

VertiSep™ HCS

VertiSep™ HCS HPLC Columns

- High purity spherical silica offers high stability, efficiency and column-to-column reproducibility
- Highest carbon loading C18 offers highest degree of hydrophobicity for highest resolution of organic compounds that have similar structures
- High surface area offers high resolution for gradient elution
- Fully endcapped to improve peak symmetry
- Polymeric bonding offers high stability and longer column lifetime



VertiSep™ HCS packings are high purity silica which contains less amounts of metal ions and sulfate contaminants offer high stability at pH 1.5-10.0 efficiency, column-to-column reproducibility and long lifetime.

VertiSep™ HCS reverse phase C18 packings are highest carbon loading of 23% offering the highest degree of hydrophobicity for highest resolution of organic compounds that have similar structures such as polynuclear aromatic hydrocarbons, benzidines, vitamins D2,D3, PTH and amino acids.

VertiSep™ HCS packings are high surface of 350 m²/g offer high capacity and high resolution for gradient elution.

VertiSep™ HCS reverse phase packings are fully endcapped and show selectivity as conventional C18 phases.

VertiSep™ HCS packings are polymeric bonding resulting high stability and longer column lifetime.

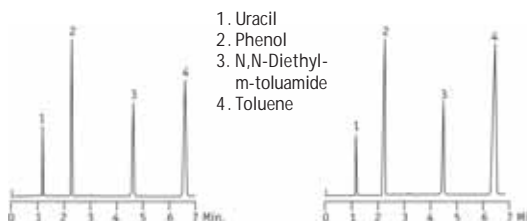
VertiSep™ HCS Packing Specifications

| Packing | Particle Size (µm) | Carbon Load (%) | Pore Size (Å) | Pore Volume (mL/g) | Surface Area (m ² /g) | End Capped |
|---------|--------------------|-----------------|---------------|--------------------|----------------------------------|------------|
| C18 | 3,5,10 | 23 | 100 | 1.0 | 350 | Yes |
| C8 | 3,5,10 | 13 | 100 | 1.0 | 350 | Yes |
| Ph | 3,5,10 | 8 | 100 | 1.0 | 350 | Yes |
| C4 | 3,5,10 | 6 | 100 | 1.0 | 350 | Yes |
| CN | 3,5,10 | 4 | 100 | 1.0 | 350 | Yes |
| NH2 | 3,5,10 | 3 | 100 | 1.0 | 350 | No |
| Si | 3,5,10 | - | 100 | 1.0 | 350 | No |

Stability Test

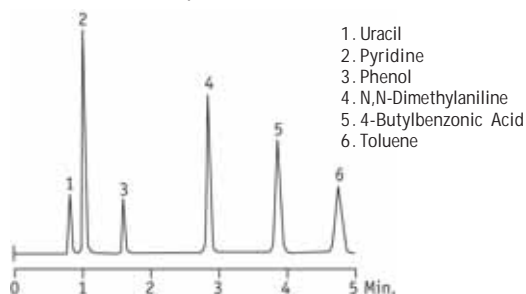
Initial Separation

After 750 Hrs at pH 1.0 and 60°C



Column: VertiSep™ HCS C18 5µ 4.6x150mm
 Mobile Phase: CH₃OH/H₂O=58/42
 Flow Rate: 1.0mL/min
 Detection: UV230nm

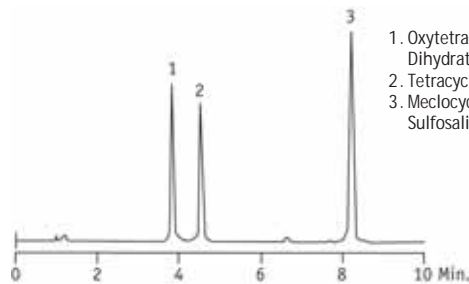
Acids, Bases and Neutrals



1. Uracil
2. Pyridine
3. Phenol
4. N,N-Dimethylaniline
5. 4-Butylbenzoic Acid
6. Toluene

Column: VertiSep™ HCS C18 3µm 100x4.6mm
 Mobile Phase: 50mM KH₂PO₄ pH3:CH₃CN (40:60)
 Flow Rate: 1.0mL/min
 Detection: UV254nm

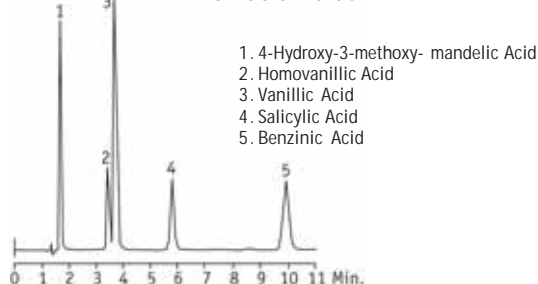
Antibacterials



1. Oxytetracycline Dihydrate
2. Tetracycline HCL
3. Mecloctycline Sulfosalicylate Salt

Column: VertiSep™ HCS C18 5µm 150x4.6mm
 Mobile Phase: A: 50mM KH₂PO₄ pH3.0 B: CH₃CN
 Gradient: Time/%B, 0/15, 10/40
 Flow Rate: 2.0mL/min
 Detection: UV254nm

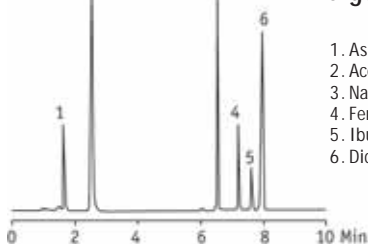
Aromatic Acids



1. 4-Hydroxy-3-methoxy- mandelic Acid
2. Homovanillic Acid
3. Vanillic Acid
4. Salicylic Acid
5. Benzoic Acid

Column: VertiSep™ HCS C18 5µm 150x4.6mm
 Mobile Phase: 50mM KH₂PO₄ pH3:CH₃OH (60:40)
 Flow Rate: 1.0mL/min
 Detection: UV254nm

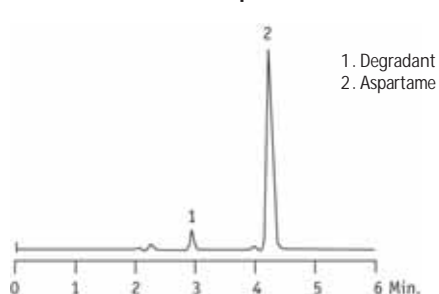
Analgesics



1. Aspirin
2. Acetaminophen
3. Naproxen
4. Fenpropfen
5. Ibuprofen
6. Diclofenac

Column: VertiSep™ HCS C18 5µm 150x4.6mm
 Mobile Phase: A: 50mM KH₂PO₄ pH3.3
 B: Methanol
 C: Acetonitrile
 Gradient: Time/%B/%C, 0/10/10, 5/30/25
 Flow Rate: 2.0mL/min
 Detection: UV280nm

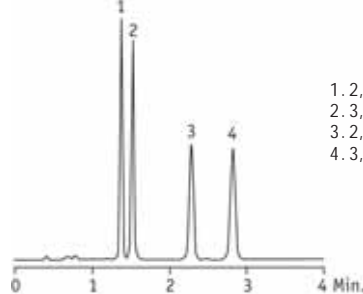
Aspartame



1. Degradant
2. Aspartame

Column: VertiSep™ HCS C18 3µm 150x4.6mm
 Mobile Phase: 50mM KH₂PO₄ pH3:CH₃OH (80:20)
 Flow Rate: 1.0mL/min
 Detection: UV220nm

MDA & MDMA Analogs



1. 2,3-MDA
2. 3,4-MDA
3. 2,3-MDMA
4. 3,4-MDMA

Column: VertiSep™ HCS C18 3µm 150x4.6mm
 Mobile Phase: 50mM KH₂PO₄ pH3:CH₃OH (80:20)
 Flow Rate: 1.0mL/min
 Detection: UV280nm

VertiSep™ HCS

HPLC Columns

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| C18 | 3 | Ultra-Fast | 2.1 x 10 | 03BA-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BA-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BA-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BA-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BA-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BA-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BA-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BA-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BA-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BA-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BA-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BA-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BA-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BA-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BA-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BA-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BA-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BA-E521 |
| | 5 | Prep | 10.0 x 150 | 03BA-H421 |
| | 5 | Prep | 10.0 x 250 | 03BA-H521 |
| 5 | Prep | 21.2 x 150 | 03BA-I421 | |
| 5 | Prep | 21.2 x 250 | 03BA-I521 | |
| 10 | Analytical | 4.6 x 250 | 03BA-E531 | |
| 10 | Prep | 10.0 x 150 | 03BA-H431 | |
| 10 | Prep | 10.0 x 250 | 03BA-H531 | |
| 10 | Prep | 21.2 x 150 | 03BA-I431 | |
| 10 | Prep | 21.2 x 250 | 03BA-I531 | |

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| C8 | 3 | Ultra-Fast | 2.1 x 10 | 03BB-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BB-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BB-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BB-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BB-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BB-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BB-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BB-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BB-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BB-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BB-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BB-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BB-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BB-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BB-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BB-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BB-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BB-E521 |
| | 5 | Prep | 10.0 x 150 | 03BB-H421 |
| | 5 | Prep | 10.0 x 250 | 03BB-H521 |
| 5 | Prep | 21.2 x 150 | 03BB-I421 | |
| 5 | Prep | 21.2 x 250 | 03BB-I521 | |
| 10 | Analytical | 4.6 x 250 | 03BB-E531 | |
| 10 | Prep | 10.0 x 150 | 03BB-H431 | |
| 10 | Prep | 10.0 x 250 | 03BB-H531 | |
| 10 | Prep | 21.2 x 150 | 03BB-I431 | |
| 10 | Prep | 21.2 x 250 | 03BB-I531 | |

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| Ph | 3 | Ultra-Fast | 2.1 x 10 | 03BD-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BD-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BD-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BD-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BD-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BD-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BD-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BD-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BD-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BD-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BD-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BD-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BD-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BD-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BD-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BD-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BD-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BD-E521 |
| | 5 | Prep | 10.0 x 150 | 03BD-H421 |
| | 5 | Prep | 10.0 x 250 | 03BD-H521 |
| 5 | Prep | 21.2 x 150 | 03BD-I421 | |
| 5 | Prep | 21.2 x 250 | 03BD-I521 | |
| 10 | Analytical | 4.6 x 250 | 03BD-E531 | |
| 10 | Prep | 10.0 x 150 | 03BD-H431 | |
| 10 | Prep | 10.0 x 250 | 03BD-H531 | |
| 10 | Prep | 21.2 x 150 | 03BD-I431 | |
| 10 | Prep | 21.2 x 250 | 03BD-I531 | |

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| C4 | 3 | Ultra-Fast | 2.1 x 10 | 03BC-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BC-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BC-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BC-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BC-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BC-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BC-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BC-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BC-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BC-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BC-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BC-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BC-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BC-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BC-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BC-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BC-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BC-E521 |
| | 5 | Prep | 10.0 x 150 | 03BC-H421 |
| | 5 | Prep | 10.0 x 250 | 03BC-H521 |
| 5 | Prep | 21.2 x 150 | 03BC-I421 | |
| 5 | Prep | 21.2 x 250 | 03BC-I521 | |
| 10 | Analytical | 4.6 x 250 | 03BC-E531 | |
| 10 | Prep | 10.0 x 150 | 03BC-H431 | |
| 10 | Prep | 10.0 x 250 | 03BC-H531 | |
| 10 | Prep | 21.2 x 150 | 03BC-I431 | |
| 10 | Prep | 21.2 x 250 | 03BC-I531 | |

VertiSep™ HCS

HPLC Columns

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| CN | 3 | Ultra-Fast | 2.1 x 10 | 03BE-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BE-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BE-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BE-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BE-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BE-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BE-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BE-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BE-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BE-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BE-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BE-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BE-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BE-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BE-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BE-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BE-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BE-E521 |
| | 5 | Prep | 10.0 x 150 | 03BE-H421 |
| | 5 | Prep | 10.0 x 250 | 03BE-H521 |
| 5 | Prep | 21.2 x 150 | 03BE-I421 | |
| 5 | Prep | 21.2 x 250 | 03BE-I521 | |
| 10 | Analytical | 4.6 x 250 | 03BE-E531 | |
| 10 | Prep | 10.0 x 150 | 03BE-H431 | |
| 10 | Prep | 10.0 x 250 | 03BE-H531 | |
| 10 | Prep | 21.2 x 150 | 03BE-I431 | |
| 10 | Prep | 21.2 x 250 | 03BE-I531 | |

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| NH2 | 3 | Ultra-Fast | 2.1 x 10 | 03BF-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BF-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BF-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BF-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BF-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BF-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BF-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BF-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BF-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BF-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BF-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BF-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BF-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BF-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BF-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BF-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BF-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BF-E521 |
| | 5 | Prep | 10.0 x 150 | 03BF-H421 |
| | 5 | Prep | 10.0 x 250 | 03BF-H521 |
| | 5 | Prep | 21.2 x 150 | 03BF-I421 |
| | 5 | Prep | 21.2 x 250 | 03BF-I521 |
| | 10 | Analytical | 4.6 x 250 | 03BF-E531 |
| | 10 | Prep | 10.0 x 150 | 03BF-H431 |
| | 10 | Prep | 10.0 x 250 | 03BF-H531 |
| | 10 | Prep | 21.2 x 150 | 03BF-I431 |
| | 10 | Prep | 21.2 x 250 | 03BF-I531 |

| VertiSep™ HCS Columns | | | | |
|-----------------------|--------------------|------------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| Si | 3 | Ultra-Fast | 2.1 x 10 | 03BG-B111 |
| | 3 | Ultra-Fast | 2.1 x 20 | 03BG-B611 |
| | 3 | Ultra-Fast | 2.1 x 50 | 03BG-B211 |
| | 3 | LC/MS | 2.1 x 100 | 03BG-B311 |
| | 3 | LC/MS | 2.1 x 150 | 03BG-B411 |
| | 3 | LC/MS | 3.2 x 100 | 03BG-C311 |
| | 3 | LC/MS | 3.2 x 150 | 03BG-C411 |
| | 3 | Analytical | 4.6 x 100 | 03BG-E311 |
| | 3 | Analytical | 4.6 x 150 | 03BG-E411 |
| | 5 | LC/MS | 2.1 x 100 | 03BG-B321 |
| | 5 | LC/MS | 2.1 x 150 | 03BG-B421 |
| | 5 | LC/MS | 2.1 x 250 | 03BG-B521 |
| | 5 | LC/MS | 3.2 x 100 | 03BG-C321 |
| | 5 | LC/MS | 3.2 x 150 | 03BG-C421 |
| | 5 | LC/MS | 3.2 x 250 | 03BG-C521 |
| | 5 | Analytical | 4.6 x 100 | 03BG-E321 |
| | 5 | Analytical | 4.6 x 150 | 03BG-E421 |
| | 5 | Analytical | 4.6 x 250 | 03BG-E521 |
| | 5 | Prep | 10.0 x 150 | 03BG-H421 |
| | 5 | Prep | 10.0 x 250 | 03BG-H521 |
| | 5 | Prep | 21.2 x 150 | 03BG-I421 |
| | 5 | Prep | 21.2 x 250 | 03BG-I521 |
| | 10 | Analytical | 4.6 x 250 | 03BG-E531 |
| | 10 | Prep | 10.0 x 150 | 03BG-H431 |
| | 10 | Prep | 10.0 x 250 | 03BG-H531 |
| | 10 | Prep | 21.2 x 150 | 03BG-I431 |
| | 10 | Prep | 21.2 x 250 | 03BG-I531 |



| VertiSep™ HCS Guard Cartridges* | | | | |
|---------------------------------|--------------------|-----------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| C18 | 3 | Guard | 2.1 x 10 | 03BA-B113 |
| | 3 | Guard | 3.2 x 10 | 03BA-C113 |
| | 3 | Guard | 4.6 x 10 | 03BA-E113 |
| | 3 | Guard | 10.0 x 10 | 03BA-H123 |
| | 3 | Guard | 21.2 x 10 | 03BA-I123 |
| | 5 | Guard | 2.1 x 10 | 03BA-B123 |
| | 5 | Guard | 3.2 x 10 | 03BA-C123 |
| | 5 | Guard | 4.6 x 10 | 03BA-E123 |
| | 5 | Guard | 10.0 x 10 | 03BA-H133 |
| | 5 | Guard | 21.2 x 10 | 03BA-I133 |
| C8 | 10 | Guard | 4.6 x 10 | 03BA-E133 |
| | 3 | Guard | 2.1 x 10 | 03BB-B113 |
| | 3 | Guard | 3.2 x 10 | 03BB-C113 |
| | 3 | Guard | 4.6 x 10 | 03BB-E113 |
| | 3 | Guard | 10.0 x 10 | 03BB-H123 |
| | 3 | Guard | 21.2 x 10 | 03BB-I123 |
| | 5 | Guard | 2.1 x 10 | 03BB-B123 |
| | 5 | Guard | 3.2 x 10 | 03BB-C123 |
| | 5 | Guard | 4.6 x 10 | 03BB-E123 |
| | 5 | Guard | 10.0 x 10 | 03BB-H133 |
| Ph | 5 | Guard | 21.2 x 10 | 03BB-I133 |
| | 10 | Guard | 4.6 x 10 | 03BB-E133 |
| | 3 | Guard | 2.1 x 10 | 03BD-B113 |
| | 3 | Guard | 3.2 x 10 | 03BD-C113 |
| | 3 | Guard | 4.6 x 10 | 03BD-E113 |
| | 3 | Guard | 10.0 x 10 | 03BD-H123 |
| | 3 | Guard | 21.2 x 10 | 03BD-I123 |
| | 5 | Guard | 2.1 x 10 | 03BD-B123 |
| | 5 | Guard | 3.2 x 10 | 03BD-C123 |
| | 5 | Guard | 4.6 x 10 | 03BD-E123 |
| C4 | 5 | Guard | 10.0 x 10 | 03BD-H133 |
| | 5 | Guard | 21.2 x 10 | 03BD-I133 |
| | 10 | Guard | 4.6 x 10 | 03BD-E133 |
| | 3 | Guard | 2.1 x 10 | 03BC-B113 |
| | 3 | Guard | 3.2 x 10 | 03BC-C113 |
| | 3 | Guard | 4.6 x 10 | 03BC-E113 |
| | 3 | Guard | 10.0 x 10 | 03BC-H123 |
| | 3 | Guard | 21.2 x 10 | 03BC-I123 |
| | 5 | Guard | 2.1 x 10 | 03BC-B123 |
| | 5 | Guard | 3.2 x 10 | 03BC-C123 |
| 5 | Guard | 4.6 x 10 | 03BC-E123 | |
| 5 | Guard | 10.0 x 10 | 03BC-H133 | |
| 5 | Guard | 21.2 x 10 | 03BC-I133 | |
| 10 | Guard | 4.6 x 10 | 03BC-E133 | |

| VertiSep™ HCS Guard Cartridges*, 2/PK | | | | |
|---------------------------------------|--------------------|-----------|------------------|-----------|
| Packing | Particle Size (µm) | Formats | I.D. Length (mm) | Part No. |
| CN | 3 | Guard | 2.1 x 10 | 03BE-B113 |
| | 3 | Guard | 3.2 x 10 | 03BE-C113 |
| | 3 | Guard | 4.6 x 10 | 03BE-E113 |
| | 3 | Guard | 10.0 x 10 | 03BE-H123 |
| | 3 | Guard | 21.2 x 10 | 03BE-I123 |
| | 5 | Guard | 2.1 x 10 | 03BE-B123 |
| | 5 | Guard | 3.2 x 10 | 03BE-C123 |
| | 5 | Guard | 4.6 x 10 | 03BE-E123 |
| | 5 | Guard | 10.0 x 10 | 03BE-H133 |
| | 5 | Guard | 21.2 x 10 | 03BE-I133 |
| NH2 | 10 | Guard | 4.6 x 10 | 03BE-E133 |
| | 3 | Guard | 2.1 x 10 | 03BF-B113 |
| | 3 | Guard | 3.2 x 10 | 03BF-C113 |
| | 3 | Guard | 4.6 x 10 | 03BF-E113 |
| | 3 | Guard | 10.0 x 10 | 03BF-H123 |
| | 3 | Guard | 21.2 x 10 | 03BF-I123 |
| | 5 | Guard | 2.1 x 10 | 03BF-B123 |
| | 5 | Guard | 3.2 x 10 | 03BF-C123 |
| | 5 | Guard | 4.6 x 10 | 03BF-E123 |
| | 5 | Guard | 10.0 x 10 | 03BF-H133 |
| Si | 5 | Guard | 21.2 x 10 | 03BF-I133 |
| | 10 | Guard | 4.6 x 10 | 03BF-E133 |
| | 3 | Guard | 2.1 x 10 | 03BG-B113 |
| | 3 | Guard | 3.2 x 10 | 03BG-C113 |
| | 3 | Guard | 4.6 x 10 | 03BG-E113 |
| | 3 | Guard | 10.0 x 10 | 03BG-H123 |
| | 3 | Guard | 21.2 x 10 | 03BG-I123 |
| | 5 | Guard | 2.1 x 10 | 03BG-B123 |
| | 5 | Guard | 3.2 x 10 | 03BG-C123 |
| | 5 | Guard | 4.6 x 10 | 03BG-E123 |
| 5 | Guard | 10.0 x 10 | 03BG-H133 | |
| 5 | Guard | 21.2 x 10 | 03BG-I133 | |
| 10 | Guard | 4.6 x 10 | 03BG-E133 | |

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

