

Vydac

for biomolecules and polypeptide separation

Vydac 300 Å columns are a commonly employed range in bioseparations. Vydac columns are fully scalable from capillary to microbore and analytical to preparative dimensions. Separate biomolecules from small peptides to large intact proteins with the Vydac family of reversed-phase columns (including Vydac TP, MS, Denali, and Everest) and ion exchange (Vydac 302IC) columns. Reversed-phase columns for a polypeptide separation should be considered on the basis of the polypeptide's hydrophobicity, with molecular weight as a secondary consideration.



VYDAC HPLC COLUMN SPECIFICATIONS

Phase	USP listing	Functional group	Endcapped	Particle Size (µm)	Surface Area (m ² /g)	Pore size (Å)	Carbon load (%)	Bonding type	pH
Vydac TP									
218TP	L1	Octadecyl	Yes	3, 5, 10, 10-15, 15-20, 20-30	60 - 110	300	8	Polymeric	2 - 7
238TP	L1	Octadecyl	No	5	60 - 110	300	4	Monomeric	2 - 7
201TP	L1	Octadecyl	No	5, 10	70 - 90	300	8	Polymeric	2 - 7
202TP	L1	Octadecyl	No	5	60 - 90	300	9	Polymeric	2 - 7
208TP	L7	Octyl	Yes	3, 5, 10, 10-15, 15-20	60 - 110	300	5	Polymeric	2 - 7
214TP	L26	Butyl	Yes	3, 5, 10, 10-15, 15-20	60 - 110	300	3	Polymeric	2 - 7
214ATP	L26	Butyl	Yes	5	60 - 110	300	3	Polymeric	2 - 7
219TP	L11	Diphenyl	Yes	5, 10	60 - 110	300	4	Polymeric	2 - 7
Vydac MS									
218MS	L1	Octadecyl	Yes	5, 10	200	190	12	Monomeric	2 - 7
238MS	L1	Octadecyl	Yes	5	200	190	4	Monomeric	2 - 7
208MS	L1	Octadecyl	Yes	5, 10	450	100	24	Monomeric	2 - 7
214MS	L1	Octadecyl	Yes	5, 10, 10-15	450	100	20	Monomeric	2 - 7
Vydac Denali									
238DE	L1	Octadecyl	Yes	5, 10	70 - 110	120	6	Monomeric	2 - 7
Vydac Everest									
238EV	L1	Octadecyl	Yes	5	70 - 110	300	6	Monomeric	2 - 7
Vydac IC									
302IC	-	Quaternary amine	-	10	-	> 100	-	-	2 - 6.5

Please contact chromsupport@avantorsciences.com for advice on column selection for EP (European Pharmacopoeia) and JP (Japanese Pharmacopoeia) guidelines, or by application.

Vydac MS

for analysis of small peptides to large proteins

Vydac MS is a further development of the Vydac range for reversed-phase separation of biomolecules. A proprietary surface treatment and bonding process give Vydac MS columns unique selectivity. A variety of reversed-phases makes this product line suitable for the analysis of small peptides to large intact proteins.

Key Features

- 300 Å pore size spherical silica
- Four reversed-phase chemistries
- Excellent peak shape with little or no TFA
- High protein recoveries make scale-up easy

VYDAC MS PHASE SPECIFICATIONS

Phase	Functional group	Particle size (µm)	Properties	Applications	USP code
218MS	C18	5, 10	Polymeric bonding, highest hydrophobic interaction and unique geometric selectivity	Use for simple enzymatic digests (<12 proteins) or biomolecules 0–5 kDa MW	L1
238MS	C18	5	Monomeric bonding offers increased peptide interaction and generally yields higher peak counts	Use for same applications as 218MS, but offers different C18 selectivity	L1
208MS	C8	5, 10	Lower hydrophobicity is better for larger biomolecules	Ideal for biomolecules 5–10 kDa MW	L7
214MS	C4	5, 10	Lower capacity than C18 or C8, suitable for hydrophobic proteins or when minimal organic solvent is desired	Ideal for biomolecules >10 kDa MW, intact proteins, antibodies, oligonucleotides, human growth hormone	L26

ORDERING INFORMATION

CAPILLARY COLUMNS - 5 µm

Length (mm)	50		
i.d. (mm)	0.075	0.3	0.5
218MS	218MS5.07505	218MS5.305	218MS5.505
238MS	238MS5.07505	238MS5.305	238MS5.505
208MS	208MS5.07505	208MS5.305	208MS5.505
214MS	214MS5.07505	214MS5.305	214MS5.505

Length (mm)	100			
i.d. (mm)	0.075	0.1	0.3	0.5
218MS	218MS5.07510	–	218MS5.310	218MS5.510
238MS	238MS5.07510	–	238MS5.310	238MS5.510
208MS	208MS5.07510	208MS5.1010	208MS5.310	208MS5.510
214MS	214MS5.07510	–	214MS5.310	214MS5.510

Length (mm)	150		
i.d. (mm)	0.075	0.3	0.5
218MS	218MS5.07515	218MS5.315	218MS5.515
238MS	238MS5.07515	238MS5.315	238MS5.515
208MS	208MS5.07515	208MS5.315	208MS5.515
214MS	214MS5.07515	214MS5.315	214MS5.515

Length (mm)	250		
i.d. (mm)	0.075	0.3	0.5
218MS	218MS5.07525	218MS5.325	218MS5.525
238MS	238MS5.07525	238MS5.325	238MS5.525
208MS	208MS5.07525	208MS5.325	208MS5.525
214MS	214MS5.07525	214MS5.325	214MS5.525

ANALYTICAL COLUMNS - 5 µm

Length (mm)	20	50			
i.d. (mm)	2.1	4.6	1.0	2.1	4.6
218MS	218MS5202	218MS5402	218MS5105	218MS5205	218MS5405
238MS	–	–	238MS5105	238MS5205	–
208MS	–	–	208MS5105	208MS5205	–
214MS	–	–	214MS5105	214MS5205	214MS5405

Length (mm)	100			
i.d. (mm)	1.0	2.1	3.0	4.6
218MS	218MS5110	218MS5210	218MS5310	218MS5410
238MS	238MS5110	238MS5210	–	238MS5410
208MS	208MS5110	208MS5210	–	–
214MS	214MS5110	214MS5210	214MS5310	214MS5410

Length (mm)	100				200
i.d. (mm)	1.0	2.1	3.0	4.6	1.0
218MS	218MS5115	218MS5215	–	218MS5415	218MS5120
238MS	238MS5115	238MS5215	–	238MS5415	–
208MS	208MS5115	208MS5215	208MS5315	208MS5415	–
214MS	214MS5115	214MS5215	214MS5315	214MS5415	–

Length (mm)	250			
i.d. (mm)	1.0	2.1	3.0	4.6
218MS	218MS51	218MS52	218MS53	218MS54
238MS	238MS51	238MS52	–	238MS54
208MS	208MS51	208MS52	–	208MS54
214MS	214MS51	214MS52	214MS53	214MS54

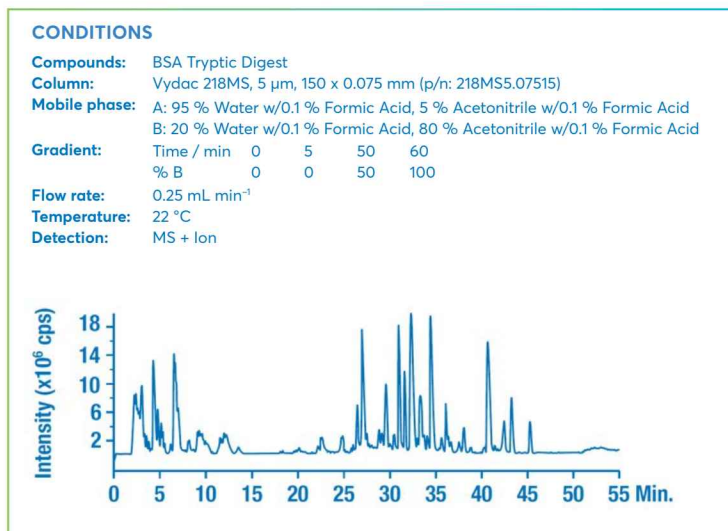


FIGURE 9: BSA Tryptic Digest.

ANALYTICAL COLUMNS - 5 µm

Length (mm)	Guard cartridges (2/pk) ¹			Guard cartridge kits ²		
i.d. (mm)	For 1.0	For 2.1	For 3.0-4.6	For 1.0	For 2.1	For 3.0-4.6
218MS	218GD51MS/N	218GD52MS/N	218GD54MS/N	218GK51MS/N	218GK52MS/N	218GK54MS/N
238MS	238GD51MS/N	238GD52MS/N	238GD54MS/N	238GK51MS/N	238GK52MS/N	238GK54MS/N
208MS	208GD51MS/N	208GD52MS/N	208GD54MS/N	208GK51MS/N	208GK52MS/N	208GK54MS/N
214MS	214GD51MS/N	214GD52MS/N	214GD54MS/N	214GK51MS/N	214GK52MS/N	214GK54MS/N

¹ To be used with All-Guard cartridge holder (80101/N) and column coupler for All-Guard cartridges (HI-081).

² Includes holder (80101/N), column coupler (HI-081), and 1 guard cartridge.

ANALYTICAL COLUMNS - 10 µm

Length (mm)	250	Guard cartridges (2/pk) ¹	Guard cartridge kits ²	
i.d. (mm)	1.0	4.6	For 3.0-4.6	For 3.0-4.6
218MS	218MS101	218MS104	218GD104MS/N	218GK104MS/N
208MS	–	208MS104	–	–
214MS	–	214MS104	–	–

¹ To be used with All-Guard cartridge holder (80101/N) and column coupler for All-Guard cartridges (HI-081).

² Includes holder (80101/N), column coupler (HI-081), and 1 guard cartridge.

ANALYTICAL COLUMNS - 10-15 µm

Length (mm)	250
i.d. (mm)	4.6
214MS	214MS10154

SEMI-PREPARATIVE AND PREPARATIVE COLUMNS - 5 µm

Length (mm)	250
i.d. (mm)	10
218MS	218MS510
208MS	208MS510
214MS	214MS510

SEMI-PREPARATIVE AND PREPARATIVE COLUMNS - 10 µm

Length (mm)	150	250	
i.d. (mm)	22	10	22
218MS	218MS102215	218MS1010	218MS1022
208MS	208MS102215	–	208MS1022
214MS	–	214MS1010	214MS1022

SEMI-PREPARATIVE AND PREPARATIVE COLUMNS - 10-15 µm

Length (mm)	250	Guard cartridges – 12 µm (2/pk) ¹
i.d. (mm)	22	For 22
214MS	214MS101522	214FSK1210MS

¹ To be used with semi-prep guard holder (GCH10) and column coupler for All-Guard cartridges (HI-081).