes (SB-C8, SB-Phenyl, SB-C3, and SB-CN) are less susceptible to loss of the bonded phase by acid hydrolysis than traditional dimethylsilanes providing high column lifetime under these harsh conditions. Monolayer bonding with these bulky silanes results in a high degree of reproducibility from column lot-to-lot. StableBond columns are available with five different bonded phases to provide many choices for achieving good resolution during method development.

ORDERING INFORMATION



StableBond columns are designed for optimal use at low pH. At pH 6-8, column stability is obtained by operating at temperatures <40 °C using low buffer concentrations in the range of 0.01 - 0.02 M.

StableBond 80 Å Columns

Column	µm	Size (mm)	SB-C18 (L1)	SB-C8 (L7)	SB-CN (L10)	SB-C3	SB-Phenyl (L11)	Price
Analytical	5	250 x 4.6	880975-902	880975-906	880975-905	—	880975-912	
Analytical	5	150 x 4.6	883975-902	883975-906	883975-905	883975-909	883975-912	
Rapid Resolution	3.5	150 x 4.6	863953-902	863953-906	863953-905	—	863953-912	
Rapid Resolution	3.5	75 x 4.6	866953-902	866953-906	866953-905	—	866953-912	
Solvent Saver	5	250 x 3.0	—	880975-306	—	—	—	
Solvent Saver Plus	3.5	150 x 3.0	—	863954-306	—	—	863954-312	
Narrow-Bore	5	150 x 2.1	883700-922	883700-906	883700-905	—	883700-912	
Narrow-Bore LC/MS	5	50 x 2.1	860975-902	—	860975-905	—	—	
Semi-Preparative	5	250 x 9.4	880975-202	—	880975-205	—	—	
Preparative	7	250 x 21.2	—	877250-106	—	—	—	
Guard Cartridge ¹ (4pk)	5	12.5 x 4.6	820950-920	820950-915	820950-916	—	820950-917	
Preparative Guard Cartridge ² (2pk)	7	15 x 9.4	820675-115	820675-115	—	—	820675-115	



¹ Guard cartridges require a reusable hardware kit, Part No. 820888-901 (see ordering information on next page).

² Preparative guard cartridge columns require a reusable hardware kit, Part No. 840140-901 (see ordering information on next page).

StableBond™ 300 Å

- Excellent lifetime with TFA containing mobile phases
- Wide-pore (300 Å) columns for high molecular weight analytes
- Multiple selectivities for proteins and peptides

Wide-pore, StableBond 300SB-C18, 300SB-C8, 300SB-CN, and 300SB-C3 columns provide high efficiency and complementary selectivities for optimized separations of proteins and peptides. All StableBond columns are monolayer bonded to high purity silica for reproducibility and excellent peak shape, a necessity for basic peptides and proteins. Four different bonded-phases are available for excellent resolution without compromising column stability.

ORDERING INFORMATION

StableBond 300 Å (Wide-Pore) Columns

Column	µm	Size (mm)	300SB-C18	300SB-C8	300SB-CN	300SB-C3	Price
Analytical	5	250 x 4.6	880995-902	880995-906	880995-905	880995-909	
Analytical	5	150 x 4.6	883995-902	883995-906	883995-905	883995-909	
Rapid Resolution	3.5	150 x 4.6	863973-902	863973-906	863973-905	863973-909	
Rapid Resolution	3.5	50 x 4.6	865973-902	—	865973-905	—	
Narrow-Bore	5	150 x 2.1	883750-902	883750-906	883750-905	883750-909	
Semi-Preparative	5	250 x 9.4	—	880995-206	—	—	
Guard Cartridge ¹ (4pk)	5	12.5 x 4.6	820950-921	820950-918	820950-923	820950-924	



¹ Guard cartridges require a reusable hardware kit, Part No. 820888-901 (see ordering information on next page).

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ORDERING INFORMATION

RX Series

Rx 80 Å Reversed-Phase HPLC Columns

Column	µm	Size (mm)	Rx-C18 (L1)	Rx-C8 (L7)	Price
Analytical	5	250 x 4.6	880967-902	880967-901	
Analytical	5	150 x 4.6	883967-902	883967-901	
Rapid Resolution	3.5	150 x 4.6	863967-902	863953-906	
Rapid Resolution	3.5	75 x 4.6	866967-902	866953-906	
Solvent Saver	5	250 x 3.0	—	880975-306	
Narrow-Bore	5	150 x 2.1	—	883700-906	
Semi-Preparative	5	250 x 9.4	880967-202	880967-201	
Preparative	7	250 x 21.2	—	877250-106	
Guard Cartridge ¹ (4pk)	5	12.5 x 4.6	820950-914	820950-913	
Preparative Guard Cartridge ² (2pk)	7	15 x 9.4	820675-115	820675-115	

Traditional Reversed Phase

Traditional Reversed-Phase Columns

Column	µm	Size (mm)	ODS C18 (L1)	C8 (L7)	Phenyl (L11)	CN (L10)	TMS (L13)	Price
Analytical	5	250 x 4.6	880952-702	880952-706	880952-712	884950-507	880952-710	
Analytical	5	150 x 4.6	883952-702	883952-706	883952-712	884950-526	—	
Special Analytical ³	5	250 x 4.6	884950-543	—	—	—	—	
Semi-Preparative	5	250 x 9.4	880952-202	—	—	—	—	
Guard Cartridge ¹ (4pk)	5	12.5 x 4.6	820950-902	820950-906	—	820950-905	—	
Preparative Guard Cartridge ² (2pk)	7	15 x 9.4	820675-115	820675-115	820675-115	—	—	

Normal Phase

Normal Phase Columns

Column	µm	Size (mm)	Rx-SIL (L3)	SIL (L3)	CN (L10)	NH ₂ (L8)	Price
Analytical	5	250 x 4.6	880975-901	880952-701	880952-705	880952-708	
Analytical	5	150 x 4.6	883975-901	883952-701	883952-705	883952-708	
Semi-Preparative	5	250 x 9.4	—	880952-201	—	—	
Guard Cartridge ¹ (4pk)	5	12.5 x 4.6	—	—	820950-905	820950-908	



¹ Guard cartridges require a reusable hardware kit, Part No. 820888-901 (see ordering information below).

² Preparative guard cartridge columns require a reusable hardware kit, Part No. 840140-901 (see ordering information below).

³ Non-encapped

Reusable Hardware Kits

Kit	Part No.	Price
Guard Hardware Kit*	820888-901	
Preparative Guard Hardware Kit†	840140-901	

* Guard Hardware Kit includes guard column holder (1), guard endfitting (1), column connector (1). Upgrade for old Part No. 820777-901.

† Compatible with all Zorbax guard cartridges. † Preparative Guard Hardware Kit includes inlet fitting (1), Teflon® coated endfitting (1), and a column connector (1).



All hardware components are available separately as replacement parts.



See p. 268 for Phenomenex packed Zorbax HPLC columns.

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Rapid Resolution Columns

- StableBond
- Eclipse XDB
- Zorbax Rx
- StableBond 300 Å

The need for new column configurations to increase productivity is growing rapidly. Rapid Resolution columns use 3.5 µm particles

to provide high efficiency in a short column. The result is a time and solvent savings of up to 60 %. The 150 mm Rapid Resolution column has 18,000 - 20,000 theoretical plates – the same as a 250 mm column packed with 5 µm particles.

The 75 mm Rapid Resolution columns are comparable to 150 mm, 5 µm columns. Rapid Resolution columns are also available in 300 Å pore-size for the separation of high molecular weight molecules (>4000), such as peptides and proteins.

ORDERING INFORMATION

Rapid Resolution Columns					
Column	µm	Size (mm)	Pore Size	Part No.	Price
Rx-C18	3.5	150 x 4.6	80 Å	863967-902	
Rx-C18	3.5	75 x 4.6	80 Å	866967-902	
SB-C18	3.5	150 x 4.6	80 Å	863953-902	
SB-C18	3.5	75 x 4.6	80 Å	866953-902	
SB-C18	3.5	50 x 4.6	80 Å	835975-902	
SB-C8	3.5	150 x 4.6	80 Å	863953-906	
SB-C8	3.5	75 x 4.6	80 Å	866953-906	
SB-C8	3.5	50 x 4.6	80 Å	835975-906	
SB-CN	3.5	150 x 4.6	80 Å	863953-905	
SB-CN	3.5	75 x 4.6	80 Å	866953-905	
SB-CN	3.5	50 x 4.6	80 Å	835975-905	
SB-Phenyl	3.5	150 x 4.6	80 Å	863953-912	
SB-Phenyl	3.5	75 x 4.6	80 Å	866953-912	
Eclipse XDB-C18	3.5	150 x 4.6	80 Å	963967-902	
Eclipse XDB-C18	3.5	75 x 4.6	80 Å	966967-902	
Eclipse XDB-C8	3.5	150 x 4.6	80 Å	963967-906	
300SB-C18	3.5	150 x 4.6	300 Å	863973-902	
300SB-C18	3.5	50 x 4.6	300 Å	865973-902	
300SB-C8	3.5	150 x 4.6	300 Å	863973-906	
300SB-CN	3.5	150 x 4.6	300 Å	863973-905	
300SB-CN	3.5	50 x 4.6	300 Å	865973-905	
300SB-C3	3.5	150 x 4.6	300 Å	863973-909	

Ultron® ES Chiral Columns*

- Two complementary protein-based chiral stationary phases
- Easy to use with reversed-phase mobile phases
- Racemic separation without derivatization

Specifically designed chiral stationary phases are an excellent choice for the HPLC separation of enantiomers without derivatization. These constitute a growing number of drug substances of interest. The Ultron® ES-OVM columns contain an

ovomucoid protein covalently bonded to 5 µm silica particles with 120 Å pores. Both columns are easy to use since they separate enantiomers using reversed-phase, predominantly aqueous mobile phases. The Ultron® ES-OVM column can be used over the pH range 3-7.5 and can separate both acidic and basic compounds. The Ultron® ES-Pepsin column will better resolve many compounds the ES-OVM column may not, and is excellent for separation of basic compounds because of the lower isoelectric point of pepsin.

ORDERING INFORMATION

Ultron ES Chiral Columns					
Column	µm	Size (mm)	ES-OVM	ES-Pepsin	Price
Analytical	5	150 x 4.6	702111651	822111651	
Analytical & Guard	5	150 x 4.6	702111651A	822111631A	

*Ultron Chiral HPLC columns are manufactured by Shinwa Chemical Industries, Ltd.



**See p. 108 for additional Chiral Stationary phases.