

VertiSep™ EPS HPLC Columns

- High purity base-deactivated silica for sharp symmetrical peaks
- Dual retention mechanism; hydrophobic and hydrophilic with enhanced-polar selectivity
- Monomeric bonding offers low back pressure and high column efficiency to better resolve chemically similar analytes
- Exceptional efficiency and reproducibility



VertiSep™ EPS are high purity spherical base-deactivated silica which contains less amounts of metal ions and sulfate contaminants offering ultra performance with excellent stability at pH 1.5-7.5 and symmetrical peak shape for sensitive metal compounds.

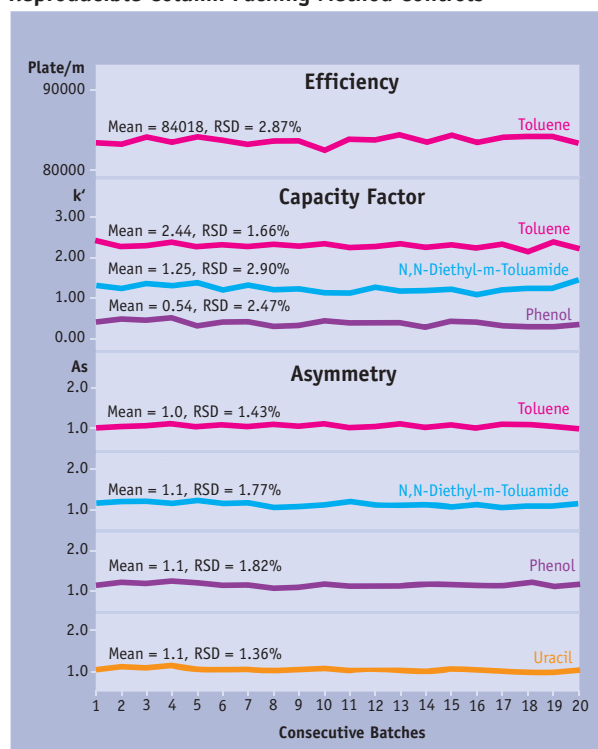
VertiSep™ EPS are monomeric bonding offers low back pressure and high column efficiency to better resolve chemically similar analytes.

VertiSep™ EPS have both hydrophobic and hydrophilic selectivity. The polar functional group of the compounds interact secondary with hydrophilic site and are retained primarily by reversed phase mechanism. This special design offers unique selectivity for separation of polar compounds containing amine, carboxyl, phenol, cyano, hydroxide, nitrite, brominated, fluorinate and chlorinated groups found in pharmaceutical, food and environmental applications.

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

Packing	Particle Size (mm)	Carbon Load (%)	Pore Size (Å)	Pore Volume (mL/g)	Surface Area (m ² /g)	End Capped
C18	3,5,10	7	100	1.1	200	No
C8	3,5,10	5	100	1.1	200	No
Ph	3,5,10	4	100	1.1	200	No
CN	3,5,10	3	100	1.1	200	No
Si	3,5,10	-	100	1.1	200	No
DIOL	3,5,10	-	100	1.1	200	No

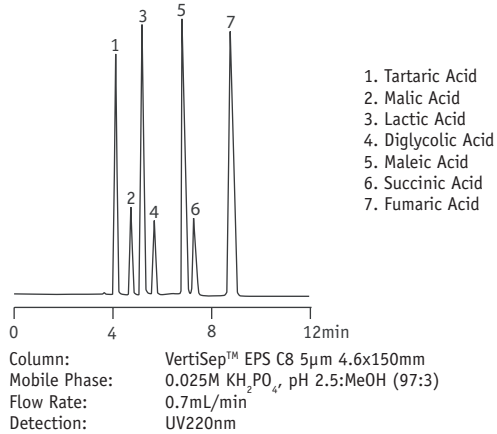
Reproducible Column Packing Method Controls



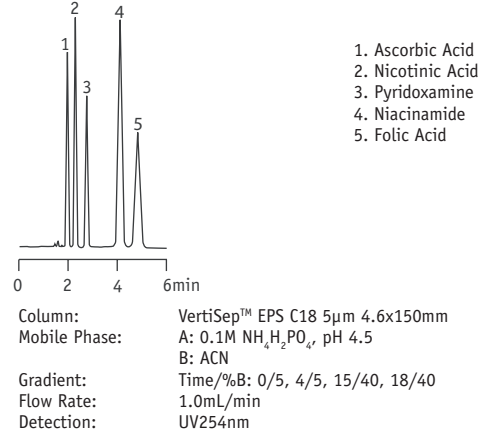
Test Conditions

Column: VertiSep™ EPS C18, 5µm, 4.6x250mm
 Mobile Phase: 60:40 Acetonitrile /Water
 Flow Rate: 1.0mL/min
 Detector: UV 254nm
 Sample: Reversed phase test mix

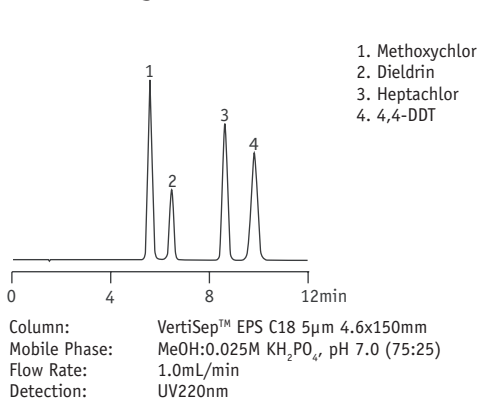
Organic acids



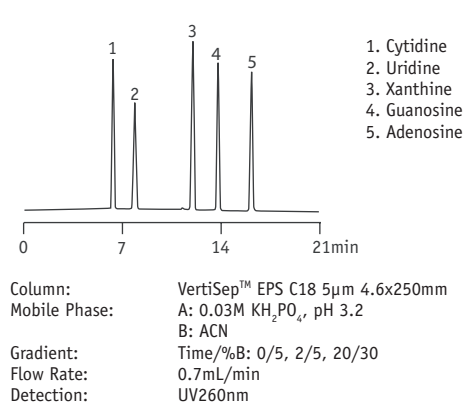
Water Soluble Vitamins



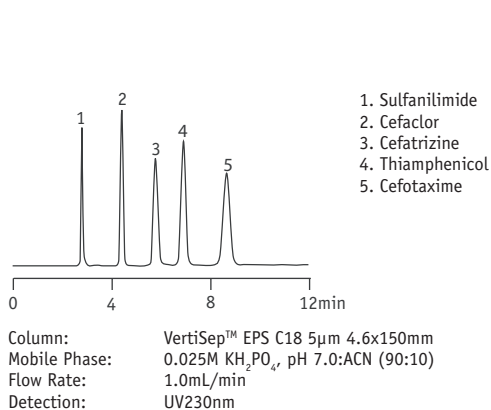
Organochlorine Pesticides



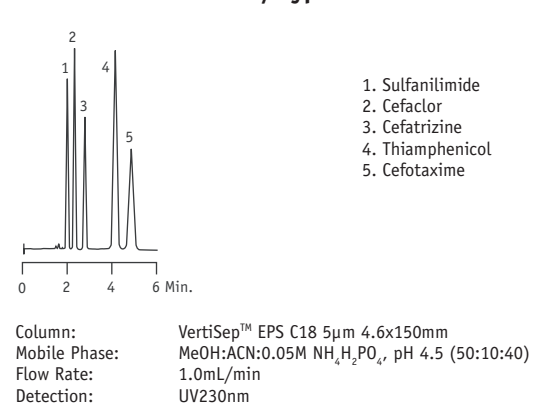
Nucleosides



Antibacterials



Sedatives/Hypnotics



VertiSep™ EPS

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS					
C18	3	Ultra-Fast	2.1 x 10	1	03EA-B111
	3	Ultra-Fast	2.1 x 20	1	03EA-B611
	3	Ultra-Fast	2.1 x 50	1	03EA-B211
	3	LC/MS	2.1 x 100	1	03EA-B311
	3	LC/MS	2.1 x 150	1	03EA-B411
	3	LC/MS	3.2 x 100	1	03EA-C311
	3	LC/MS	3.2 x 150	1	03EA-C411
	3	Hi-Speed	4.6 x 50	1	03EA-E211
	3	Analytical	4.6 x 100	1	03EA-E311
	3	Analytical	4.6 x 150	1	03EA-E411
	3	Hi-Speed	7.8 x 50	1	03EA-G211
	3	Analytical	7.8 x 100	1	03EA-G311
	5	LC/MS	2.1 x 100	1	03EA-B321
	5	LC/MS	2.1 x 150	1	03EA-B421
	5	LC/MS	2.1 x 250	1	03EA-B521
	5	LC/MS	3.2 x 100	1	03EA-C321
	5	LC/MS	3.2 x 150	1	03EA-C421
	5	LC/MS	3.2 x 250	1	03EA-C521
	5	Hi-Speed	4.6 x 50	1	03EA-E221
	5	Analytical	4.6 x 100	1	03EA-E321
	5	Analytical	4.6 x 150	1	03EA-E421
	5	Analytical	4.6 x 250	1	03EA-E521
	5	Prep	10.0 x 150	1	03EA-H421
	5	Prep	10.0 x 250	1	03EA-H521
	5	Prep	21.2 x 150	1	03EA-I421
	5	Prep	21.2 x 250	1	03EA-I521
	10	Analytical	4.6 x 250	1	03EA-E531
	10	Prep	10.0 x 150	1	03EA-H431
	10	Prep	10.0 x 250	1	03EA-H531
	10	Prep	21.2 x 150	1	03EA-I431
	10	Prep	21.2 x 250	1	03EA-I531
	10	Prep	30.0 x 150	1	03EA-J431
	10	Prep	30.0 x 250	1	03EA-J531
	10	Prep	50.0 x 150	1	03EA-K431
	10	Prep	50.0 x 250	1	03EA-K531

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS					
C8	3	Ultra-Fast	2.1 x 10	1	03EB-B111
	3	Ultra-Fast	2.1 x 20	1	03EB-B611
	3	Ultra-Fast	2.1 x 50	1	03EB-B211
	3	LC/MS	2.1 x 100	1	03EB-B311
	3	LC/MS	2.1 x 150	1	03EB-B411
	3	LC/MS	3.2 x 100	1	03EB-C311
	3	LC/MS	3.2 x 150	1	03EB-C411
	3	Hi-Speed	4.6 x 50	1	03EB-E211
	3	Analytical	4.6 x 100	1	03EB-E311
	3	Analytical	4.6 x 150	1	03EB-E411
	3	Hi-Speed	7.8 x 50	1	03EB-G211
	3	Analytical	7.8 x 100	1	03EB-G311
	5	LC/MS	2.1 x 100	1	03EB-B321
	5	LC/MS	2.1 x 150	1	03EB-B421
	5	LC/MS	2.1 x 250	1	03EB-B521
	5	LC/MS	3.2 x 100	1	03EB-C321
	5	LC/MS	3.2 x 150	1	03EB-C421
	5	LC/MS	3.2 x 250	1	03EB-C521
	5	Hi-Speed	4.6 x 50	1	03EB-E221
	5	Analytical	4.6 x 100	1	03EB-E321
	5	Analytical	4.6 x 150	1	03EB-E421
	5	Analytical	4.6 x 250	1	03EB-E521
	5	Prep	10.0 x 150	1	03EB-H421
	5	Prep	10.0 x 250	1	03EB-H521
	5	Prep	21.2 x 150	1	03EB-I421
	5	Prep	21.2 x 250	1	03EB-I521
	10	Analytical	4.6 x 250	1	03EB-E531
	10	Prep	10.0 x 150	1	03EB-H431
	10	Prep	10.0 x 250	1	03EB-H531
	10	Prep	21.2 x 150	1	03EB-I431
	10	Prep	21.2 x 250	1	03EB-I531
	10	Prep	30.0 x 150	1	03EB-J431
	10	Prep	30.0 x 250	1	03EB-J531
	10	Prep	50.0 x 150	1	03EB-K431
	10	Prep	50.0 x 250	1	03EB-K531

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS					
Ph	3	Ultra-Fast	2.1 x 10	1	03ED-B111
	3	Ultra-Fast	2.1 x 20	1	03ED-B611
	3	Ultra-Fast	2.1 x 50	1	03ED-B211
	3	LC/MS	2.1 x 100	1	03ED-B311
	3	LC/MS	2.1 x 150	1	03ED-B411
	3	LC/MS	3.2 x 100	1	03ED-C311
	3	LC/MS	3.2 x 150	1	03ED-C411
	3	Hi-Speed	4.6 x 50	1	03ED-E211
	3	Analytical	4.6 x 100	1	03ED-E311
	3	Analytical	4.6 x 150	1	03ED-E411
	3	Hi-Speed	7.8 x 50	1	03ED-G211
	3	Analytical	7.8 x 100	1	03ED-G311
	5	LC/MS	2.1 x 100	1	03ED-B321
	5	LC/MS	2.1 x 150	1	03ED-B421
	5	LC/MS	2.1 x 250	1	03ED-B521
	5	LC/MS	3.2 x 100	1	03ED-C321
	5	LC/MS	3.2 x 150	1	03ED-C421
	5	LC/MS	3.2 x 250	1	03ED-C521
	5	Hi-Speed	4.6 x 50	1	03ED-E221
	5	Analytical	4.6 x 100	1	03ED-E321
	5	Analytical	4.6 x 150	1	03ED-E421
	5	Analytical	4.6 x 250	1	03ED-E521
	5	Prep	10.0 x 150	1	03ED-H421
	5	Prep	10.0 x 250	1	03ED-H521
	5	Prep	21.2 x 150	1	03ED-I421
	5	Prep	21.2 x 250	1	03ED-I521
	10	Analytical	4.6 x 250	1	03ED-E531
	10	Prep	10.0 x 150	1	03ED-H431
	10	Prep	10.0 x 250	1	03ED-H531
	10	Prep	21.2 x 150	1	03ED-I431
	10	Prep	21.2 x 250	1	03ED-I531
	10	Prep	30.0 x 150	1	03ED-J431
	10	Prep	30.0 x 250	1	03ED-J531
	10	Prep	50.0 x 150	1	03ED-K431
	10	Prep	50.0 x 250	1	03ED-K531

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS					
CN	3	Ultra-Fast	2.1 x 10	1	03EE-B111
	3	Ultra-Fast	2.1 x 20	1	03EE-B611
	3	Ultra-Fast	2.1 x 50	1	03EE-B211
	3	LC/MS	2.1 x 100	1	03EE-B311
	3	LC/MS	2.1 x 150	1	03EE-B411
	3	LC/MS	3.2 x 100	1	03EE-C311
	3	LC/MS	3.2 x 150	1	03EE-C411
	3	Hi-Speed	4.6 x 50	1	03EE-E211
	3	Analytical	4.6 x 100	1	03EE-E311
	3	Analytical	4.6 x 150	1	03EE-E411
	3	Hi-Speed	7.8 x 50	1	03EE-G211
	3	Analytical	7.8 x 100	1	03EE-G311
	5	LC/MS	2.1 x 100	1	03EE-B321
	5	LC/MS	2.1 x 150	1	03EE-B421
	5	LC/MS	2.1 x 250	1	03EE-B521
	5	LC/MS	3.2 x 100	1	03EE-C321
	5	LC/MS	3.2 x 150	1	03EE-C421
	5	LC/MS	3.2 x 250	1	03EE-C521
	5	Hi-Speed	4.6 x 50	1	03EE-E221
	5	Analytical	4.6 x 100	1	03EE-E321
	5	Analytical	4.6 x 150	1	03EE-E421
	5	Analytical	4.6 x 250	1	03EE-E521
	5	Prep	10.0 x 150	1	03EE-H421
	5	Prep	10.0 x 250	1	03EE-H521
	5	Prep	21.2 x 150	1	03EE-I421
	5	Prep	21.2 x 250	1	03EE-I521
	10	Analytical	4.6 x 250	1	03EE-E531
	10	Prep	10.0 x 150	1	03EE-H431
	10	Prep	10.0 x 250	1	03EE-H531
	10	Prep	21.2 x 150	1	03EE-I431
	10	Prep	21.2 x 250	1	03EE-I531
	10	Prep	30.0 x 150	1	03EE-J431
	10	Prep	30.0 x 250	1	03EE-J531
	10	Prep	50.0 x 150	1	03EE-K431
	10	Prep	50.0 x 250	1	03EE-K531



VertiSep™ EPS

HPLC Columns

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS					
Si	3	Ultra-Fast	2.1 x 10	1	03EG-B111
	3	Ultra-Fast	2.1 x 20	1	03EG-B611
	3	Ultra-Fast	2.1 x 50	1	03EG-B211
	3	LC/MS	2.1 x 100	1	03EG-B311
	3	LC/MS	2.1 x 150	1	03EG-B411
	3	LC/MS	3.2 x 100	1	03EG-C311
	3	LC/MS	3.2 x 150	1	03EG-C411
	3	Hi-Speed	4.6 x 50	1	03EG-E211
	3	Analytical	4.6 x 100	1	03EG-E311
	3	Analytical	4.6 x 150	1	03EG-E411
	3	Hi-Speed	7.8 x 50	1	03EG-G211
	3	Analytical	7.8 x 100	1	03EG-G311
	5	LC/MS	2.1 x 100	1	03EG-B321
	5	LC/MS	2.1 x 150	1	03EG-B421
	5	LC/MS	2.1 x 250	1	03EG-B521
	5	LC/MS	3.2 x 100	1	03EG-C321
	5	LC/MS	3.2 x 150	1	03EG-C421
	5	LC/MS	3.2 x 250	1	03EG-C521
	5	Hi-Speed	4.6 x 50	1	03EG-E221
	5	Analytical	4.6 x 100	1	03EG-E321
	5	Analytical	4.6 x 150	1	03EG-E421
	5	Analytical	4.6 x 250	1	03EG-E521
	5	Prep	10.0 x 150	1	03EG-H421
	5	Prep	10.0 x 250	1	03EG-H521
	5	Prep	21.2 x 150	1	03EG-I421
	5	Prep	21.2 x 250	1	03EG-I521
	10	Analytical	4.6 x 250	1	03EG-E531
	10	Prep	10.0 x 150	1	03EG-H431
	10	Prep	10.0 x 250	1	03EG-H531
	10	Prep	21.2 x 150	1	03EG-I431
	10	Prep	21.2 x 250	1	03EG-I531
	10	Prep	30.0 x 150	1	03EG-J431
	10	Prep	30.0 x 250	1	03EG-J531
	10	Prep	50.0 x 150	1	03EG-K431
	10	Prep	50.0 x 250	1	03EG-K531

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS					
DIOL	3	Ultra-Fast	2.1 x 10	1	03EP-B111
	3	Ultra-Fast	2.1 x 20	1	03EP-B611
	3	Ultra-Fast	2.1 x 50	1	03EP-B211
	3	LC/MS	2.1 x 100	1	03EP-B311
	3	LC/MS	2.1 x 150	1	03EP-B411
	3	LC/MS	3.2 x 100	1	03EP-C311
	3	LC/MS	3.2 x 150	1	03EP-C411
	3	Hi-Speed	4.6 x 50	1	03EP-E211
	3	Analytical	4.6 x 100	1	03EP-E311
	3	Analytical	4.6 x 150	1	03EP-E411
	3	Hi-Speed	7.8 x 50	1	03EP-G211
	3	Analytical	7.8 x 100	1	03EP-G311
	5	LC/MS	2.1 x 100	1	03EP-B321
	5	LC/MS	2.1 x 150	1	03EP-B421
	5	LC/MS	2.1 x 250	1	03EP-B521
	5	LC/MS	3.2 x 100	1	03EP-C321
	5	LC/MS	3.2 x 150	1	03EP-C421
	5	LC/MS	3.2 x 250	1	03EP-C521
	5	Hi-Speed	4.6 x 50	1	03EP-E221
	5	Analytical	4.6 x 100	1	03EP-E321
	5	Analytical	4.6 x 150	1	03EP-E421
	5	Analytical	4.6 x 250	1	03EP-E521
	5	Prep	10.0 x 150	1	03EP-H421
	5	Prep	10.0 x 250	1	03EP-H521
	5	Prep	21.2 x 150	1	03EP-I421
	5	Prep	21.2 x 250	1	03EP-I521
	10	Analytical	4.6 x 250	1	03EP-E531
	10	Prep	10.0 x 150	1	03EP-H431
	10	Prep	10.0 x 250	1	03EP-H531
	10	Prep	21.2 x 150	1	03EP-I431
	10	Prep	21.2 x 250	1	03EP-I531
	10	Prep	30.0 x 150	1	03EP-J431
	10	Prep	30.0 x 250	1	03EP-J531
	10	Prep	50.0 x 150	1	03EP-K431
	10	Prep	50.0 x 250	1	03EP-K531



Ordering Information						
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.	
VertiSep™ EPS Guard Cartridges						
C18	3	Guard	2.1 x 10	2	03EA-B113	
	3	Guard	3.2 x 10	2	03EA-C113	
	3	Guard	4.6 x 10	2	03EA-E113	
	5	Guard	2.1 x 10	2	03EA-B123	
	5	Guard	3.2 x 10	2	03EA-C123	
	5	Guard	4.6 x 10	2	03EA-E123	
	5	Guard	10.0 x 10	2	03EA-H123	
	5	Guard	21.2 x 10	2	03EA-I123	
	10	Guard	4.6 x 10	2	03EA-E133	
	10	Guard	10.0 x 10	2	03EA-H133	
	10	Guard	21.2 x 10	2	03EA-I133	
	C8	3	Guard	2.1 x 10	2	03EB-B113
		3	Guard	3.2 x 10	2	03EB-C113
3		Guard	4.6 x 10	2	03EB-E113	
5		Guard	2.1 x 10	2	03EB-B123	
5		Guard	3.2 x 10	2	03EB-C123	
5		Guard	4.6 x 10	2	03EB-E123	
5		Guard	10.0 x 10	2	03EB-H123	
5		Guard	21.2 x 10	2	03EB-I123	
10		Guard	4.6 x 10	2	03EB-E133	
10		Guard	10.0 x 10	2	03EB-H133	
Ph	3	Guard	2.1 x 10	2	03ED-B113	
	3	Guard	3.2 x 10	2	03ED-C113	
	3	Guard	4.6 x 10	2	03ED-E113	
	5	Guard	2.1 x 10	2	03ED-B123	
	5	Guard	3.2 x 10	2	03ED-C123	
	5	Guard	4.6 x 10	2	03ED-E123	
	5	Guard	10.0 x 10	2	03ED-H123	
	5	Guard	21.2 x 10	2	03ED-I123	
	10	Guard	4.6 x 10	2	03ED-E133	
	10	Guard	10.0 x 10	2	03ED-H133	
CN	3	Guard	2.1 x 10	2	03EE-B113	
	3	Guard	3.2 x 10	2	03EE-C113	
	3	Guard	4.6 x 10	2	03EE-E113	
	5	Guard	2.1 x 10	2	03EE-B123	
	5	Guard	3.2 x 10	2	03EE-C123	
	5	Guard	4.6 x 10	2	03EE-E123	
	5	Guard	10.0 x 10	2	03EE-H123	
	5	Guard	21.2 x 10	2	03EE-I123	
	10	Guard	4.6 x 10	2	03EE-E133	
	10	Guard	10.0 x 10	2	03EE-H133	
10	Guard	21.2 x 10	2	03EE-I133		

Ordering Information					
Phase	Particle Size (µm)	Formats	I.D. Length (mm)	QTY	Part No.
VertiSep™ EPS Guard Cartridges					
Si	3	Guard	2.1 x 10	2	03EG-B113
	3	Guard	3.2 x 10	2	03EG-C113
	3	Guard	4.6 x 10	2	03EG-E113
	5	Guard	2.1 x 10	2	03EG-B123
	5	Guard	3.2 x 10	2	03EG-C123
	5	Guard	4.6 x 10	2	03EG-E123
	5	Guard	10.0 x 10	2	03EG-H123
	5	Guard	21.2 x 10	2	03EG-I123
	10	Guard	4.6 x 10	2	03EG-E133
	10	Guard	10.0 x 10	2	03EG-H133
DIOL	3	Guard	2.1 x 10	2	03EP-B113
	3	Guard	3.2 x 10	2	03EP-C113
	3	Guard	4.6 x 10	2	03EP-E113
	5	Guard	2.1 x 10	2	03EP-B123
	5	Guard	3.2 x 10	2	03EP-C123
	5	Guard	4.6 x 10	2	03EP-E123
	5	Guard	10.0 x 10	2	03EP-H123
	5	Guard	21.2 x 10	2	03EP-I123
	10	Guard	4.6 x 10	2	03EP-E133
	10	Guard	10.0 x 10	2	03EP-H133
10	Guard	21.2 x 10	2	03EP-I133	

*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
For column I.D. 10 mm	1	0300-0002
For column I.D. 21.2 mm	1	0300-0003

