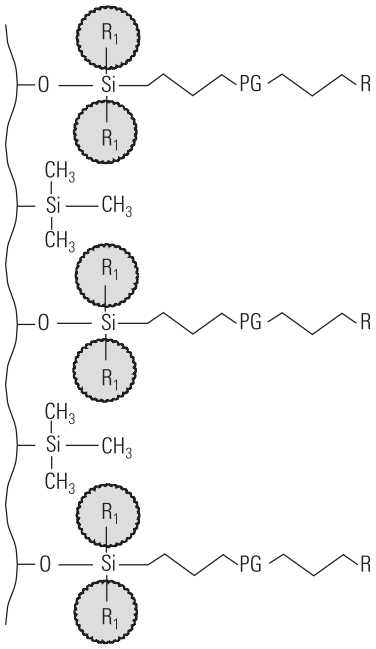


Unique, Polar Alkyl Bonus-RP Bonded Phase

ZORBAX Bonus-RP

- Excellent peak shape for challenging basic compounds at low and mid pH
- Unique reversed-phase selectivity
- Novel bonding technology with embedded polar group and steric protection
- Usable in 100% aqueous mobile phases

The Agilent ZORBAX Bonus-RP column has a polar amide group embedded in a long alkyl chain. This novel bonding reduces interactions between basic compounds and the silica support, improving peak shape for the most difficult basic compounds. Peak shape and column lifetime are further improved by triple endcapping. In addition, diisopropyl side groups provide steric protection against acid hydrolysis for good lifetime at low pH. The Bonus-RP column provides an alternate selectivity to C18 and C8 alkyl bonded phases.

Column Specifications

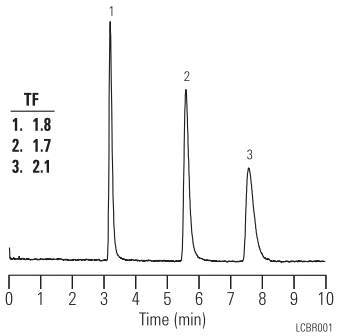
Bonded Phase	Pore Size	Surface Area	Temp. Limits*	pH Range	Endcapped	Carbon Load
ZORBAX Bonus-RP	80Å	180 m^2/g	60°C	2.0-9.0	Triple	9.5%

Specifications represent typical values only.

*Temperature limits are 60°C up to pH 8, 40°C from pH 8-9.

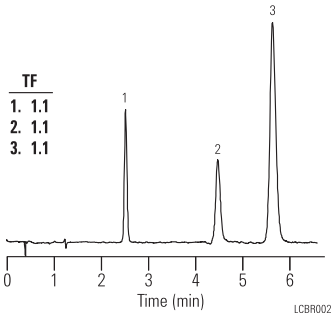
Improved Peak Shape of Basic Compounds Using Bonus-RP

Column: **Alkyl-C8 4.6 x 150 mm, 5 µm**
Mobile Phase: 75% 25 mM NH_4OAc, pH 5.5
25% ACN
Flow Rate: 1.5 mL/min
Temperature: 40°C
Detector: 254 nm



1. Doxylamine
2. Chlorpheniramine
3. Triprolidine

Column: **ZORBAX Bonus-RP 883668-901 4.6 x 150 mm, 5 µm**
Mobile Phase: 80% 25 mM NH_4OAc, pH 5.5
20% ACN
Flow Rate: 1.5 mL/min
Temperature: 40°C
Detector: 254 nm

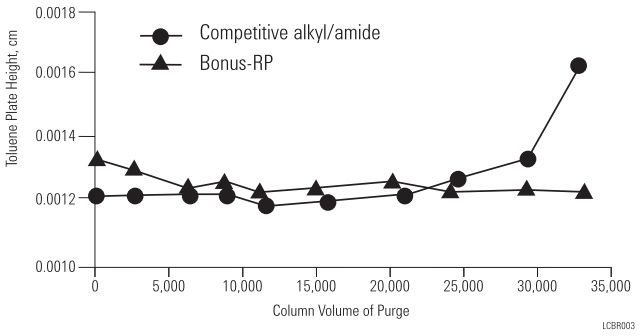


1. Doxylamine
2. Chlorpheniramine
3. Triprolidine

Bonus-RP eliminates peak tailing of these basic compounds in comparison to a typical alkyl C8 bonded phase. In the mid-pH region, residual silanols can interact more strongly with basic compounds to cause peak tailing. The polar group in the Bonus-RP bonded phase eliminates peak tailing of these basic compounds by reducing interactions with residual silanols.

ZORBAX Bonus-RP is Stable at Low and Mid pH

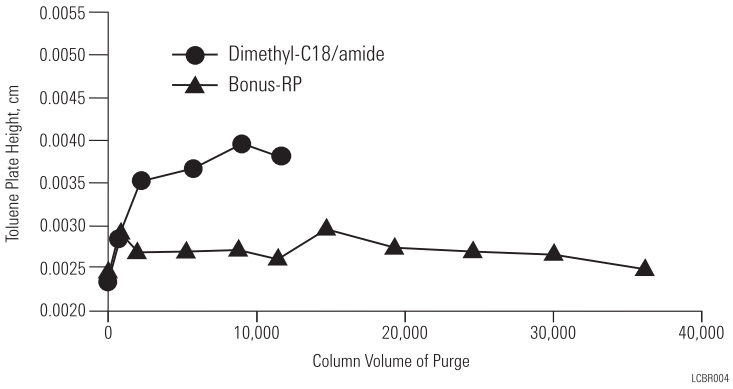
Column:	**ZORBAX Bonus-RP 883668-901 4.6 x 150 mm, 5 µm**
Mobile Phase:	60% 25 mM Phosphate Buffer, pH 7.0:40% ACN
Flow Rate:	1.5 mL/min
Temperature:	23°C



Triple endcapping of Bonus-RP enhances stability at pH 7. Each 10,000 column volume is equivalent to approximately one working month.

Dimethyl-C18/amide, Bonus-RP

Column:	**ZORBAX Bonus-RP 883668-901 4.6 x 150 mm, 5 µm**
Mobile Phase:	Aging: 50% MeOH 50% 0.1% TFA Test: 80% MeOH 20% H_2O
Flow Rate:	1.0 mL/min
Temperature:	Aging: 60°C Test: 23°C



Sterically protecting side groups provide good low pH stability and longer column lifetime than similar polar alkyl bonded phases.

Tips & Tools

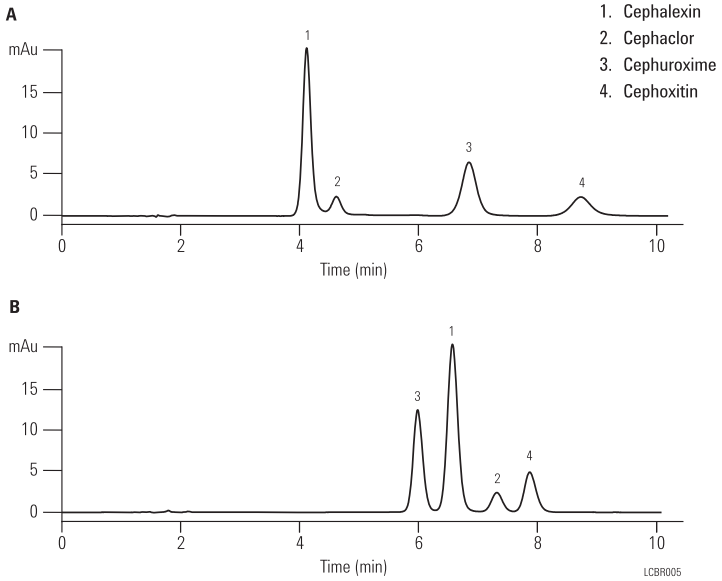
Don't forget, we have special offers throughout the year.

To learn more, visit **www.agilent.com/chem/specialoffers**

ZORBAX Bonus-RP Provides Unique Selectivity

Column A:	**ZORBAX Bonus-RP 883668-901 4.6 x 150 mm, 5 µm**
Column B:	**Eclipse XDB-C8 993967-906 4.6 x 150 mm, 5 µm**
Mobile Phase:	75% 25 mM Na Citrate, pH 6 25% MeOH
Flow Rate:	1.0 mL/min
Temperature:	Ambient
Detector:	254 nm
Sample:	3 µL Cephalosporins

Peak elution order can change dramatically when using Bonus-RP. In this example, the elution order of the first three peaks changes.



ZORBAX Bonus-RP

Hardware Description	Size (mm)	Particle Size (µm)	Bonus-RP USP L60
Standard Columns (no special hardware required)			
Analytical	4.6 x 250	5	880668-901
Analytical	4.6 x 150	5	883668-901
Rapid Resolution	4.6 x 250	3.5	884950-577
Rapid Resolution	4.6 x 150	3.5	863668-901
Rapid Resolution	4.6 x 100	3.5	864668-901
Rapid Resolution	4.6 x 75	3.5	866668-901
Rapid Resolution	4.6 x 50	3.5	835668-901
Rapid Resolution HT, 600 bar	4.6 x 100	1.8	828668-901
Rapid Resolution HT, 600 bar	4.6 x 75	1.8	830668-901
Rapid Resolution HT, 600 bar	4.6 x 50	1.8	827668-901

Unless indicated, column pressure limit is 400 bar.

(Continued)

ZORBAX Bonus-RP

Hardware	Description	Size (mm)	Particle Size (µm)	Bonus-RP USP L60
Standard Columns (no special hardware required)				
	Solvent Saver	3.0 x 250	5	880668-301
	Solvent Saver	3.0 x 150	5	883668-301
	Solvent Saver Plus	3.0 x 150	3.5	863668-301
	Solvent Saver Plus	3.0 x 100	3.5	864668-301
	Solvent Saver HT, 600 bar	3.0 x 100	1.8	828668-301
	Solvent Saver HT, 600 bar	3.0 x 50	1.8	827668-301
	Narrow Bore	2.1 x 150	5	883725-901
	Narrow Bore	2.1 x 50	5	861971-901
	Narrow Bore RR	2.1 x 150	3.5	863700-901
	Narrow Bore RR	2.1 x 100	3.5	861768-901
	Narrow Bore RR	2.1 x 50	3.5	861700-901
	Narrow Bore RRHT, 600 bar	2.1 x 100	1.8	828768-901
	Narrow Bore RRHT, 600 bar	2.1 x 50	1.8	827768-901
	MicroBore RR	1.0 x 150	3.5	863608-901
	MicroBore RR	1.0 x 50	3.5	865608-901
	MicroBore RR	1.0 x 30	3.5	861608-901
	MicroBore Guard, 3/pk	1.0 x 17	5	5185-5922
ZGC	Guard Cartridge, 4/pk	4.6 x 12.5	5	820950-928
ZGC	Guard Cartridge, 4/pk	2.1 x 12.5	5	821125-928
ZGC	Guard Hardware Kit			820999-901
PrepHT Cartridge Columns (require endfittings kit 820400-901)				
PI	PrepHT Cartridge	21.2 x 250	7	878250-101
PI	PrepHT Cartridge	21.2 x 150	7	878150-101
PI	PrepHT Cartridge	21.2 x 150	5	868150-901
PI	PrepHT Cartridge	21.2 x 100	5	868100-901
PI	PrepHT Cartridge	21.2 x 50	5	868050-901
PI	PrepHT endfittings, 2/pk			820400-901
PI	PrepHT Guard Cartridge, 2/pk	17 x 7.5	5	820212-928
PI	Guard Cartridge Hardware			820444-901

Unless indicated, column pressure limit is 400 bar.