

VertiSep™ PRP

VertiSep™ PRP HPLC Columns

- pH stable range 1-14
- Excellent analyte recovery
- Very rugged, long lasting materials
- Great peak shape for all types on compounds
- Good reproducibility from column to column



VertiSep™ PRP-L21 HPLC columns are 100% Polystyrene Divinylbenzene (PS-DVB) Copolymer for compatibility with equivalent high efficiency as silica-based C18 columns and pH stable range 1-14. VertiSep™ PRP-L21 columns comply with **USP L21** specification and ideal for reversed phase separation of biopharmaceutical and pharmaceutical applications.

VertiSep™ PRP-AQ HPLC columns are Hydroxylated Polystyrene Divinylbenzene (PS-DVB-OH) Copolymer for difference selectivity by reversed phase or normal phase chromatography. VertiSep™ PRP-AQ columns can be used with 100% water with minimum shrinkage. VertiSep™ PRP-AQ columns are ideal for polar compounds.

VertiSep™ PRP-C18 HPLC columns are Polyvinylalcohol-based C18 for replacement of silica-based C18 columns due to the same separation efficiency and logical elution order. VertiSep™ PRP-C18 columns are stable in pH range 2-13 solutions not possible on silica. Polyvinylalcohol offers minimum shrinkage and swelling. VertiSep™ PRP-C18 columns are ideal for small analytes, peptides and small proteins.

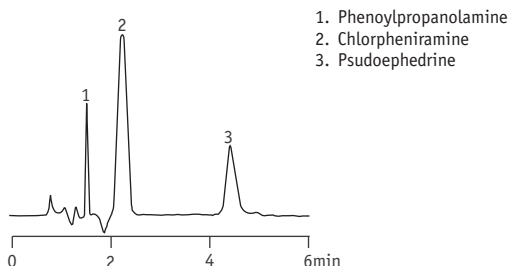
Specifications					
Packing	Particle Size (μm)	Carbon Load (%)	Pore Size (Å)	Surface Area (m ² /g)	pH Range
PRP-L21	5,10	-	100	500	1-14
PRP-AQ	5	-	100	500	1-14
PRP-C18	5	17	100	500	2-13
PRP-C8	5	10	100	500	2-13
PRP-NH2	5	6	100	500	2-13

VertiSep™ PRP-C8 HPLC columns are polyvinylalcohol-based C8 for replacement of silica-based C8 columns due to the same separation efficiency and logical elution order. VertiSep™ PRP-C8 columns are stable in pH range 2-13 solutions not possible on silica. Polyvinylalcohol offers minimum shrinkage and swelling. VertiSep™ PRP-C8 columns are ideal for small analytes, peptides and small proteins.

VertiSep™ PRP-NH2 HPLC columns are polyvinylalcohol-based NH2 for replacement of silica-based NH2 columns due to the same separation efficiency and logical elution order. VertiSep™ PRP-NH2 columns are stable in pH range 2-13 solutions not possible on silica. Polyvinylalcohol offers minimum shrinkage and swelling. VertiSep™ PRP-NH2 columns are ideal for analysis of saccharides in normal phase like silica-based NH2 columns but longer life-time.

VertiSep™ PRP 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.

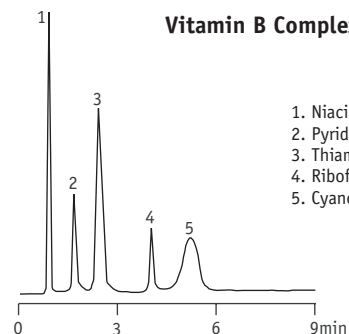
Phenylpropanolamine



Column: VertiSep™ PRP-L21 5µm 4.6x150mm
 Mobile Phase: ACN:Water (35:65) (with 0.1% TFA)
 Flow Rate: 1.0mL/min
 Detection: UV220nm

1. Phenylpropanolamine
2. Chlorpheniramine
3. Pseudoephedrine

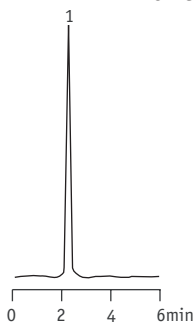
Vitamin B Complex



Column: VertiSep™ PRP-L21 5µm 4.6x150mm
 Mobile Phase: A: 0.1 N Perchloric Acid
 B: ACN
 Gradient: Time/%B: 0/5, 10/50
 Flow Rate: 2.0mL/min
 Detection: UV210 nm

1. Niacinamide 10 mg
2. Pyridoxine (B6) 10 mg
3. Thiamine (B1) 10 mg
4. Riboflavin (B2) 10 mg
5. Cyanocobalamin (B12) 10 mg

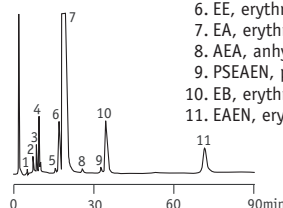
Promethazine (in Syrup)



Column: VertiSep™ PRP-L21 5µm 4.6x150mm
 Mobile Phase: ACN:Water (35:65) (with 0.1% TFA)
 Flow Rate: 1.0mL/min
 Detection: UV220nm

1. Promethazine

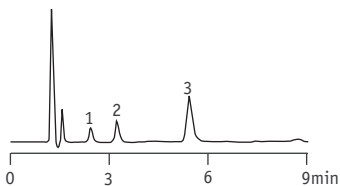
Erythromycin



Column: VertiSep™ PRP-L21 5µm 4.6x250mm
 Mobile Phase: A:ACN, B:0.2M K₂HPO₄, pH9.0, C:H₂O
 Gradient: Time/%B/%C: 0/6/64, 50/6/44
 Flow Rate: 1.0mL/min
 Temp: 50°C
 Detection: UV210nm

1. EANO, erythromycin A N-oxide
2. EF, erythromycin F
3. NdMeEA, N-demethylerythromycin A
4. EC, erythromycin C
5. ED, erythromycin D
6. EE, erythromycin E
7. EA, erythromycin A
8. AEA, anhydroerythromycin A
9. PSEAE, pseudoerythromycin A enol ether
10. EB, erythromycin B
11. EAEN, erythromycin A enol ether

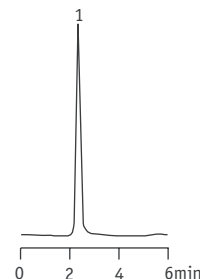
Promethazine, Codeine, Ethedrine



Column: VertiSep™ PRP-L21 5µm 4.6x150mm
 Mobile Phase: ACN:Water (35:65) (with 0.1% TFA)
 Flow Rate: 1.0mL/min
 Detection: UV220nm

1. Promethazine
2. Codeine
3. Ethedrine

Pyridinoline

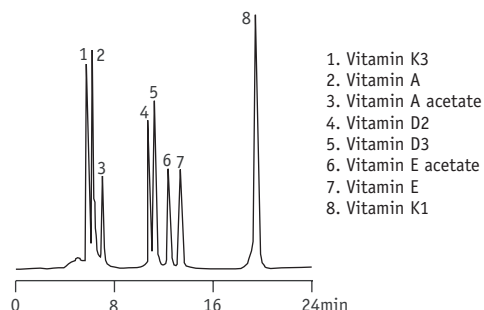


Column: VertiSep™ PRP-L21 5µm 4.6x150mm
 Mobile Phase: Acetonitrile:Deionized Water (1:9) with 0.1% Heptafluorobutyric Acid
 Flow Rate: 2.0mL/min
 Temp: Ambient
 Detection: UV280nm

1. Pyridinoline, 3 mg/mL

VertiSep™ PRP

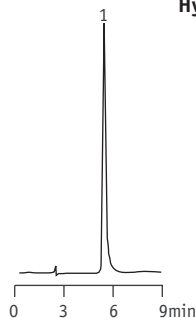
Fat-soluble Vitamins



1. Vitamin K3
2. Vitamin A
3. Vitamin A acetate
4. Vitamin D2
5. Vitamin D3
6. Vitamin E acetate
7. Vitamin E
8. Vitamin K1

Column: VertiSep™ PRP-C18 5µm 4.6x250mm
 Mobile Phase: CH₃CN:CH₃OH (50:50)
 Flow Rate: 0.6mL/min
 Temp: 30°C
 Detection: UV280nm

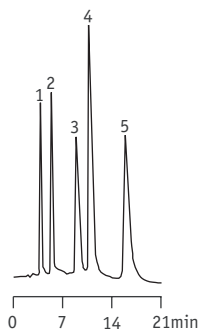
Hydrochlorothiazide



1. Hydrochlorothiazide

Column: VertiSep™ PRP-C18 5µm 4.6x150mm
 Mobile Phase: 25mM Sodium Phosphate buffer, pH7.0:CH₃CN (60:40)
 Flow Rate: 0.6mL/min
 Temp: 30°C
 Detection: UV254nm

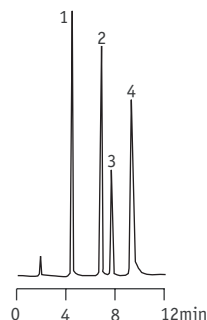
Steroids



1. Estriol
2. 16-Epiestriol
3. 17α-Estradiol
4. Esterone
5. Progesterone

Column: VertiSep™ PRP-C18 5µm 4.6x150mm
 Mobile Phase: ACN:H₂O (65:35)
 Flow Rate: 0.7mL/min
 Temp: 25°C
 Detection: UV215nm

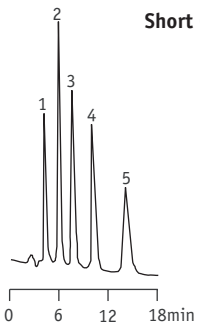
Drugs



1. 5-Fluorouracil
2. Propranolol
3. Diphenhydramine
4. Hydrocortisone

Column: VertiSep™ PRP-C18 5µm 4.6x150mm
 Mobile Phase: 25mM Sodium Phosphate buffer, pH3.0:CH₃CN (70:30)
 Flow Rate: 0.6mL/min
 Temp: 30°C
 Detection: UV254nm

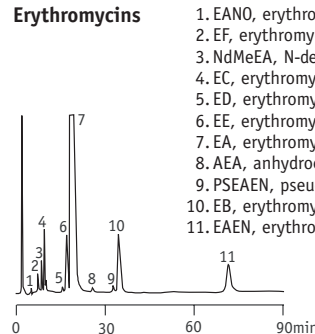
Short Chain Fatty Acids



1. Propionic Acid
2. Valeric Acid
3. Caproic Acid
4. Enanthic Acid
5. Caprylic Acid

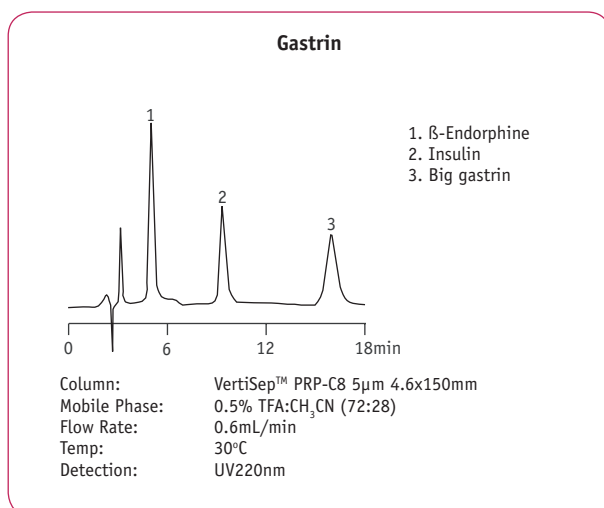
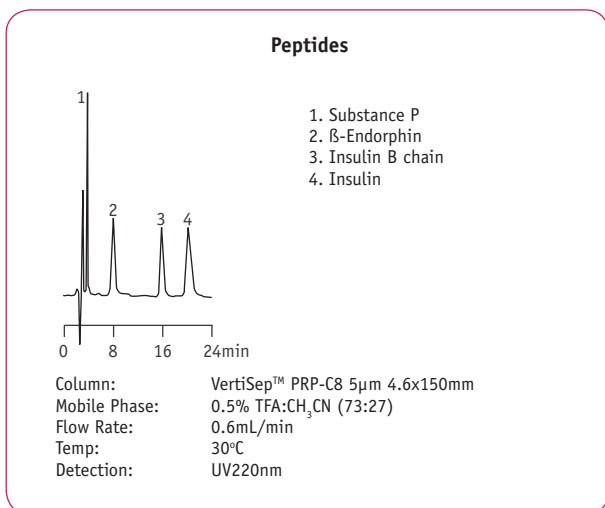
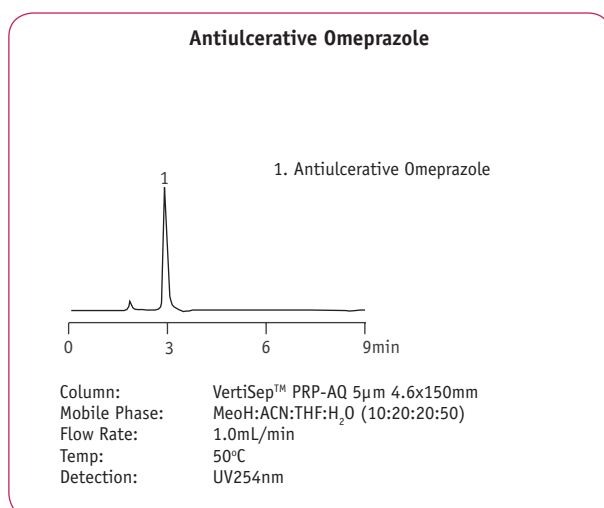
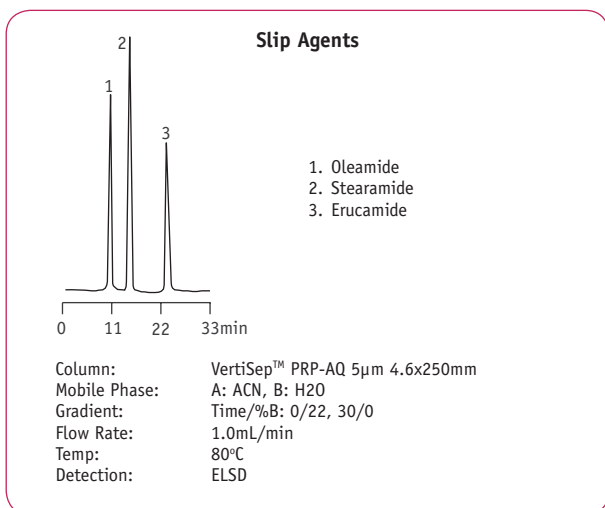
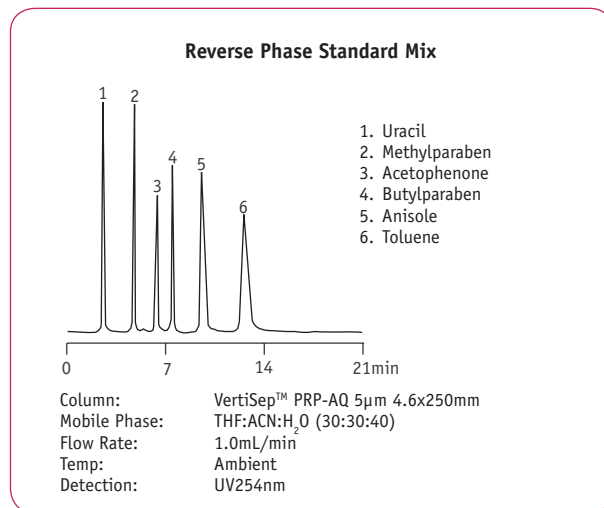
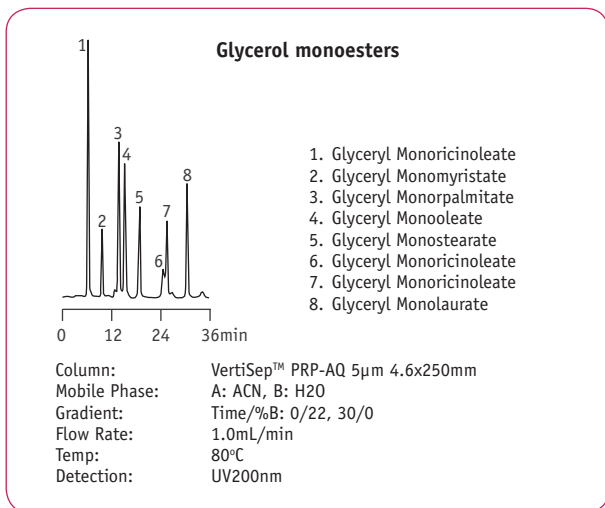
Column: VertiSep™ PRP-C18 5µm 4.6x150mm
 Mobile Phase: ACN:H₂O:H₃PO₄ (50:50)
 Flow Rate: 0.7mL/min
 Temp: 25°C
 Detection: UV210nm

Erythromycins

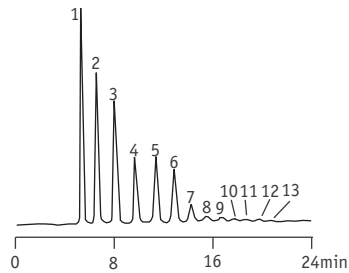


1. EANO, erythromycin A N-oxide
2. EF, erythromycin F
3. NdMeEA, N-demethylerythromycin A
4. EC, erythromycin C
5. ED, erythromycin D
6. EE, erythromycin E
7. EA, erythromycin A
8. AEA, anhydroerythromycin A
9. PSEAEN, pseudoerythromycin A enol ether
10. EB, erythromycin B
11. EAEN, erythromycin A enol ether

Column: VertiSep™ PRP-L21 5µm 4.6x250mm
 Mobile Phase: A:ACN, B:0.2M K₂HPO₄, pH9.0, C:H₂O
 Gradient: Time/%B/%C: 0/6/64, 50/6/44
 Temp: 50°C
 Flow Rate: 1.0mL/min
 Detection: UV210nm



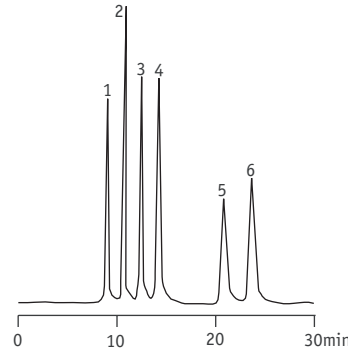
Corn Syrup Solids



1. Dextrose
2. Maltose
3. Maltotriose
4. Maltotetraose
5. Maltopentaose
6. Maltohexaose
7. Maltoheptaose
8. Maltooctaose
9. Maltononaose
10. Maltodecaose
11. Maltoundecaose
12. Maltododecaose
13. Maltotridecaose

Column: VertiSep™ PRP-NH2 5µm 4.6x250mm
 Mobile Phase: A: ACN, B: H₂O
 Gradient: Time/%B, 0/35, 15/50
 Flow Rate: 1.0mL/min
 Detection: UV220nm

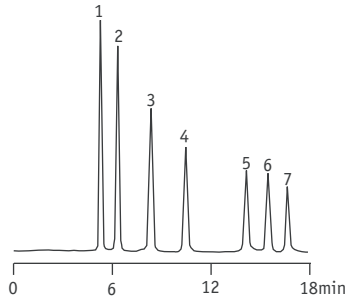
Sugar and Sugar Alcohols



1. L-Rhamnose
2. D(+)-Arabitol
3. Sorbitol
4. d-Galactose
5. Sucrose
6. Lactose

Column: VertiSep™ PRP-NH2 5µm 4.6x250mm
 Mobile Phase: CH₃CN:H₂O (75:25)
 Flow Rate: 0.9mL/min
 Detection: RI

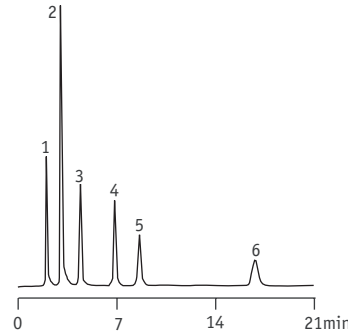
Beer Standards Modified Mobile Phase



1. Fructose
2. Glucose
3. Sucrose
4. Maltose
5. Maltotriose
6. Maltotetraose
7. Maltopentaose

Column: VertiSep™ PRP-NH2 5µm 4.6x150mm
 Mobile Phase: A: Acetonitrile:Acetone (75:25), B: Water
 Gradient: Time/%B, 0/24, 18/50
 Flow Rate: 1.0mL/min
 Detection: ELSD

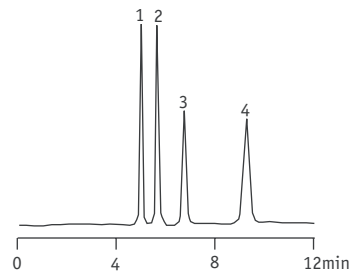
Separation of Mono to Trisaccharide



1. Ribose
2. Fructose
3. Glucose
4. Sucrose
5. Maltose
6. Maltotriose

Column: VertiSep™ PRP-NH2 5µm 4.6x250mm
 Mobile Phase: CH₃CN:H₂O (75:25)
 Flow Rate: 0.9mL/min
 Detection: RI

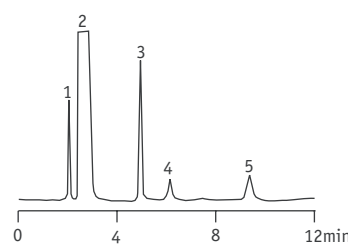
Sugar Alcohols



1. Iso-erythritol
2. Xylitol
3. Mannitol
4. Maltitol

Column: VertiSep™ PRP-NH2 5µm 4.6x250mm
 Mobile Phase: ACN:H₂O (70:30)
 Flow Rate: 1.0mL/min
 Detection: RI

OTC Antihistamine and Excipients



1. Diphenhydramine
2. PEG, Gelatin
3. Sorbitan
4. Glycerol
5. Sorbitol

Column: VertiSep™ PRP-NH2 5µm 4.6x250mm
 Mobile Phase: ACN:0.1% Ammonium Carbonate, pH6.5 (80:20)
 Flow Rate: 1.0mL/min
 Detection: RI

Ordering Information

Phase	Particle Size (µm)	I.D. Length (mm)	QTY	Part No.
VertiSep™ PRP				
L21	5	4.6 x 150	1	03LN-E421
	5	4.6 x 250	1	03LN-E521
	10	4.6 x 150	1	03LN-E431
AQ	10	4.6 x 250	1	03LN-E531
	5	4.6 x 150	1	03LO-E421
C18	5	4.6 x 250	1	03LO-E521
	5	4.6 x 150	1	03LA-E421
C8	5	4.6 x 250	1	03LA-E521
	5	4.6 x 150	1	03LB-E421
NH2	5	4.6 x 250	1	03LB-E521
	5	4.6 x 150	1	03LF-E421
	5	4.6 x 250	1	03LF-E521

Ordering Information

Phase	Particle Size (µm)	I.D. Length (mm)	QTY	Part No.
VertiSep™ PRP Guard Cartridge*				
PRP-L21	5	4.6 x 10	2	03LN-E421
PRP-AQ	5	4.6 x 10	2	03LB-E421
PRP-C18	5	4.6 x 10	2	03LB-E521
PRP-C8	5	4.6 x 10	2	03LF-E421
PRP-NH2	5	4.6 x 10	2	03LF-E521

*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

