

VertiSep™ BDS

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



HPLC Columns

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.

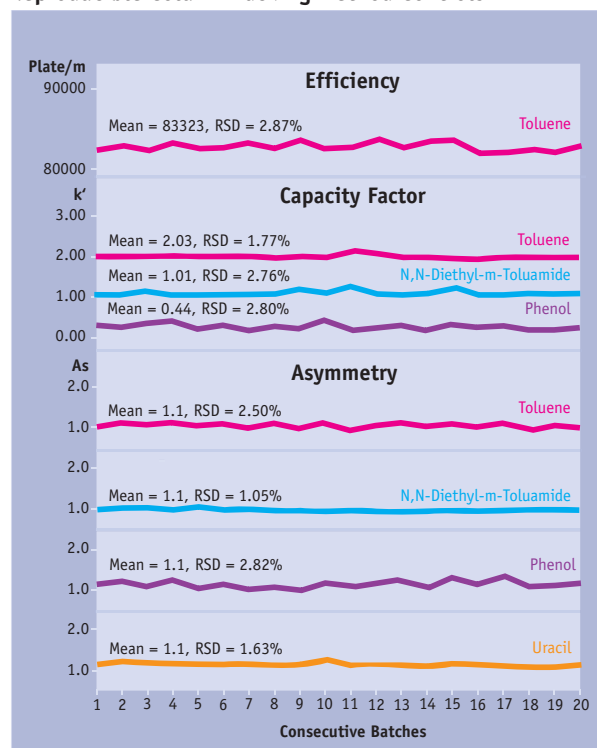
VertiSep™ BDS are guaranteed separations of your samples will be comparable to separations with Hypersil® BDS columns. If VertiSep™ BDS does not meet your satisfaction, send in comparative data within 45 days and keep VertiSep™ BDS column for FREE.

VertiSep™ BDS are manufactured by statistic process control of silica synthesis, bonding and column packing. The reproducible column packing method control provides exceptional efficiency, symmetry and reproducible capacity factor.

Packing Characteristics Comparison		
	Hypersil® BDS	VertiSep™ BDS
Particle Shape	Spherical	Spherical
Particle Size	3,5mm	3,5mm
Pore Size	130Å	140Å
Surface Area	170m ² /g	150m ² /g
Pore Volumn	0.6mL/g	0.6mL/g
Endcapped	Yes	Yes

Specifications						
Packing	Particle Size (mm)	Carbon Load (%)	Pore Size (Å)	Pore Volume (mL/g)	Surface Area (m ² /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

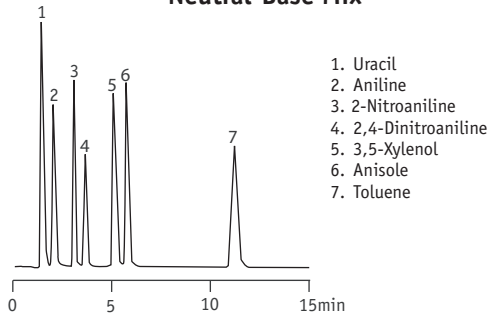
Reproducible Column Packing Method Controls



Test Conditions

Column: VertiSep™ BDS C18, 5µm, 4.6x250mm
 Mobile Phase: Acetonitrile:Water (60:40)
 Flow Rate: 1.0mL/min
 Detector: UV254nm
 Sample: Reversed phase test mix

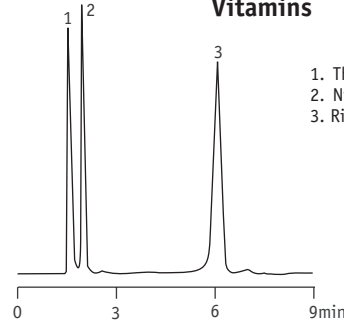
Neutral-Base Mix



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: MeOH:0.05M KH₂PO₄, pH 3.5 (65:35)
 Flow Rate: 1.0mL/min
 Detection: UV254nm

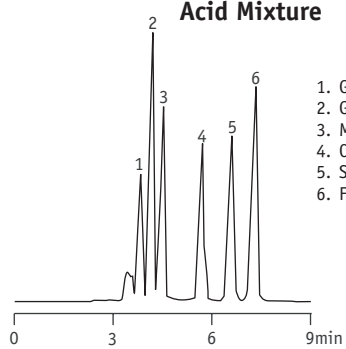
Vitamins



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

Column: VertiSep™ BDS C18 5µm 150x4.6mm
 Mobile Phase: MeOH:0.05M KH₂PO₄, pH 3.5 (30:70)
 Flow Rate: 1.0mL/min
 Detection: UV254nm

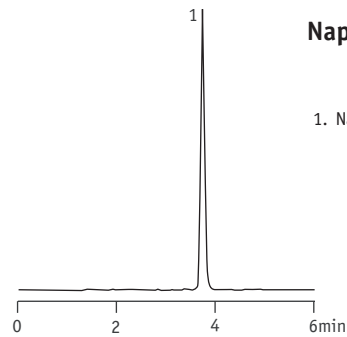
Acid Mixture



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 H₃PO₄:MeOH (65:35)
 Flow Rate: 0.8mL/min
 Detection: UV254nm

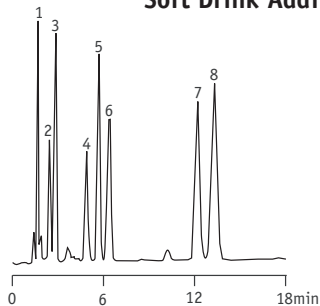
Naproxen



1. Naproxen

Column: VertiSep™ BDS C18 5µm 250x4.6mm
 Mobile Phase: 20 molar KH₂PO₄ buffer, pH 3.0:
 10% ACN (90:10)
 Flow Rate: 1.0mL/min
 Detection: UV254nm

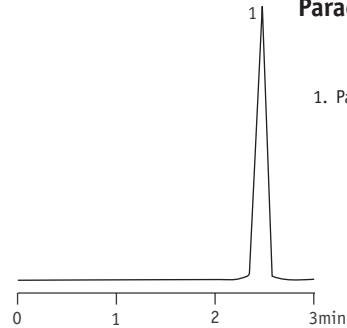
Soft Drink Additives



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

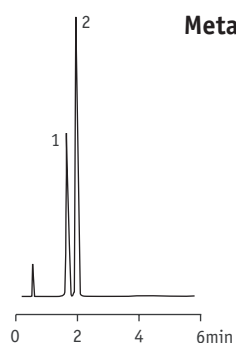
Column: VertiSep™ BDS C18 5µm 150x4.6mm
 Mobile Phase: MeOH:1% Acetic Acid (30:70)
 Flow Rate: 1.0mL/min
 Detection: UV254nm

Paracetamol



1. Paracetamol

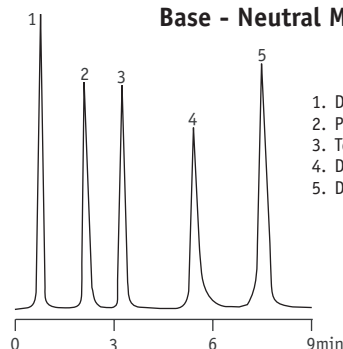
Column: VertiSep™ BDS C18 5µm 150x4.6mm
 Mobile Phase: ACN:0.05M KH₂PO₄, pH 4.5 (30:70)
 Flow Rate: 1.0mL/min
 Detection: UV254nm



Metal Chelator

1. Pyridine
2. 2,2'Dipyridyl

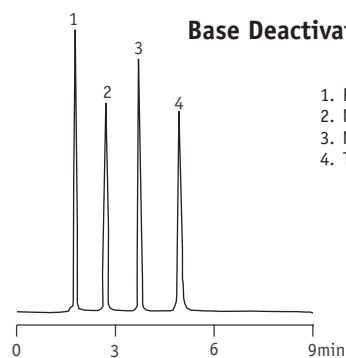
Column: VertiSep™ BDS C18 5µm 150x4.6mm
 Mobile Phase: ACN:0.05M KH₂PO₄, pH 3.0 (50:50)
 Flow Rate: 1.0mL/min
 Detection: UV254nm



Base - Neutral Mix

1. Dihydroxyacetone
2. Propanolol
3. Toluene
4. Doxepin
5. Dibutyl Phthalate

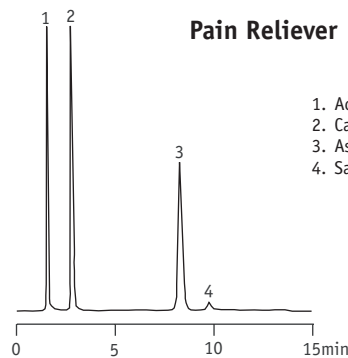
Column: VertiSep™ BDS C18 5µm 150x4.6mm
 Mobile Phase: MeOH:0.05M KH₂PO₄, pH7.0 (75:25)
 Flow Rate: 1.0mL/min
 Detection: UV254nm



Base Deactivation

1. Pyridine
2. N-Methylaniline
3. N,N-Dimethylaniline
4. Toluene

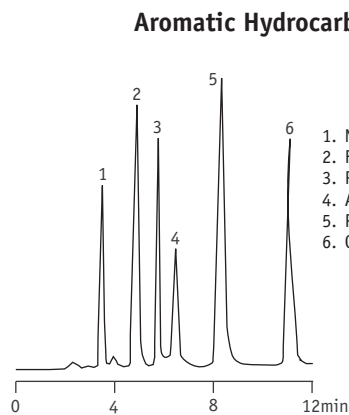
Column: VertiSep™ BDS C18 5µm 250x4.6mm
 Mobile Phase: ACN:0.05M KH₂PO₄, pH 4.5 (60:40)
 Flow Rate: 1.0mL/min
 Detection: UV254nm



Pain Reliever

1. Acetaminophen
2. Caffeine
3. Aspirin
4. Salicylic Acid

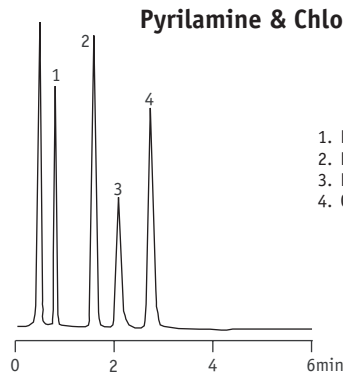
Column: VertiSep™ BDS C18 5µm 250x4.6mm
 Mobile Phase: H₂O:MeOH:Acetic Acid (720mL:250mL:3mL)
 Flow Rate: 1.25mL/min
 Detection: UV275nm



Aromatic Hydrocarbons

1. Naphthalene
2. Fluorene
3. Phenanthrene
4. Anthracene
5. Pyrene
6. Chrysene

Column: VertiSep™ BDS C18 5µm 150x4.6mm
 Mobile Phase: ACN:Water (75:25)
 Flow Rate: 1.0mL/min
 Detection: UV254nm



Pyrilamine & Chlorpheniramine

1. Pseudoephedrine
2. Lidocaine
3. Pyrilamine
4. Chlorpheniramine

Column: VertiSep™ BDS C18 3µm 100x4.6mm
 Mobile Phase: ACN:0.05M KH₂PO₄, pH 2.5 (20:80)
 Flow Rate: 2.0mL/min
 Detection: UV220nm

VertiSep™ BDS

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ BDS					
C18	3	Ultra-Fast	2.1 x 50	1	03FA-B211
	3	LC/MS	2.1 x 100	1	03FA-B311
	3	LC/MS	2.1 x 150	1	03FA-B411
	3	LC/MS	3.2 x 100	1	03FA-C311
	3	LC/MS	3.2 x 150	1	03FA-C411
	3	Hi-Speed	4.6 x 50	1	03FA-E211
	3	Analytical	4.6 x 100	1	03FA-E311
	3	Analytical	4.6 x 150	1	03FA-E411
	3	Hi-Speed	7.8 x 50	1	03FA-G211
	3	Analytical	7.8 x 100	1	03FA-G311
	5	LC/MS	2.1 x 100	1	03FA-B321
	5	LC/MS	2.1 x 150	1	03FA-B421
	5	LC/MS	3.2 x 100	1	03FA-C321
	5	LC/MS	3.2 x 150	1	03FA-C421
	5	Analytical	3.9 x 150	1	03FA-L421
	5	Analytical	3.9 x 300	1	03FA-L921
	5	Hi-Speed	4.6 x 50	1	03FA-E221
	5	Analytical	4.6 x 150	1	03FA-E421
	5	Analytical	4.6 x 250	1	03FA-E521
	C8	3	Ultra-Fast	2.1 x 50	1
3		LC/MS	2.1 x 100	1	03FB-B311
3		LC/MS	2.1 x 150	1	03FB-B411
3		LC/MS	3.2 x 100	1	03FB-C311
3		LC/MS	3.2 x 150	1	03FB-C411
3		Hi-Speed	4.6 x 50	1	03FB-E211
3		Analytical	4.6 x 100	1	03FB-E311
3		Analytical	4.6 x 150	1	03FB-E411
3		Hi-Speed	7.8 x 50	1	03FB-G211
3		Analytical	7.8 x 100	1	03FB-G311
5		LC/MS	2.1 x 100	1	03FB-B321
5		LC/MS	2.1 x 150	1	03FB-B421
5		LC/MS	3.2 x 100	1	03FB-C321
5		LC/MS	3.2 x 150	1	03FB-C421
5		Analytical	3.9 x 150	1	03FB-L421
5		Analytical	3.9 x 300	1	03FB-L921
5		Hi-Speed	4.6 x 50	1	03FB-E221
5		Analytical	4.6 x 150	1	03FB-E421
5		Analytical	4.6 x 250	1	03FB-E521
Ph		3	Ultra-Fast	2.1 x 50	1
	3	LC/MS	2.1 x 100	1	03FD-B311
	3	LC/MS	2.1 x 150	1	03FD-B411
	3	LC/MS	3.2 x 100	1	03FD-C311
	3	LC/MS	3.2 x 150	1	03FD-C411
	3	Hi-Speed	4.6 x 50	1	03FD-E211
	3	Analytical	4.6 x 100	1	03FD-E311
	3	Analytical	4.6 x 150	1	03FD-E411
	3	Hi-Speed	7.8 x 50	1	03FD-G211
	3	Analytical	7.8 x 100	1	03FD-G311
	5	LC/MS	2.1 x 100	1	03FD-B321
	5	LC/MS	2.1 x 150	1	03FD-B421
	5	LC/MS	3.2 x 100	1	03FD-C321
	5	LC/MS	3.2 x 150	1	03FD-C421
	5	Analytical	3.9 x 150	1	03FD-L421
	5	Analytical	3.9 x 300	1	03FD-L921
	5	Hi-Speed	4.6 x 50	1	03FD-E221
	5	Analytical	4.6 x 150	1	03FD-E421
	5	Analytical	4.6 x 250	1	03FD-E521

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ BDS					
CN	3	Ultra-FEst	2.1 x 50	1	03FE-B211
	3	LC/MS	2.1 x 100	1	03FE-B311
	3	LC/MS	2.1 x 150	1	03FE-B411
	3	LC/MS	3.2 x 100	1	03FE-C311
	3	LC/MS	3.2 x 150	1	03FE-C411
	3	Hi-Speed	4.6 x 50	1	03FE-E211
	3	Analytical	4.6 x 100	1	03FE-E311
	3	Analytical	4.6 x 150	1	03FE-E411
	3	Hi-Speed	7.8 x 50	1	03FE-G211
	3	Analytical	7.8 x 100	1	03FE-G311
	5	LC/MS	2.1 x 100	1	03FE-B321
	5	LC/MS	2.1 x 150	1	03FE-B421
	5	LC/MS	3.2 x 100	1	03FE-C321
	5	LC/MS	3.2 x 150	1	03FE-C421
	5	Analytical	3.9 x 150	1	03FE-L421
	5	Analytical	3.9 x 300	1	03FE-L921
	5	Hi-Speed	4.6 x 50	1	03FE-E221
	5	Analytical	4.6 x 150	1	03FE-E421
	5	Analytical	4.6 x 250	1	03FE-E521

Ordering Information						
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.	
VertiSep™ BDS Guard Cartridges						
C18	3	Guard	2.1 x 10	2	03FA-B113	
	3	Guard	3.2 x 10	2	03FA-C113	
	3	Guard	4.6 x 10	2	03FA-E113	
	5	Guard	2.1 x 10	2	03FA-B123	
	5	Guard	3.2 x 10	2	03FA-C123	
	5	Guard	4.6 x 10	2	03FA-E123	
	C8	3	Guard	2.1 x 10	2	03FB-B113
		3	Guard	3.2 x 10	2	03FB-C113
		3	Guard	4.6 x 10	2	03FB-E113
		5	Guard	2.1 x 10	2	03FB-B123
5		Guard	3.2 x 10	2	03FB-C123	
Ph	5	Guard	4.6 x 10	2	03FB-E123	
	3	Guard	2.1 x 10	2	03FD-B113	
	3	Guard	3.2 x 10	2	03FD-C113	
	3	Guard	4.6 x 10	2	03FD-E113	
	5	Guard	2.1 x 10	2	03FD-B123	
CN	5	Guard	3.2 x 10	2	03FD-C123	
	5	Guard	4.6 x 10	2	03FD-E123	
	3	Guard	2.1 x 10	2	03FE-B113	
	3	Guard	3.2 x 10	2	03FE-C113	
	3	Guard	4.6 x 10	2	03FE-E113	
	5	Guard	2.1 x 10	2	03FE-B123	
	5	Guard	3.2 x 10	2	03FE-C123	
	5	Guard	4.6 x 10	2	03FE-E123	

*Guard holder required

Ordering Information		
Description	QTY	Part No.
Guard Holder with Coupler		
For column I.D. 2.1-7.8 mm	1	0300-0001