

HPLC/UHPLC Column Phase Selection Chart

Specifically designed for successful and reproducible method development and transfer

KINETEX Core-Shell Technology **Use for highest performance compared to fully porous media**

Phase	Particle Type	Pore Size (Å)	Carbon Load %	pH Range	USP Classification	Selectivity Features	Available Particle Size(s)
EVO C18	Core-Shell Organo-Silica (U.S. Patent Nos. 7,563,367 and 8,658,038)	100	11'	1.0-12.0	L1	Robust reversed phase methods even in alkaline conditions with improved peak shape for polar basic compounds and 100% aqueous stability.	5µm
C18	Core-Shell Silica	100	12'	1.5-8.5 [†]	L1	All purpose phase that offers the hydrophobic retention and methylene selectivity chromatographers expect from a C18 column.	1.3µm 1.7µm 2.6µm 5µm
Biphenyl	Core-Shell Silica	100	11'	1.5-8.5 [†]	L11	100% aqueous stable and allows for excellent reversed phase retention and enhanced polar and aromatic selectivity.	1.7µm 2.6µm 5µm
XB-C18 (C18 with protective iso-butyl side chains)	Core-Shell Silica	100	10'	1.5-8.5 [†]	L1	Unique C18 phase that yields increased hydrogen bonding with hydrophobic selectivity, resulting in improved peak shape for basic compounds and increased retention of acidic compounds.	1.7µm 2.6µm 5µm
F5 (pentafluorophenyl propyl)	Core-Shell Silica	100	9'	1.5-8.5 [†]	L43	Highly reproducible pentafluorophenyl propyl phase that offers a unique combination of polar, hydrophobic, aromatic, and shape selectivity.	1.7µm 2.6µm
C8	Core-Shell Silica	100	8'	1.5-8.5 [†]	L7	USP L7 phase that provides less hydrophobic and methylene selectivity than a C18.	1.7µm 2.6µm 5µm
Phenyl-Hexyl	Core-Shell Silica	100	11'	1.5-8.5 [†]	L11	Reversed phase chemistry that allows for greater retention and separation of aromatic hydrocarbons.	1.7µm 2.6µm 5µm
HILIC (Unbonded silica)	Core-Shell Silica	100	0	2.0-7.5	L3	Unbonded silica phase for HILIC conditions to provide selectivity for polar compounds.	1.7µm 2.6µm 5µm

† Effective Carbon Load. pH range is 1.5-10 under isocratic conditions, pH range is 1.5-8.5 under gradient conditions.



Ordering Info →

AERIS Ultra-high performance for the analysis of proteins and peptides

Phase	Particle Type	Pore Size (Å)	Carbon Load %	pH Range	USP Classification	Selectivity Features	Available Particle Size(s)
WIDEPORE XB-C18	Core-Shell Silica	—	—	1.5-9	L1	Recommended for polypeptides, large peptides, proteins, hydrophilic proteins, Fc-fused proteins, Antibody-Drug Conjugates, high temperature separations, alternate selectivity for peptide mapping.	3.6µm
WIDEPORE XB-C8	Core-Shell Silica	—	—	1.5-9	L7	Recommended for large proteins, moderately hydrophobic proteins, monoclonal antibodies, glycosylated proteins, Antibody-Drug Conjugates, high temperature separations.	3.6µm
WIDEPORE C4	Core-Shell Silica	—	—	1.5-9	L26	Recommended for very large proteins, very hydrophobic proteins, membrane proteins, least retentive phase of Aeris WIDEPORE.	3.6µm
PEPTIDE XB-C18	Core-Shell Silica	100	10'	1.5-9	L1	Recommended for low molecular weight peptides (synthetic or natural) and peptide mapping.	1.7µm 2.6µm 3.6µm 5µm

† Effective Carbon Load.

Gemini Rugged reversed phase column can be used reliably from pH 1-12

Phase	Particle Type	Pore Size (Å)	Carbon Load %	pH Range	USP Classification	Selectivity Features	Available Particle Size(s)
C18	Fully Porous Organo-Silica (U.S. Patent Nos. 7,563,367 and 8,658,038)	110	14	1.0-12	L1	This is a high loading, organo-silane particle column with pH stability 1-12. The patented procedure creates a surface that is a strong hydrogen donor and acceptor. It is ideal for a combination of polar and non-polar retention.	3µm 5µm 10µm
NX-C18	Fully Porous Organo-Silica (U.S. Patent Nos. 7,563,367 and 8,658,038)	110	14	1.0-12	L1	New generation of organo-silane material incorporates ethylene bridges to provide pH stability from 1-12 and for the durability of earlier hybrids. The homogeneous surface offers some steric selectivity.	3µm 5µm 10µm
C6-Phenyl	Fully Porous Organo-Silica (U.S. Patent Nos. 7,563,367 and 8,658,038)	110	12	1.0-12	L11	This is a very inert phase for great peak shapes of ionized compounds. The planar phenyl rings offer moderate hydrophobic retention and high steric selectivity for structural isomer selectivity.	3µm 5µm

LUNA One of the world's leading HPLC columns for virtually every application

Phase	Particle Type	Pore Size (Å)	Carbon Load %	pH Range	USP Classification	Selectivity Features	Available Particle Size(s)
C18(2)	Fully Porous Silica	100	17.5	1.5-9.0 [†]	L1	Excellent general purpose reversed phase selectivity with high hydrophobic and methylene retention. Non-polar endcapping virtually eliminates silanol interactions.	2.5µm 3µm 5µm 10µm
C8(2)	Fully Porous Silica	100	13.5	1.5-9.0 [†]	L7	General C8 phase that provides less hydrophobic retention than a C18, but the density of the ligand bonding creates more steric based selectivity.	3µm 5µm 10µm
CN	Fully Porous Silica	100	7	1.5-7.0	L10	Can be used as reversed or normal phase material. Nitrile groups bound to the silica surface offer a unique polar selectivity under reversed phase or normal phase conditions.	3µm 5µm 10µm
HILIC (cross-linked diol)	Fully Porous Silica	200	5.7	1.5-8.0	L20	HILIC phase that provides excellent selectivity and retention for polar compounds as well as improved MS sensitivity with low bleed.	3µm 5µm
NH₂	Fully Porous Silica	100	9.5	1.5-11	L8	Amino phase. Can be used in reversed or normal phase modes. Stable from pH 1.5 to 11.0 and under 100% aqueous conditions. High performance silica and bonding techniques produces a rugged, highly reproducible column.	3µm 5µm 10µm
PPF(2)	Fully Porous Silica	100	11.5	1.5-9.0 [†]	L43	A pentafluorophenyl phase that provides excellent selectivity for aromatic compounds from influence of fluorine substitution on phenyl ring. Multiple retention mechanisms. Orthogonal selectivity to traditional C18 phases.	3µm 5µm
Phenyl-Hexyl	Fully Porous Silica	100	17.5	1.5-9.0 [†]	L11	A phenyl phase which employs a hexyl alkyl linker, leading to a balanced degree of hydrophobic and aromatic selectivity. Our most hydrophobic phenyl column and it will also provide good hydrogen accepting functionality for acidic retention.	3µm 5µm 10µm
SCX	Fully Porous Silica	100	0.55% Sulfur Load	2.0-7.0	L9	A benzene sulfonic acid bonded phase is used to make this strong cation exchange (SCX) column. Offers great peak shape and resolution.	5µm 10µm
Silica(2)	Fully Porous Silica	100	0	2.0-7.5	L3	Ultra-pure silica with high column bed stability enhanced by particle shape uniformity.	3µm 5µm 10µm

† pH range is 1.5-10 under isocratic conditions, pH range is 1.5-9.0 under gradient conditions.

synergi These four columns together will solve nearly any method development problem

Phase	Particle Type	Pore Size (Å)	Carbon Load %	pH Range	USP Classification	Selectivity Features	Available Particle Size(s)
Fusion-RP (polar embedded C18)	Fully Porous Silica	80 [†]	12	1.5-9.0 [†]	L1	For a balanced retention of polar, basic compounds and moderate retention for hydrophobics over a broad pH range. See improvements in the analysis of polar, basic compounds with little or no MS phase bleed. (100% Aqueous Stable).	2.5µm 4µm 10µm
Hydro-RP (C18 with polar endcapping)	Fully Porous Silica	80 [†]	19	1.5-7.5	L1	For extreme retention of non-polar and extremely polar alkyl compounds. 2.5µm 4µm 10µm Resolution of highly polar compounds under 100% buffer mobile phase conditions. (100% Aqueous Stable).	2.5µm 4µm 10µm
Max-RP (C12)	Fully Porous Silica	80 [†]	17	1.5-9.0 [†]	—	For hydrophobic, non-polar compounds over a wide pH range, with little or no MS phase bleed. See sharper peak shape for basic compounds at neutral pH.	2.5µm 4µm 10µm
Polar-RP (ether linked phenyl with polar endcapping)	Fully Porous Silica	80 [†]	11	1.5-7.0	L11	For extreme retention of polar and aromatic compounds. Additional improved peak shape for acidic and basic analytes and aromatic selectivity with methanol containing mobile phases. (100% Aqueous Stable).	2.5µm 4µm 10µm

† pH range is 1.5-10 under isocratic conditions, pH range is 1.5-9.0 under gradient conditions. † Pore size of 100 for 2.5µm particles.



Ordering Information



1.3 µm MiniBore Columns (mm)				
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1
C18	00A-4515-AN	00B-4515-AN		

1.7 µm MiniBore Columns (mm)				
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1
FS	—	00B-4722-AN	00D-4722-AN	00F-4722-AN
Biphenyl	—	00B-4628-AN	00D-4628-AN	00F-4628-AN
XB-C18	00A-4498-AN	00B-4498-AN	00C-4498-AN	00D-4498-AN
C18	00A-4475-AN	00B-4475-AN	00C-4475-AN	00D-4475-AN
CS	00A-4499-AN	00B-4499-AN	00C-4499-AN	00D-4499-AN
HILIC	00A-4474-AN	00B-4474-AN	00C-4474-AN	00D-4474-AN
Phenyl-Hexyl	—	00B-4500-AN	00D-4500-AN	00F-4500-AN

1.7 µm MidBore™ Columns (mm)				
Phases	30 x 3.0	50 x 3.0	100 x 3.0	150 x 3.0
XB-C18	00A-4498-Y0	00B-4498-Y0	00C-4498-Y0	AJO-8775
C18	00A-4475-Y0	00B-4475-Y0	00C-4475-Y0	AJO-8775
CS	00A-4499-Y0	00B-4499-Y0	00C-4499-Y0	AJO-8777
HILIC	—	00B-4474-Y0	—	AJO-8779

2.6 µm MiniBore Columns (mm)						
Phases	30 x 2.1	50 x 2.1	75 x 2.1	100 x 2.1	150 x 2.1	3/µk
FS	—	00B-4723-AN	—	00D-4723-AN	00F-4723-AN	AJO-8322
Biphenyl	00A-4622-AN	00B-4622-AN	—	00D-4622-AN	00F-4622-AN	AJO-8209
XB-C18	00A-4496-AN	00B-4496-AN	00C-4496-AN	00D-4496-AN	00F-4496-AN	AJO-8782
C18	00A-4462-AN	00B-4462-AN	00C-4462-AN	00D-4462-AN	00F-4462-AN	AJO-8782
CS	00A-4497-AN	00B-4497-AN	00C-4497-AN	00D-4497-AN	00F-4497-AN	AJO-8784
HILIC	00A-4461-AN	00B-4461-AN	00C-4461-AN	00D-4461-AN	00F-4461-AN	AJO-8788
Phenyl-Hexyl	00A-4495-AN	00B-4495-AN	00C-4495-AN	00D-4495-AN	00F-4495-AN	AJO-8788

2.6 µm MidBore™ Columns (mm)				
Phases	30 x 3.0	50 x 3.0	75 x 3.0	100 x 3.0
FS	—	00B-4723-Y0	—	00D-4723-Y0
Biphenyl	—	00B-4622-Y0	—	00D-4622-Y0
XB-C18	00A-4496-Y0	00B-4496-Y0	00C-4496-Y0	00D-4496-Y0
C18	00A-4462-Y0	00B-4462-Y0	00C-4462-Y0	00D-4462-Y0
CS	00A-4497-Y0	00B-4497-Y0	00C-4497-Y0	00D-4497-Y0
HILIC	00A-4461-Y0	—	—	00F-4461-Y0
Phenyl-Hexyl	00A-4495-Y0	—	—	00F-4495-Y0

*SecurityGuard ULTRA cartridges require holder. Part No.: AJO-9000



Aeris PEPTIDE 1.7 µm MiniBore Columns (mm)				
Phases	50 x 2.1	100 x 2.1	150 x 2.1	3/µk
XB-C18	00B-4506-AN	00D-4506-AN	00F-4506-AN	AJO-8948

Aeris PEPTIDE 2.6 µm MiniBore Columns (mm)				
Phases	50 x 2.1	100 x 2.1	150 x 2.1	3/µk
XB-C18	00B-4505-AN	00D-4505-AN	00F-4505-AN	AJO-8948

Aeris PEPTIDE 2.6 µm MidBore™ and Analytical Columns (mm)				
Phases	100 x 3.0	150 x 4.6	250 x 4.6	3/µk
XB-C18	00F-4505-Y0	00F-4505-E0	00G-4505-E0	AJO-8946

Aeris PEPTIDE 3.6 µm MiniBore Columns (mm)				
Phases	50 x 2.1	100 x 2.1	150 x 2.1	3/µk
XB-C18	00B-4507-AN	00D-4507-AN	00F-4507-AN	AJO-8948

Aeris PEPTIDE 3.6 µm Analytical Columns (mm)				
Phases	50 x 4.6	100 x 4.6	150 x 4.6	3/µk
XB-C18	00B-4507-E0	00D-4507-E0	00F-4507-E0	AJO-8946

Aeris PEPTIDE 5 µm Analytical Columns (mm)				
Phases	150 x 4.6	250 x 4.6	3/µk	
XB-C18	00F-4632-E0	00G-4632-E0	AJO-8946	

Aeris WIDEPORE 3.6 µm MiniBore Columns (mm)				
Phases	50 x 2.1	100 x 2.1	150 x 2.1	3/µk
XB-C18	00B-4482-AN	00D-4482-AN	00F-4482-AN	AJO-8783
XB-CS	00B-4481-AN	00D-4481-AN	00F-4481-AN	AJO-8785
C4	00B-4496-AN	00D-4496-AN	00F-4496-AN	AJO-8099

Aeris WIDEPORE 3.6 µm Analytical Columns (mm)				
Phases	100 x 4.6	150 x 4.6	250 x 4.6	3/µk
XB-C18	00D-4482-E0	00F-4482-E0	00G-4482-E0	AJO-8789
XB-CS	00D-4481-E0	00F-4481-E0	00G-4481-E0	AJO-8771
C4	00D-4486-E0	00F-4486-E0	00G-4486-E0	AJO-8901

*SecurityGuard ULTRA cartridges require holder. Part No.: AJO-9000

2.6 µm Analytical Columns (mm)						
Phases	30 x 4.6	75 x 4.6	100 x 4.6	150 x 4.6	3/µk	SecurityGuard ULTRA Cartridges*
FS	—	00B-4723-E0	—	00D-4723-E0	00F-4723-E0	AJO-9320
Biphenyl	—	00B-4622-E0	—	00D-4622-E0	00F-4622-E0	AJO-9207
XB-C18	—	00B-4496-E0	00C-4496-E0	00D-4496-E0	00F-4496-E0	AJO-8768
C18	00A-4462-E0	00B-4462-E0	00C-4462-E0	00D-4462-E0	00F-4462-E0	AJO-8768
CS	—	00B-4497-E0	00C-4497-E0	00D-4497-E0	00F-4497-E0	AJO-8772
HILIC	—	00B-4461-E0	00C-4461-E0	00D-4461-E0	00F-4461-E0	AJO-8772
Phenyl-Hexyl	—	00B-4495-E0	00C-4495-E0	00D-4495-E0	00F-4495-E0	AJO-8774

5 µm MiniBore Columns (mm)						
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/µk	SecurityGuard ULTRA Cartridges*
EVO C18	00A-4633-AN	00B-4633-AN	00C-4633-AN	00D-4633-AN	—	AJO-9298
Biphenyl	00A-4627-AN	00B-4627-AN	00C-4627-AN	00D-4627-AN	—	AJO-9209
XB-C18	00A-4605-AN	00B-4605-AN	00C-4605-AN	00D-4605-AN	—	AJO-8782
C18	00A-4601-AN	00B-4601-AN	00C-4601-AN	00D-4601-AN	—	AJO-8782
CS	—	00B-4608-AN	00C-4608-AN	00D-4608-AN	—	AJO-8784
Phenyl-Hexyl	—	00B-4603-AN	00C-4603-AN	—	—	AJO-8788

5 µm MidBore™ Columns (mm)						
Phases	50 x 3.0	100 x 3.0	150 x 3.0	3/µk		SecurityGuard ULTRA Cartridges*
EVO C18	00B-4633-Y0	00C-4633-Y0	00D-4633-Y0	—	—	AJO-9297
Biphenyl	00B-4627-Y0	00C-4627-Y0	00D-4627-Y0	—	—	AJO-9208
XB-C18	00B-4605-Y0	00C-4605-Y0	00D-4605-Y0	—	—	AJO-8775
C18	00B-4601-Y0	00C-4601-Y0	00D-4601-Y0	—	—	AJO-8775
CS	00B-4608-Y0	00C-4608-Y0	—	—	—	AJO-8777
Phenyl-Hexyl	00B-4603-Y0	00C-4603-Y0	—	—	—	AJO-8781

5 µm Analytical Columns (mm)						
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	3/µk	SecurityGuard ULTRA Cartridges*
EVO C18	00B-4633-E0	00C-4633-E0	00D-4633-E0	00E-4633-E0	—	AJO-9298
Biphenyl	00B-4627-E0	00C-4627-E0	00D-4627-E0	00E-4627-E0	—	AJO-9207
XB-C18	00B-4605-E0	00C-4605-E0	00D-4605-E0	00E-4605-E0	—	AJO-8768
C18	00B-4601-E0	00C-4601-E0	00D-4601-E0	00E-4601-E0	—	AJO-8768
CS	00B-4608-E0	00C-4608-E0	00D-4608-E0	00E-4608-E0	—	AJO-8770
Phenyl-Hexyl	00B-4603-E0	00C-4603-E0	00D-4603-E0	00E-4603-E0	—	AJO-8774

*SecurityGuard ULTRA cartridges require holder. Part No.: AJO-9000



2.5 µm High Speed Technology (HST) Columns (mm)						
Phases	30 x 2.0	50 x 2.0	100 x 2.0	50 x 3.0	100 x 3.0	50 x 4.6
Max-RP	00A-4372-80	00B-4372-80	00C-4372-80	00D-4372-70	00E-4372-50	00B-4372-50
Hydro-RP	00A-4387-80	00B-4387-80	00C-4387-80	00D-4387-70	00E-4387-50	00B-4387-50
Polar-RP	00A-4371-80	00B-4371-80	00C-4371-80	00D-4371-70	00E-4371-50	00B-4371-50
Fusion-RP	00A-4423-80	00B-4423-80	00C-4423-80	00D-4423-70	00E-4423-50	00B-4423-50

4 µm MicroBore and MiniBore Columns (mm)				
Phases	50 x 1.0	150 x 1.0	30 x 2.0	50 x 2.0
Max-RP	00B-4337-A0	00F-4337-A0	00A-4337-80	AJO-6073
Hydro-RP	00B-4375-A0	00F-4375-A0	00A-4375-80	AJO-7510
Polar-RP	00B-4336-A0	00F-4336-A0	00A-4336-80	AJO-6075
Fusion-RP	00B-4424-A0	00F-4424-A0	00A-4424-80	AJO-7556

4 µm MiniBore Columns (mm) (cont'd)				
Phases	75 x 2.0	150 x 2.0	250 x 2.0	4 x 2.0' /10 µk
Max-RP	00C-4337-80	00F-4337-80	00G-4337-80	AJO-6073
Hydro-RP	00C-4375-80	00F-4375-80	00G-4375-80	AJO-7510
Polar-RP	00C-4336-80	00F-4336-80	00G-4336-80	AJO-6075
Fusion-RP	00C-4424-80	00F-4424-80	00G-4424-80	AJO-7556

4 µm MidBore™ Columns (mm)				
Phases	30 x 3.0	50 x 3.0	150 x 3.0	250 x 3.0
Max-RP	—	00B-4337-Y0	00F-4337-Y0	AJO-6073
Hydro-RP	00A-4375-Y0	00B-4375-Y0	00F-4375-Y0	AJO-7510
Polar-RP	00A-4336-Y0	00B-4336-Y0	00F-4336-Y0	AJO-6075
Fusion-RP	—	00B-4424-Y0	00F-4424-Y0	AJO-7556

4 µm Analytical Columns (mm)						
Phases	30 x 4.6	50 x 4.6	75 x 4.6	150 x 4.6	250 x 4.6	4 x 2.0' /10 µk
Max-RP	00A-4337-E0	00B-4337-E0	00C-4337-E0	00D-4337-E0	00E-4337-E0	AJO-6074
Hydro-RP	00A-4375-E0	00B-4375-E0	00C-4375-E0	00D-4375-E0	00E-4375-E0	AJO-7511
Polar-RP	00A-4336-E0	00B-4336-E0	00C-4336-E0	00D-4336-E0	00E-4336-E0	AJO-6076
Fusion-RP	—	00B-4424-E0	00F-4424-E0	00G-4424-E0	—	AJO-7557

*SecurityGuard Analytical Cartridges require holder. Part No.: AJO-4282



2.5 µm High Speed Technology (HST) Columns (mm)					
Phases	30 x 2.0	100 x 2.0	50 x 3.0	100 x 3.0	
C18(2)-HST	00A-4446-80	00B-4446-80	00D-4446-80	00E-4446-70	00G-4446-70

3 µm MicroBore and MiniBore Columns (mm)							
Phases	50 x 1.0	100 x 1.0	30 x 2.0	50 x 2.0	100 x 2.0	150 x 2.0	4 x 2.0' /10µk
Silica(2)	—	—	00A-4162-80	00B-4162-80	00C-4162-80	00D-4162-80	AJO-4347
CR(2)	00B-4248-A0	00F-4248-A0	00A-4248-80	00B-4248-80	00C-4248-80	00D-4248-80	AJO-4289
C18(2)	00B-4251-A0	00F-4251-A0	00A-4251-80	00B-4251-80	00C-4251-80	00D-4251-80	AJO-4286
CN	—	—	00A-4254-80	00B-4254-80	00C-4254-80	00D-4254-80	AJO-4304
Phenyl-Hexyl	00B-4256-A0	—	00A-4256-80	00B-4256-80	00C-4256-80	00D-4256-80	AJO-4300
NH ₂	—	00F-4377-A0	00A-4377-80	00B-4377-80	00C-4377-80	00D-4377-80	AJO-4301
HILIC	—	—	00B-4449-80	00C-4449-80	00D-4449-80	00E-4449-80	AJO-8328
PPF(2)	—	—	00A-4447-80	00B			