

Vydac® Everest® Columns Introduction

VYDAC



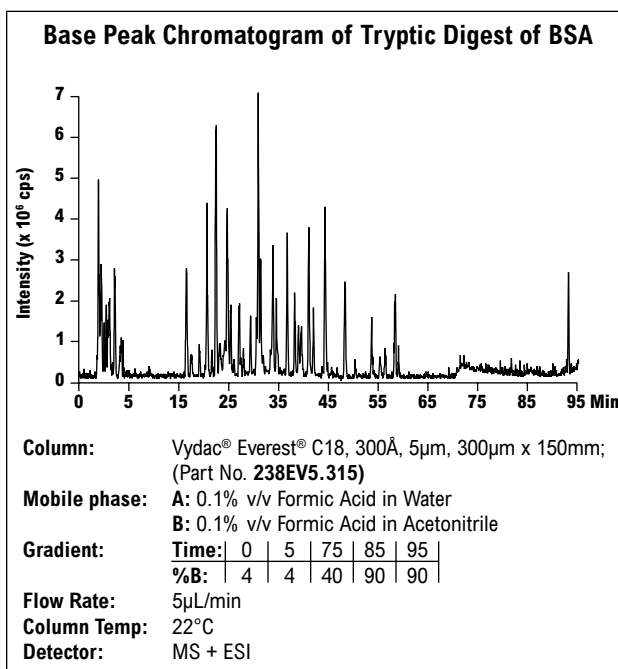
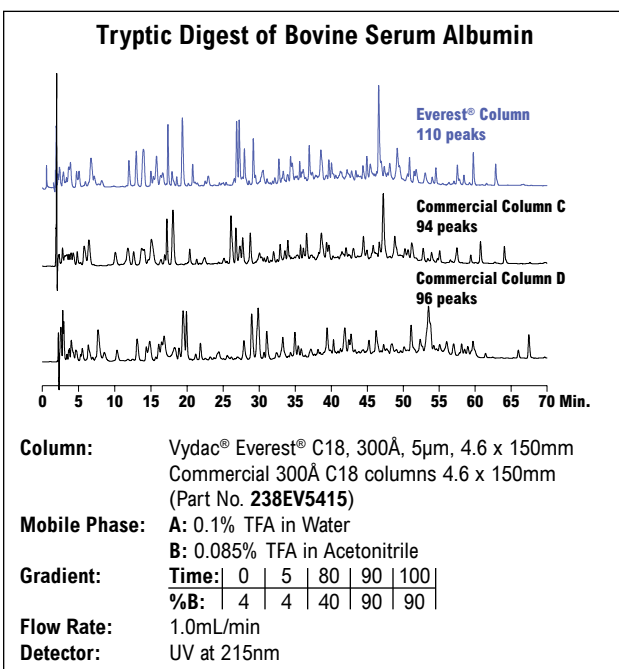
High Resolution for Complex Peptide Samples

- High resolution of complex peptide digests
- Unique selectivity for both hydrophilic and hydrophobic peptides
- Exceptional microbore sensitivity with little or no TFA in the mobile phase

Everest® columns provide exceptionally high resolution for complex peptide digest separations. Unique selectivity and sensitivity are the result of new bonding technology that improves C18 surface coverage and deactivates residual silanols. Previously, the best 300Å C18 chemistries have had carbon coverage in the 2.8 to 3.6µmol/m² range. Everest® C18 coverage is in excess of 4µmol/m² and approximates the theoretical limit based on surface area. This increased shielding of the base silica increases column life and reduces the amount of TFA required to shield the silica.

Everest® Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
238EV C18	Silica	Spheroidal	5, 10, 10–15, 15–20µm	300Å	70–110m ² /g	6%	Monomeric	Yes	L1



Everest® columns outperform competitor columns at higher peptide loads, by providing higher-resolution separations (average of 17% higher peak counts than competitor columns tested).

The Everest® column performs exceptionally well with no TFA in the mobile phase, ensuring excellent microbore sensitivity.

Everest® 300Å C18

Particle Size	i.d.	Columns				Recommended Guards	
		50mm	100mm	150mm	250mm	Guard Kit ¹	Guard Cartridge ²
Everest® Analytical Columns 238EV C18							
5µm	1.0mm ³	238EV5105	238EV5110	238EV5115	238EV51	238GK51EV	238GD51EV
	2.1mm ³	238EV5205	238EV5210	238EV5215	238EV52	238GK52EV	238GD52EV
	4.6mm ³	238EV5405	238EV5410	238EV5415	238EV54	238GK54EV	238GD54EV
Everest® Capillary Columns 238ZU C18							
5µm	75µm	238EV5.07505	238EV5.07510	238EV5.07515	238EV5.07525	—	—
	150µm	238EV5.1505	238EV5.1510	238EV5.1515	238EV5.1525	—	—
	300µm	238EV5.305	238EV5.310	238EV5.315	238EV5.325	—	—
	500µm	238EV5.505	238EV5.510	238EV5.515	238EV5.525	—	—

¹A guard kit includes a holder and one guard cartridge. ²Guard cartridge units include two guard cartridges. ³Titanium frits are standard in column diameters 4.6mm and smaller.

Everest® Guard Cartridges

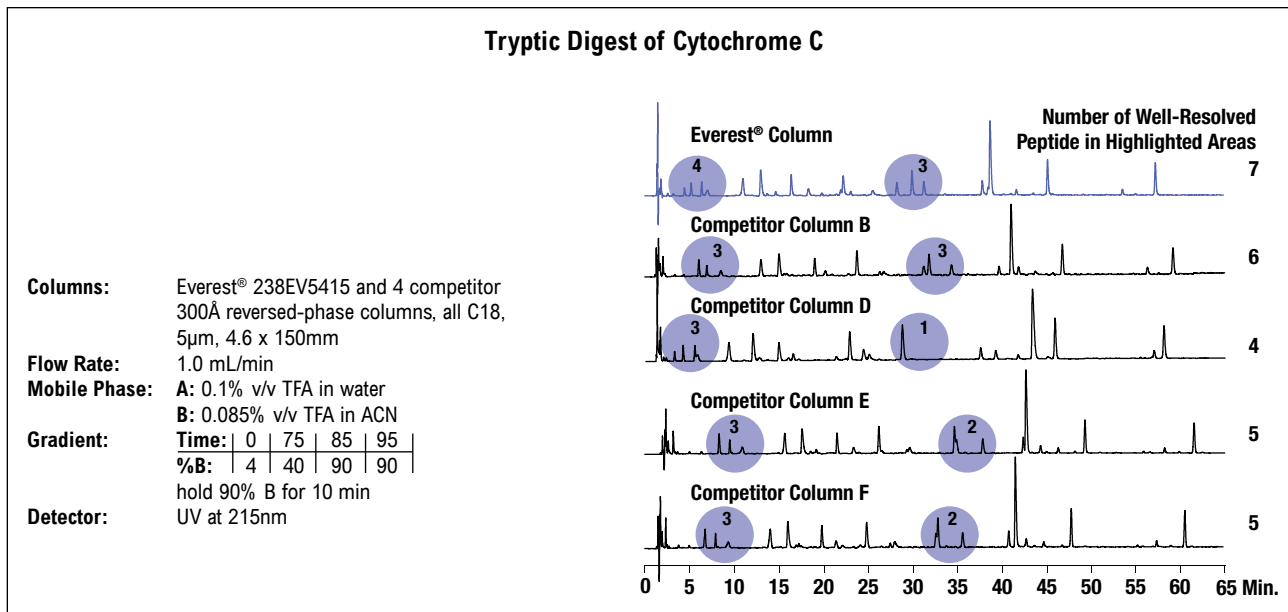
Packing	i.d. x Length	Qty.	Part No.
C18, 5µm* Capillary Guard**	0.150 x 10mm	ea	238EV5C0115
	0.300 x 10mm	ea	238EV5C0130
	1.0 x 10mm	2	238GD51EV

*All-Guard™ holder required. Other particle sizes available.

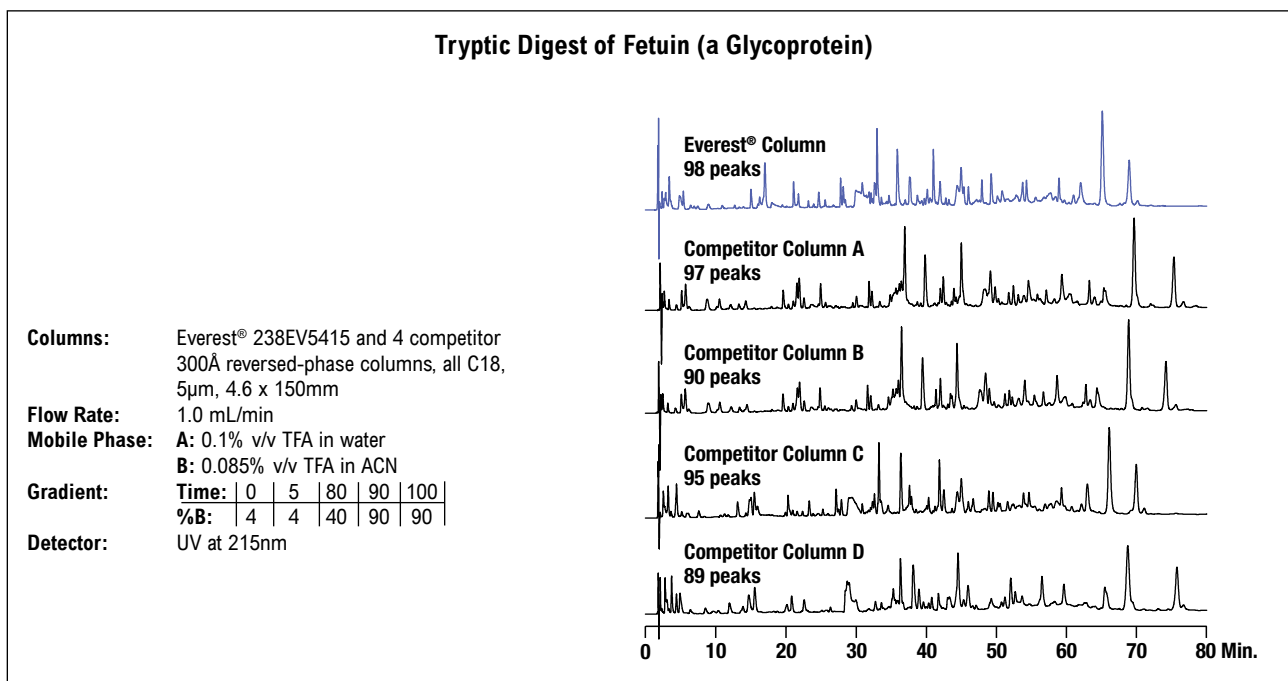
**1.5µm and 5µm particles and other dimensions are available.

Everest® Guard Cartridges (continued)

Packing	Qty.	Part No.
<i>Capillary Guard Cartridge Holder</i>		
Guard Holder for 0.100mm and 0.150mm Guards	ea	GR-3710E
Guard Holder for 0.300mm and 0.500mm Guards	ea	GR-3710A
Guard Holder for 1mm Guards	ea	GCH1



For a tryptic digest of Cytochrome C, an Everest® column offers unique selectivity which allows the best separation of a group of hydrophilic and hydrophobic peptides. To assess resolution, chromatograms of tryptic digests of several proteins on an Everest® column and several other commercial 300Å C18 reversed-phase columns were compared. Peak counts were based on detection by automated chromatography software with parameters set identically for all columns. In the analyses of a tryptic digest of cytochrome c, specific regions of the chromatogram were examined for the number of peaks resolved. The Everest® column demonstrated unique selectivity for both hydrophilic and hydrophobic peptides.



A tryptic digest of fetuin injected at high load on an Everest® column provided higher peak counts compared to four commercial columns. Peak numbers shown are the average of three separations on each column.