

Grom™ Sil Columns



High-Quality, Wide Variety, HPLC Columns for All Types of Applications

- Highly consistent manufacturing for excellent reproducibility
- 40 different phases to choose from, general purpose to specialty phases
- Wide range of particle sizes from sub 2µm to 10µm
- Available in nano to preparative column formats

High purity spherical silica with high and universal selectivity for broad range of applications. Different phases and bonding technologies give you the power and flexibility

ST = standard bonding with endcapping—high-quality universal column

NE = not endcapped—high polar selectivity

HE = hydrophilic endcapping—increased polar selectivity; pH-stable at high pH, high carbon load and very low silanol activity

CP = possibility to work at high pH

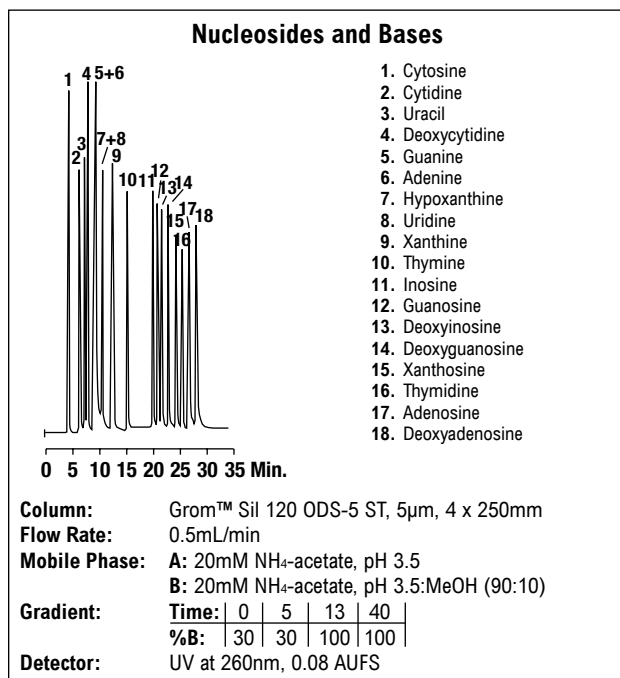
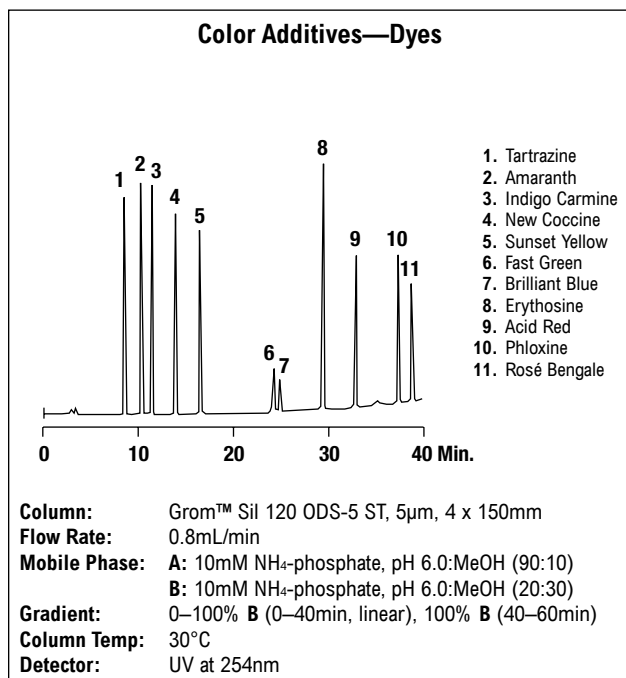
FE = Fully endcapped—maximum silica coverage

PA = Cross-linked polyamino—better stability

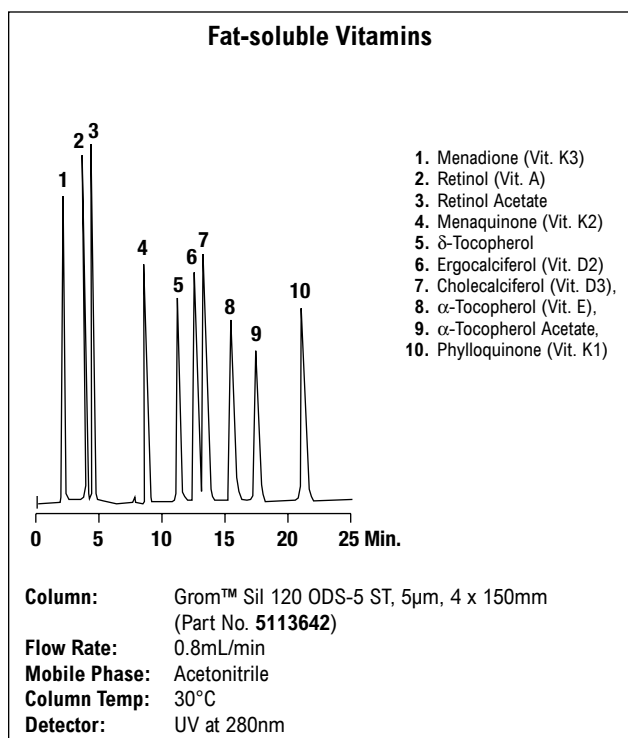
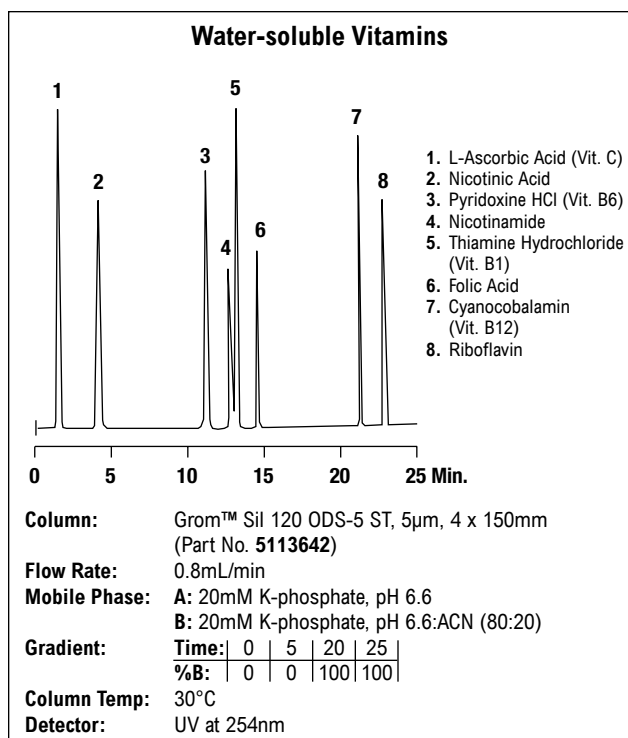
pH = pH stable—use mobile phases up to pH 11

Grom™ Sil Phase Specifications									
Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	End-capped?	USP L-code
ODS-3 CP (encapsulated)	Silica	Spherical	3, 5, 7, 10µm	120, 300Å	320, 170m ² /g	15, 6%	Polymeric	No	L1
ODS-4 HE (hydrophilic endcapping)	Silica	Spherical	3, 4, 5, 7, 10µm	120, 200Å	300, 200m ² /g	16, 11%	Monomeric	Yes	L1
ODS-5 ST (standard)	Silica	Spherical	3, 4, 5, 7, 10µm	60, 120, 200Å	580, 300, 200m ² /g	22, 17, 12%	Monomeric	Yes	L1
ODS-7 pH (pH-stable)	Silica	Irregular	4µm	80Å	510m ² /g	22%	Polymeric	No	L1
Octyl-5 CP (encapsulated)	Silica	Spherical	3, 5, 7, 10µm	120, 300Å	320, 170m ² /g	10, 5.5%	Polymeric	No	L7
Phenyl-1 FE (fully endcapped)	Silica	Spherical	3, 5, 10µm	120, 300Å	300, 150m ² /g	9, 5%	Monomeric	Yes	L11
Phenyl-2 CP (encapsulated)	Silica	Irregular	5µm	120, 300Å	320, 170m ² /g	7, 4%	Polymeric	No	L11
Cyano-3 CP (encapsulated)	Silica	Spherical	5µm	120Å	320m ² /g	4%	Polymeric	No	—
Amino-2 PA (Crs linked Poly-NH)	Silica	Spherical	5µm	120Å	300m ² /g	—	Polymeric	No	L8
Diol	Silica	Spherical	5, 10µm	60, 120, 200Å	580, 300, 200m ² /g	—	Monomeric	No	L20

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Grom™ Sil Columns



more applications

To view our complete searchable chromatogram database visit www.discoverysciences.com/chromdb/



Grom™ Sil Columns

Packing	Format	i.d. x Length	Part No.	
ODS-3 CP, 3 μ m	Microbore	1 x 60mm	5115722	
	Microbore	2 x 125mm	5115672	
	Microbore	2 x 250mm	5117056	
	Solvent Reducer	3 x 60mm	5113597	
	Solvent Reducer	3 x 100mm	5117398	
	Solvent Reducer	3 x 150mm	5113602	
	Analytical	4 x 60mm	5113598	
	Analytical	4.6 x 150mm	5117003	
ODS-3 CP, 5 μ m	Solvent Reducer	3 x 125mm	5113604	
	Analytical	4 x 125mm	5115479	
ODS-4 HE, 10 μ m	Analytical	4.6 x 250mm	5113609	
ODS-4 HE, 3 μ m	Capillary	0.3 x 150mm	5116144	
	Microbore	1 x 50mm	5118148	
	Microbore	1 x 150mm	5116060	
	Microbore	2 x 100mm	5113619	
	Microbore	2 x 125mm	5115975	
	Microbore	2 x 150mm	5116880	
	Microbore	2 x 150mm	5114808	
	Analytical	4 x 50mm	5118892	
	Analytical	4 x 60mm	5117386	
	Analytical	4 x 125mm	5113618	
	Analytical	4.6 x 125mm	5117572	
	ODS-4 HE, 5 μ m	Capillary	0.1 x 150mm	5117667
		Capillary	0.2 x 250mm	5119092
		Capillary	0.5 x 250mm	5118525
Microbore		2 x 125mm	5113623	
Microbore		2 x 150mm	5116012	
Solvent Reducer		3 x 150mm	5117727	
ODS-5 ST, 3 μ m	Analytical	4 x 125mm	5115808	
	Analytical	4 x 250mm	5113626	
	Analytical	4.6 x 150mm	5116777	
	Analytical	4.6 x 150mm	5116777	
ODS-5 ST, 5 μ m	Microbore	2 x 60 mm	5117044	
	Microbore	2 x 150mm	5118335	
ODS-5 ST, 5 μ m	Microbore	2 x 250mm	5116342	
	Analytical	4 x 125mm	5116219	
	Analytical	4 x 150mm	5113642	
	Analytical	4 x 250mm	5113646	
ODS-7 pH, 4 μ m	Analytical	4.6 x 250mm	5113647	
	Capillary	0.3 x 250mm + 10mm Guard Column	5119756	
Octyl-5 HE, 3 μ m	Microbore	1 x 50mm	5118213	
	Microbore	2 x 40mm	5115266	
	Solvent Reducer	3 x 150mm	5116956	
	Analytical	4.6 x 125mm	5113654	
Octyl-5 CP, 5 μ m	Analytical	4.6 x 150mm	5115840	
	Analytical	4.6 x 125mm	5113265	
Phenyl-1 FE, 5 μ m	Microbore	2 x 250mm	5117325	
	Analytical	4 x 150mm	5117565	
Phenyl-2 CP, 5 μ m	Microbore	2 x 100mm	5113695	
	Analytical	4 x 250mm	5113696	
Cyano-3 CP, 5 μ m	Analytical	4 x 250mm	5116429	
	Microbore	2 x 125mm	5117410	
Amino-2 PA, 5 μ m	Analytical	4.6 x 60mm	5116441	
	Microbore	2 x 250mm	5115469	
	Analytical	4 x 250mm	5113466	
	Analytical	4.6 x 250mm	5115306	
Diol, 5 μ m	Microbore	2 x 100mm	5117476	

more info

For large molecule columns, refer to page 84–97.

Grom™ Sapphire Column



High Purity for Optimal Performance of Challenging Separations

- Excellent peak shape—Highly symmetrical peaks from high purity silica base
- High speed and high capacity—Range of pore sizes and surface area for improved speed
- Optimized for consistent flow—critical in low volume applications
- Variety of column formats—1.5, 3, and 5µm particles

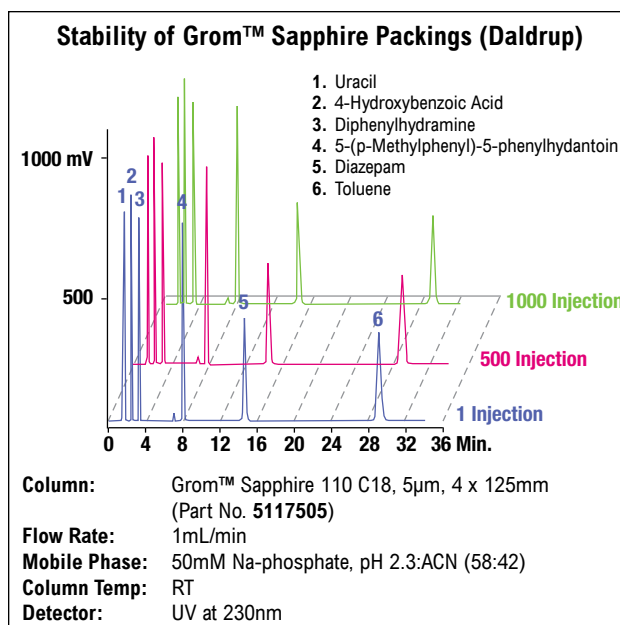
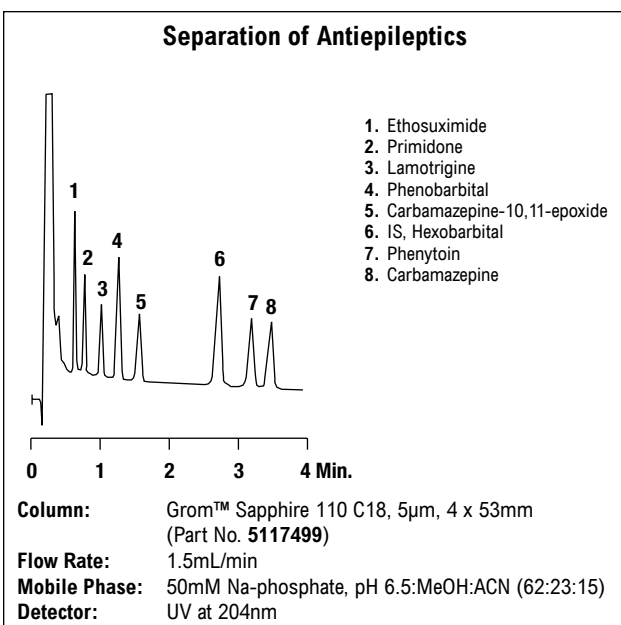


hplc columns | small molecule

Sapphire Phase Specifications

Phase	Base Material	Particle Shape	Particle Size	Pore Size	Surface Area	Carbon Load	Phase Type	Endcapped?	USP L-code
C18	Silica	Spherical	3, 5, 10µm	65, 110Å	500, 270m ² /g	23, 16%	Monomeric	Yes	L1
C8	Silica	Spherical	3, 5, 10µm	65, 110Å	500, 270m ² /g	15, 10%	Monomeric	Yes	L7
C4*	Silica	Spherical	3, 5, 10µm	65, 110Å	500, 270m ² /g	10.5, 7%	Monomeric	Yes	L26
Silica*	Silica	Spherical	3, 5, 10µm	65, 110Å	500, 270m ² /g	—	—	No	L3

*Columns available upon request.



Sapphire HPLC Columns

Packing	i.d. x Length	Part No.
C18, 3µm	0.030 x 150mm	5119303
	0.075 x 150mm	5133239
	0.100 x 100mm	5135280
C18, 5µm	4 x 53mm	5117499
	4 x 125mm	5117505
C8, 5µm	2 x 250mm	5118934

related products

Looking for HPLC column prefilers? See page 111.



technical assistance

Contact Tech Support: Phone: 1.800.255.8324 (North America)
 Email: contact.alltech@grace.com
 Online: www.discoverysciences.com

related products

Need high-pressure polymeric fittings? See pages 112–114 for our full selection of high-pressure fittings.

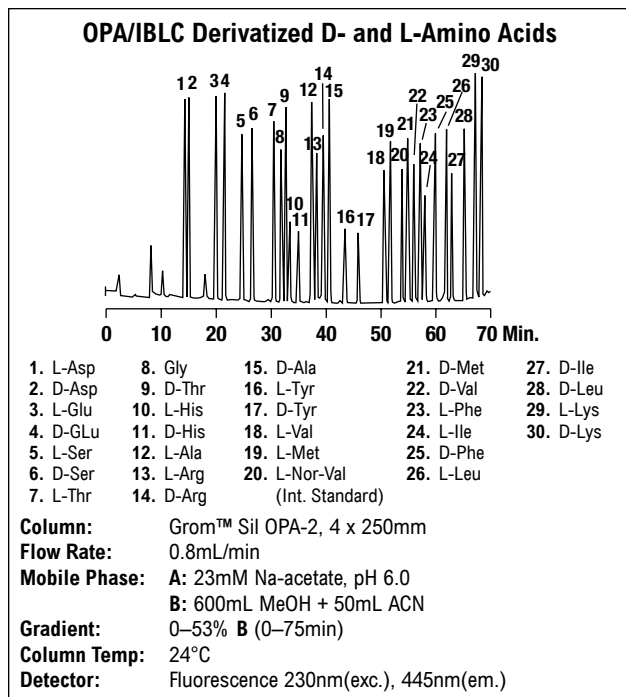


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Grom™ Amino Acid Column Kits

Amino Acid Analysis by Precolumn Derivatization Using OPA/IBLC

- High resolution (both optical antipodes of all protein amino acids in a single chromatogram)
- Outstandingly high sensitivity (fMol)
- Extraordinarily long lifetimes of columns

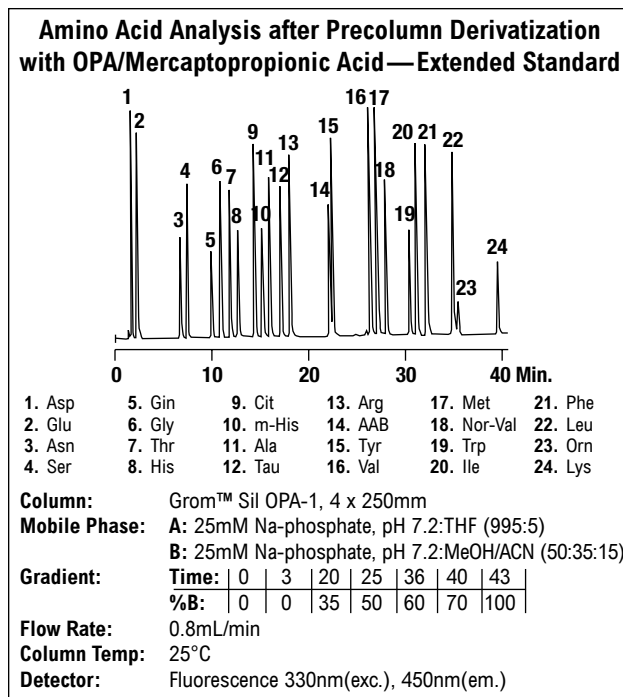


OPA/IBLC Kit

Description	Part No.
Complete kit includes 4.0mm i.d. x 250mm length column, OPA/IBLC derivitization reagents, and detailed working instructions.	987.0000

Amino Acid Analysis by Precolumn Derivatization With OPA/3-MPA

- Highest sensitivity (5–10fMol)
- Short analysis time
- Fully automated derivitization
- Best resolution



OPA/3-MPA Kit

Description	Part No.
Complete kit includes 4.6mm i.d. x 150mm length column, OPA/3-MPA derivitization reagents, and detailed working instructions.	980.0000

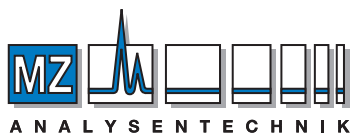
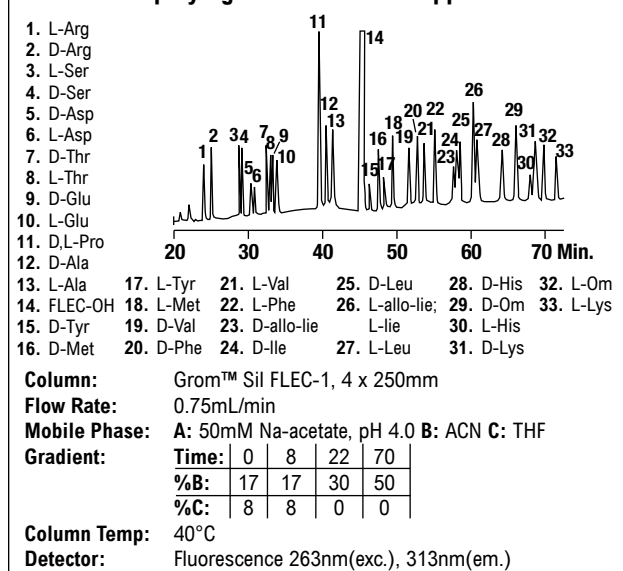
Amino Acid Analysis by Precolumn Derivatization Using FLEC/ADAM

- High resolution and high sensitivity
- Rapid, automated or manual derivitization
- Primary and secondary amines
- Stable derivatives

FLEC/ADAM Kit

Description	Part No.
Complete kit includes 4.0mm i.d. x 250mm length column, FLEC/ADAM derivitization reagents, and detailed working instructions.	984.0000

Separation of a D-, L-Amino Acid Standard by HPLC Employing the FLEC-ADAM Approach



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