

## VertiSep™ BDS HPLC Columns

- An excellent alternative to Hypersil® BDS at a reasonable lower price
- Most methods on Hypersil® BDS can be transferred to VertiSep™ BDS
- Excellent Column-to-Column reproducibility
- Full guarantee



VertiSep™ BDS are highly base deactivation for basic compounds while offer superior efficiency for neutral and acidic compounds. VertiSep™ BDS has four stable reverse phase packings C18, C8, Phenyl and Cyano that well suited for pharmaceutical and other biological compounds

VertiSep™ BDS was developed to provide a physical and performance characteristics very similar to those of Hypersil® BDS.

VertiSep™ BDS provides the results indicated comparable capacity, selectivity efficiency and peak symmetry when compared to Hypersil® BDS. Most methods developed on Hypersil® BDS can be transferred to VertiSep™ BDS, even for USP applications.

VertiSep™ BDS are manufactured to minimize lot-to-lot variation with a strict QC program to ensure excellent column-to-column reproducibility.

VertiSep™ BDS are guaranteed separations of your samples will be comparable to separations with Hypersil® BDS columns. If VertiSep™ BDS does not meet your satisfaction, send in comparative data within 45 days and keep VertiSep™ BDS column for FREE.

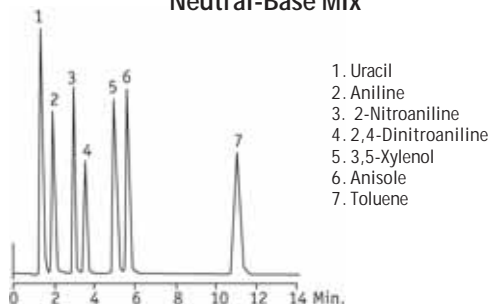
**VertiSep™ BDS Packing Specifications**

Packing	Particle Size (µm)	Carbon Load (%)	Pore Size (Å)	Pore Volume (mL/g)	Surface Area (m <sup>2</sup> /g)	End Capped
C18	3,5	11	140	0.6	150	Yes
C8	3,5	6	140	0.6	150	Yes
Ph	3,5	5	140	0.6	150	Yes
CN	3,5	4	140	0.6	150	Yes

**Packing Characteristics Comparison**

	Hypersil® BDS	VertiSep™ BDS
Particle Shape	Spherical	Spherical
Particle Size	3,5 µm	3,5 µm
Pore Size	130 Å	140 Å
Surface Area	170 m <sup>2</sup> /g	150 m <sup>2</sup> /g
Pore Volumn	0.6 mL/g	0.6 mL/g
Endcapped	Yes	Yes

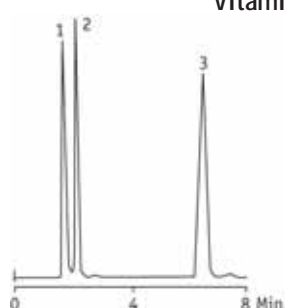
## Neutral-Base Mix



1. Uracil
2. Aniline
3. 2-Nitroaniline
4. 2,4-Dinitroaniline
5. 3,5-Xylenol
6. Anisole
7. Toluene

Column: VertiSep™ BDS C18 5µm 150x4.6mm  
 Mobile Phase: Methanol:0.05M KH<sub>2</sub>PO<sub>4</sub>, pH3.5 (65:35)  
 Flow Rate: 1.0mL/min  
 Detection: UV 254nm

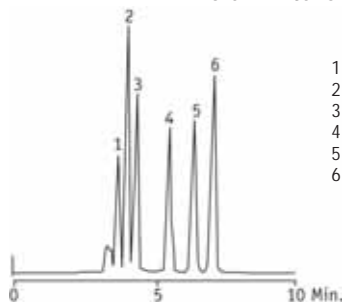
## Vitamins



1. Thiamine (B1)
2. Niacinamide (B3)
3. Riboflavin (B2)

Column: VertiSep™ BDS C18 5µm 150x4.6mm  
 Mobile Phase: Methanol:0.05M KH<sub>2</sub>PO<sub>4</sub>, pH3.5 (30:70)  
 Flow Rate: 1.0mL/min  
 Detection: UV 254nm

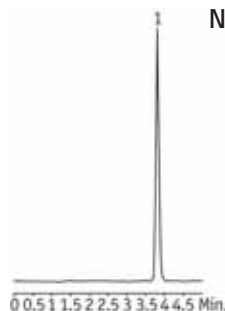
## Acid Mixture



1. Glutamic Acid
2. Glycolic Acid
3. Malic Acid
4. Citric Acid
5. Succinic Acid
6. Fumaric Acid

Column: VertiSep™ BDS C18 5µm 250x4.6mm  
 Mobile Phase: 0.2M H<sub>3</sub>PO<sub>4</sub>:Methanol (65:35)  
 Flow Rate: 0.8mL/min  
 Detection: UV 254nm

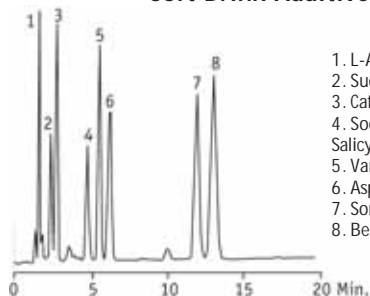
## Naproxen



1. Naproxen

Column: VertiSep™ BDS C18 5µm 250x4.6mm  
 Mobile Phase: A: 90% 20 molar KH<sub>2</sub>PO<sub>4</sub> buffer, pH 3.0  
                   B: 10% acetonitrile  
 Flow Rate: 1.0mL/min  
 Detection: UV 254nm

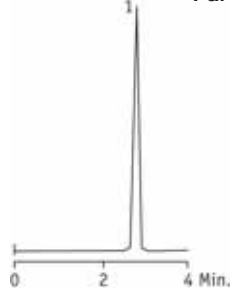
## Soft Drink Additives



1. L-Ascorbic Acid
2. Succharin
3. Caffeine
4. Sodium Salicylate
5. Vanillin
6. Aspartame
7. Sorbic Acid
8. Benzoic Acid

Column: VertiSep™ BDS C18 5µm 150x4.6mm  
 Mobile Phase: Methanol:1% Acetic Acid (30:70)  
 Flow Rate: 1.0mL/min  
 Detection: UV 254nm

## Paracetamol



1. Paracetamol

Column: VertiSep™ BDS C18 5µm 150x4.6mm  
 Mobile Phase: Acetonitrile:0.05M KH<sub>2</sub>PO<sub>4</sub> PH4.5 (30:70)  
 Flow Rate: 1.0mL/min  
 Detection: UV 254nm

### VertiSep™ BDS Columns

Packing	Particle Size (µm)	Formats	I.D. Length (mm)	Part No.
C18	3	Ultra-Fast	2.1 x 50	03FA-B211
	3	LC/MS	2.1 x 100	03FA-B311
	3	LC/MS	2.1 x 150	03FA-B411
	3	LC/MS	3.2 x 100	03FA-C311
	3	LC/MS	3.2 x 150	03FA-C411
	3	Fast	4.6 x 50	03FA-E211
	3	Analytical	4.6 x 100	03FA-E311
	3	Analytical	4.6 x 150	03FA-E411
	3	Fast	7.8 x 50	03FA-B321
	3	Analytical	7.8 x 100	03FA-B421
	5	LC/MS	2.1 x 100	03FA-G211
	5	LC/MS	2.1 x 150	03FA-G311
	5	LC/MS	3.2 x 100	03FA-C321
	5	LC/MS	3.2 x 150	03FA-C421
	5	Analytical	3.9 x 150	03FA-L421
	5	Analytical	3.9 x 300	03FA-L921
	5	Fast	4.6 x 50	03FA-E221
	5	Analytical	4.6 x 150	03FA-E421
	5	Analytical	4.6 x 250	03FA-E521
C8	3	Ultra-Fast	2.1 x 50	03FB-B211
	3	LC/MS	2.1 x 100	03FB-B311
	3	LC/MS	2.1 x 150	03FB-B411
	3	LC/MS	3.2 x 100	03FB-C311
	3	LC/MS	3.2 x 150	03FB-C411
	3	Fast	4.6 x 50	03FB-E211
	3	Analytical	4.6 x 100	03FB-E311
	3	Analytical	4.6 x 150	03FB-E411
	3	Fast	7.8 x 50	03FB-B321
	3	Analytical	7.8 x 100	03FB-B421
	5	LC/MS	2.1 x 100	03FB-G211
	5	LC/MS	2.1 x 150	03FB-G311
	5	LC/MS	3.2 x 100	03FB-C321
	5	LC/MS	3.2 x 150	03FB-C421
	5	Analytical	3.9 x 150	03FB-L421
	5	Analytical	3.9 x 300	03FB-L921
	5	Fast	4.6 x 50	03FB-E221
	5	Analytical	4.6 x 150	03FB-E421
	5	Analytical	4.6 x 250	03FB-E521
Ph	3	Ultra-Fast	2.1 x 50	03FD-B211
	3	LC/MS	2.1 x 100	03FD-B311
	3	LC/MS	2.1 x 150	03FD-B411
	3	LC/MS	3.2 x 100	03FD-C311
	3	LC/MS	3.2 x 150	03FD-C411
	3	Fast	4.6 x 50	03FD-E211
	3	Analytical	4.6 x 100	03FD-E311
	3	Analytical	4.6 x 150	03FD-E411
	3	Fast	7.8 x 50	03FD-B321
	3	Analytical	7.8 x 100	03FD-B421
	5	LC/MS	2.1 x 100	03FD-G211
	5	LC/MS	2.1 x 150	03FD-G311
	5	LC/MS	3.2 x 100	03FD-C321
	5	LC/MS	3.2 x 150	03FD-C421
	5	Analytical	3.9 x 150	03FD-L421
	5	Analytical	3.9 x 300	03FD-L921
	5	Fast	4.6 x 50	03FD-E221
	5	Analytical	4.6 x 150	03FD-E421
	5	Analytical	4.6 x 250	03FD-E521

### VertiSep™ BDS Columns

Packing	Particle Size (µm)	Formats	I.D. Length (mm)	Part No.
CN	3	Ultra-Fast	2.1 x 50	03FE-B211
	3	LC/MS	2.1 x 100	03FE-B311
	3	LC/MS	2.1 x 150	03FE-B411
	3	LC/MS	3.2 x 100	03FE-C311
	3	LC/MS	3.2 x 150	03FE-C411
	3	Fast	4.6 x 50	03FE-E211
	3	Analytical	4.6 x 100	03FE-E311
	3	Analytical	4.6 x 150	03FE-E411
	3	Fast	7.8 x 50	03FE-B321
	3	Analytical	7.8 x 100	03FE-B421
	5	LC/MS	2.1 x 100	03FE-G211
	5	LC/MS	2.1 x 150	03FE-G311
	5	LC/MS	3.2 x 100	03FE-C321
	5	LC/MS	3.2 x 150	03FE-C421
	5	Fast	3.9 x 150	03FE-L421
	5	Analytical	3.9 x 300	03FE-L921
	5	Analytical	4.6 x 50	03FE-E221
	5	Analytical	4.6 x 150	03FE-E421
	5	Analytical	4.6 x 250	03FE-E521

### VertiSep™ BDS Guard Cartridges\*, 2/PK

Packing	Particle Size (µm)	Formats	I.D. Length (mm)	Part No.
C18	3	Guard	2.1 x 10	03FA-B113
	3	Guard	3.2 x 10	03FA-C113
	3	Guard	4.6 x 10	03FA-E113
	5	Guard	2.1 x 10	03FA-B123
	5	Guard	3.2 x 10	03FA-C123
	5	Guard	4.6 x 10	03FA-E123
C8	3	Guard	2.1 x 10	03FB-B113
	3	Guard	3.2 x 10	03FB-C113
	3	Guard	4.6 x 10	03FB-E113
	5	Guard	2.1 x 10	03FB-B123
	5	Guard	3.2 x 10	03FB-C123
	5	Guard	4.6 x 10	03FB-E123
Ph	3	Guard	2.1 x 10	03FD-B113
	3	Guard	3.2 x 10	03FD-C113
	3	Guard	4.6 x 10	03FD-E113
	5	Guard	2.1 x 10	03FD-B123
	5	Guard	3.2 x 10	03FD-C123
	5	Guard	4.6 x 10	03FD-E123
CN	3	Guard	2.1 x 10	03FE-B113
	3	Guard	3.2 x 10	03FE-C113
	3	Guard	4.6 x 10	03FE-E113
	5	Guard	2.1 x 10	03FE-B123
	5	Guard	3.2 x 10	03FE-C123
	5	Guard	4.6 x 10	03FE-E123

\*Guard holder required

### Guard Holder with Coupler

Guard Holder with Coupler	QTY	Part NO.
For column I.D. 2.1-7.8 mm	1	0300-0001

