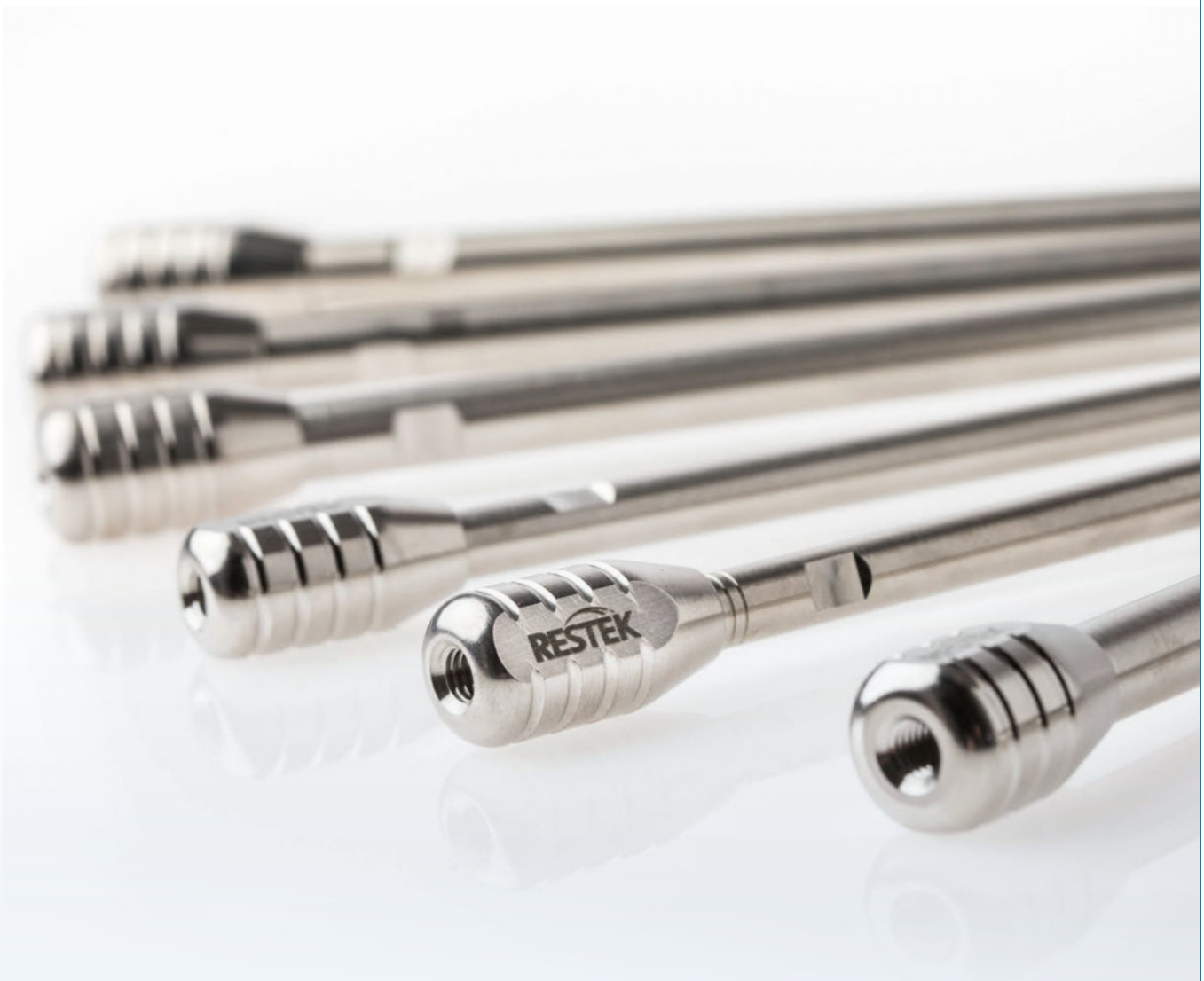
HPLC & UHPLC Columns



RESTEK

www.bgb-info.com/restek

Rev. date: 08/22

Allure Acrylamide LC Column

Particle: 5 µm, spherical
Pore Size: 60 Å
Carbon Load: proprietary
End-cap: no

Surface Area: 450 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
2.1 mm	50 mm	ea.	*9167552*
3.0 mm	150 mm	ea.	*916756E*

Allure AK Columns

Particle: 5 µm, spherical
Pore Size: 60 Å
Carbon Load: proprietary
End-Cap: yes

Surface Area: 450 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	Guard	qty.	cat.#
4.6 mm	200 mm	with Trident Inlet Fitting	ea.	*9159525-700*

Allure Organic Acids Columns

Particle: 5 µm, spherical
Pore Size: 60 Å
Carbon Load: proprietary
End-Cap: no

Surface Area: 450 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3.0 mm	150 mm	ea.	*916556E*
4.6 mm	150 mm	ea.	*9165565*
	250 mm	ea.	*9165575*
	300 mm	ea.	*9165585*

Allure PFP Propyl Columns (USP L43)

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	*9169532*
	50 mm	ea.	*9169552*
	100 mm	ea.	*9169512*
	150 mm	ea.	*9169562*
	250 mm	ea.	*9169572*
3.0 mm	30 mm	ea.	*916953E*
	50 mm	ea.	*916955E*
	100 mm	ea.	*916951E*
	150 mm	ea.	*916956E*
	200 mm	ea.	*916952E*
	250 mm	ea.	*916957E*
4.6 mm	30 mm	ea.	*9169535*
	50 mm	ea.	*9169555*
	100 mm	ea.	*9169515*
	150 mm	ea.	*9169565*
	250 mm	ea.	*9169575*

Allure Silica Columns (USP L3)

Particle: 5 µm, spherical
Pore Size: 60 Å
Carbon Load: n/a
End-cap: n/a

Surface Area: 450 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	9160532
	50 mm	ea.	9160552
	100 mm	ea.	9160512
	150 mm	ea.	9160562
	200 mm	ea.	9160522
	250 mm	ea.	9160572
3.0 mm	30 mm	ea.	916053E
	50 mm	ea.	916055E
	100 mm	ea.	916051E
	150 mm	ea.	916056E
	200 mm	ea.	916052E
	250 mm	ea.	916057E
4.6 mm	30 mm	ea.	9160535
	50 mm	ea.	9160555
	100 mm	ea.	9160515
	150 mm	ea.	9160565
	200 mm	ea.	9160525
	250 mm	ea.	9160575

Force Biphenyl LC Columns (USP L11)

Stationary Phase Category: Phenyl (L11)
Ligand Type: Biphenyl
Particle: 1.8 µm, 3 µm, or 5 µm fully porous silica
Pore Size: 100 Å
Carbon Load: 15%
End-Cap: yes
Surface Area: 300 m^2/g
Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm), 600 bar/8700 psi (3 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.

Properties:
- Increased retention for dipolar, unsaturated, or conjugated solutes.
- Enhanced selectivity when used with methanolic mobile phase.
- Ideal for increasing sensitivity and selectivity in LC-MS analyses.

Switch to a Biphenyl when:
- Limited selectivity is observed on a C18.
- You need to increase retention of hydrophilic aromatics.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	9629232
	50 mm	ea.	9629252
	100 mm	ea.	9629212
3.0 mm	50 mm	ea.	962925E
	100 mm	ea.	962921E
3 µm Particles			
2.1 mm	30 mm	ea.	9629332
	50 mm	ea.	9629352
	100 mm	ea.	9629312
	150 mm	ea.	9629362
3.0 mm	50 mm	ea.	962935E
	100 mm	ea.	962931E
	150 mm	ea.	962936E
4.6 mm	100 mm	ea.	9629315
	150 mm	ea.	9629365
5 µm Particles			
2.1 mm	50 mm	ea.	9629552
	100 mm	ea.	9629512
	150 mm	ea.	9629562
3.0 mm	50 mm	ea.	962955E
	100 mm	ea.	962951E
	150 mm	ea.	962956E
4.6 mm	100 mm	ea.	9629515
	150 mm	ea.	9629565
	250 mm	ea.	9629575

Force C18 LC Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: End-capped C18
Particle: 1.8 µm, 3 µm, or 5 µm fully porous silica
Pore Size: 100 Å
Carbon Load: 20%
End-Cap: yes
Surface Area: 300 m^2/g
Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 80 °C

Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm), 600 bar/8700 psi (3 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.
Properties:
- Compatible with moderately acidic to neutral mobile phases (pH 2–8).
- Excellent data quality in food, environmental, bioanalytical, and other applications.

Switch to a C18 when:
- You need a general-purpose column for reversed-phase chromatography.
- You need to increase retention of hydrophobic compounds.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	*9634232*
	50 mm	ea.	*9634252*
	100 mm	ea.	*9634212*
3.0 mm	50 mm	ea.	*963425E*
	100 mm	ea.	*963421E*
3 µm Particles			
2.1 mm	30 mm	ea.	*9634332*
	50 mm	ea.	*9634352*
	100 mm	ea.	*9634312*
	150 mm	ea.	*9634362*
3.0 mm	50 mm	ea.	*963435E*
	100 mm	ea.	*963431E*
	150 mm	ea.	*963436E*
4.6 mm	100 mm	ea.	*9634315*
	150 mm	ea.	*9634365*
5 µm Particles			
2.1 mm	50 mm	ea.	*9634552*
	100 mm	ea.	*9634512*
	150 mm	ea.	*9634562*
3.0 mm	50 mm	ea.	*963455E*
	100 mm	ea.	*963451E*
	150 mm	ea.	*963456E*
4.6 mm	100 mm	ea.	*9634515*
	150 mm	ea.	*9634565*
	250 mm	ea.	*9634575*

Force FluoroPhenyl LC Columns (USP L43)

Stationary Phase Category: Pentafluorophenyl propyl (L43)
Ligand Type: Fluorophenyl
Particle: 1.8 µm, 3 µm, or 5 µm fully porous silica
Pore Size: 100 Å
Carbon Load: 10%
End-Cap: no
Surface Area: 300 m^2/g
Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm), 600 bar/8700 psi (3 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.
Properties:
- Capable of both reversed-phase and HILIC separations.
- Ideal for increasing sensitivity and selectivity in LC-MS analyses.
- Offers increased retention for charged bases.

Switch to a FluoroPhenyl LC column when:
- Limited retention and selectivity are observed on a C18 for basic compounds.
- You need increased retention of hydrophilic compounds.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	*9639232*
	50 mm	ea.	*9639252*
	100 mm	ea.	*9639212*
3.0 mm	50 mm	ea.	*963925E*
	100 mm	ea.	*963921E*
3 µm Particles			
2.1 mm	30 mm	ea.	*9639332*
	50 mm	ea.	*9639352*
	100 mm	ea.	*9639312*
	150 mm	ea.	*9639362*

Continued

ID	Length	qty.	cat.#
3.0 mm	50 mm	ea.	963935E
	100 mm	ea.	963931E
	150 mm	ea.	963936E
4.6 mm	100 mm	ea.	9639315
	150 mm	ea.	9639365
5 µm Particles			
2.1 mm	50 mm	ea.	9639552
	100 mm	ea.	9639512
	150 mm	ea.	9639562
3.0 mm	50 mm	ea.	963955E
	100 mm	ea.	963951E
	150 mm	ea.	963956E
4.6 mm	100 mm	ea.	9639515
	150 mm	ea.	9639565
	250 mm	ea.	9639575

PFAS Delay Column


27854

Particle: 5 µm, spherical, fully porous
pH Range: 2.5 to 8
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi

ID	Length	qty.	cat.#
2.1 mm	50 mm	ea.	27854

Pinnacle DB Aqueous C18 Columns (USP L1)

Stationary Phase Category: modified C18 (L1)
Ligand Type: proprietary polar modified and functionally bonded C18
Particle: 1.9 µm, 3 µm, or 5 µm, spherical
Pore Size: 140 Å
Carbon Load: 6%
End-Cap: no
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.9 µm Particles			
2.1 mm	30 mm	ea.	9418232
	50 mm	ea.	9418252
	100 mm	ea.	9418212
3 µm Particles			
2.1 mm	30 mm	ea.	9418332
	50 mm	ea.	9418352
	100 mm	ea.	9418312
	150 mm	ea.	9418362
3.0 mm	30 mm	ea.	941833E
	50 mm	ea.	941835E
	100 mm	ea.	941831E
	150 mm	ea.	941836E
4.6 mm	30 mm	ea.	9418335
	50 mm	ea.	9418355
	100 mm	ea.	9418315
	150 mm	ea.	9418365
5 µm Particles			
2.1 mm	30 mm	ea.	9418532
	50 mm	ea.	9418552
	100 mm	ea.	9418512
	150 mm	ea.	9418562
	200 mm	ea.	9418522
	250 mm	ea.	9418572
3.0 mm	30 mm	ea.	941853E
	50 mm	ea.	941855E
	100 mm	ea.	941851E
	150 mm	ea.	941856E
	200 mm	ea.	941852E
	250 mm	ea.	941857E

Continued

ID	Length	qty.	cat.#
4.6 mm	30 mm	ea.	9418535
	50 mm	ea.	9418555
	100 mm	ea.	9418515
	150 mm	ea.	9418565
	200 mm	ea.	9418525
	250 mm	ea.	9418575

Pinnacle DB Biphenyl Columns (USP L11)

Stationary Phase Category: phenyl (L11)
Ligand Type: unique Biphenyl
Particle: 1.9 µm, 3 µm, or 5 µm, spherical
Pore Size: 140 Å
Carbon Load: 8%

End-Cap: yes
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.9 µm Particles			
2.1 mm	30 mm	ea.	9409232
	50 mm	ea.	9409252
	100 mm	ea.	9409212
3 µm Particles			
2.1 mm	30 mm	ea.	9409332
	50 mm	ea.	9409352
	100 mm	ea.	9409312
	150 mm	ea.	9409362
4.6 mm	30 mm	ea.	9409335
	50 mm	ea.	9409355
	100 mm	ea.	9409315
	150 mm	ea.	9409365
3.0 mm	30 mm	ea.	940933E
	50 mm	ea.	940935E
	100 mm	ea.	940931E
	150 mm	ea.	940936E
5 µm Particles			
2.1 mm	30 mm	ea.	9409532
	50 mm	ea.	9409552
	100 mm	ea.	9409512
	150 mm	ea.	9409562
	200 mm	ea.	9409522
	250 mm	ea.	9409572
4.6 mm	30 mm	ea.	9409535
	50 mm	ea.	9409555
	100 mm	ea.	9409515
	150 mm	ea.	9409565
	200 mm	ea.	9409525
	250 mm	ea.	9409575
3.0 mm	30 mm	ea.	940953E
	50 mm	ea.	940955E
	100 mm	ea.	940951E
	150 mm	ea.	940956E
	200 mm	ea.	940952E
	250 mm	ea.	940957E

Pinnacle DB C18 Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: monomeric C18
Particle: 1.9 µm, 3 µm, or 5 µm, spherical
Pore Size: 140 Å
Carbon Load: 11%

End-Cap: yes
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.9 µm Particles			
2.1 mm	30 mm	ea.	*9414232*
	50 mm	ea.	*9414252*
	100 mm	ea.	*9414212*
3 µm Particles			
2.1 mm	30 mm	ea.	*9414332*
	50 mm	ea.	*9414352*
	100 mm	ea.	*9414312*
4.6 mm	30 mm	ea.	*9414335*
	50 mm	ea.	*9414355*
	100 mm	ea.	*9414315*
3.0 mm	30 mm	ea.	*941433E*
	50 mm	ea.	*941435E*
	100 mm	ea.	*941431E*
5 µm Particles			
2.1 mm	30 mm	ea.	*9414532*
	50 mm	ea.	*9414552*
	100 mm	ea.	*9414512*
	150 mm	ea.	*9414562*
	200 mm	ea.	*9414522*
	250 mm	ea.	*9414572*
3.0 mm	30 mm	ea.	*941453E*
	50 mm	ea.	*941455E*
	100 mm	ea.	*941451E*
	150 mm	ea.	*941456E*
	200 mm	ea.	*941452E*
	250 mm	ea.	*941457E*
4.6 mm	30 mm	ea.	*9414535*
	50 mm	ea.	*9414555*
	100 mm	ea.	*9414515*
	150 mm	ea.	*9414565*
	200 mm	ea.	*9414525*
	250 mm	ea.	*9414575*

Pinnacle DB C8 Columns (USP L7)

Stationary Phase Category: C8, octylsilane (L7)
Ligand Type: monomeric C8
Particle: 3 µm or 5 µm, spherical
Pore Size: 140 Å
Carbon Load: 6%

End-Cap: yes
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9413332*
	50 mm	ea.	*9413352*
	100 mm	ea.	*9413312*
3.0 mm	30 mm	ea.	*941333E*
	50 mm	ea.	*941335E*
	100 mm	ea.	*941331E*
4.6 mm	30 mm	ea.	*9413335*
	50 mm	ea.	*9413355*
	100 mm	ea.	*9413315*

Continued

ID	Length	qty.	cat.#
5 µm Particles			
2.1 mm	30 mm	ea.	*9413532*
	50 mm	ea.	*9413552*
	100 mm	ea.	*9413512*
	150 mm	ea.	*9413562*
	200 mm	ea.	*9413522*
	250 mm	ea.	*9413572*
3.0 mm	30 mm	ea.	*941353E*
	50 mm	ea.	*941355E*
	100 mm	ea.	*941351E*
	150 mm	ea.	*941356E*
	200 mm	ea.	*941352E*
	250 mm	ea.	*941357E*
4.6 mm	30 mm	ea.	*9413535*
	50 mm	ea.	*9413555*
	100 mm	ea.	*9413515*
	150 mm	ea.	*9413565*
	200 mm	ea.	*9413525*
	250 mm	ea.	*9413575*

Pinnacle DB Cyano Columns (USP L10)

Stationary Phase Category: cyano (L10)
Ligand Type: cyanopropylsilane
Particle: 5 µm, spherical
Pore Size: 140 Å
Carbon Load: 4%

End-Cap: yes
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	*9416532*
	50 mm	ea.	*9416552*
	100 mm	ea.	*9416512*
	150 mm	ea.	*9416562*
	200 mm	ea.	*9416522*
	250 mm	ea.	*9416572*
3.0 mm	30 mm	ea.	*941653E*
	50 mm	ea.	*941655E*
	100 mm	ea.	*941651E*
	150 mm	ea.	*941656E*
	200 mm	ea.	*941652E*
	250 mm	ea.	*941657E*
4.6 mm	30 mm	ea.	*9416535*
	50 mm	ea.	*9416555*
	100 mm	ea.	*9416515*
	150 mm	ea.	*9416565*
	200 mm	ea.	*9416525*
	250 mm	ea.	*9416575*

Pinnacle DB IBD UHPLC Columns (USP L68)

Stationary Phase Category: polar-embedded alkyl (L68)
Ligand Type: proprietary polar functional embedded alkyl
Particle: 1.9 µm, spherical
Pore Size: 140 Å
Carbon Load: proprietary

End-Cap: no
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	*9425232*
	50 mm	ea.	*9425252*
	100 mm	ea.	*9425212*

Pinnacle DB PAH UHPLC Columns

Particle: 1.9 µm, spherical
Pore Size: 140 Å
Carbon Load: proprietary
End-Cap: no

Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	*9470232*
	50 mm	ea.	*9470252*
	100 mm	ea.	*9470212*

Pinnacle DB PFP Propyl Columns (USP L43)

Stationary Phase Category: fluorophenyl propyl (L43)
Ligand Type: pentafluorophenyl propyl
Particle: 1.9 µm, 3 µm, or 5 µm, spherical
Pore Size: 140 Å
Carbon Load: 6%

End-Cap: yes
Surface Area: 150 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.9 µm Particles			
2.1 mm	30 mm	ea.	*9419232*
	50 mm	ea.	*9419252*
	100 mm	ea.	*9419212*
3 µm Particles			
2.1 mm	30 mm	ea.	*9419332*
	50 mm	ea.	*9419352*
	100 mm	ea.	*9419312*
	150 mm	ea.	*9419362*
4.6 mm	30 mm	ea.	*9419335*
	50 mm	ea.	*9419355*
	100 mm	ea.	*9419315*
	150 mm	ea.	*9419365*
3.0 mm	30 mm	ea.	*941933E*
	50 mm	ea.	*941935E*
	100 mm	ea.	*941931E*
	150 mm	ea.	*941936E*
5 µm Particles			
2.1 mm	30 mm	ea.	*9419532*
	50 mm	ea.	*9419552*
	100 mm	ea.	*9419512*
	150 mm	ea.	*9419562*
	200 mm	ea.	*9419522*
	250 mm	ea.	*9419572*
3.0 mm	30 mm	ea.	*941953E*
	50 mm	ea.	*941955E*
	100 mm	ea.	*941951E*
	150 mm	ea.	*941956E*
	200 mm	ea.	*941952E*
	250 mm	ea.	*941957E*
4.6 mm	30 mm	ea.	*9419535*
	50 mm	ea.	*9419555*
	100 mm	ea.	*9419515*
	150 mm	ea.	*9419565*
	200 mm	ea.	*9419525*
	250 mm	ea.	*9419575*

Pinnacle DB Silica Columns (USP L3)

Stationary Phase Category: bare silica (L3)
Ligand Type: none
Particle: 1.9 µm, 3 µm, or 5 µm, spherical
Pore Size: 140 Å
Carbon Load: n/a
End-Cap: n/a
Surface Area: 150 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.9 µm Particles			
2.1 mm	30 mm	ea.	*9410232*
	50 mm	ea.	*9410252*
	100 mm	ea.	*9410212*
3 µm Particles			
2.1 mm	30 mm	ea.	*9410332*
	50 mm	ea.	*9410352*
	100 mm	ea.	*9410312*
	150 mm	ea.	*9410362*
3.0 mm	30 mm	ea.	*941033E*
	50 mm	ea.	*941035E*
	100 mm	ea.	*941031E*
	150 mm	ea.	*941036E*
4.6 mm	30 mm	ea.	*9410335*
	50 mm	ea.	*9410355*
	100 mm	ea.	*9410315*
	150 mm	ea.	*9410365*
5 µm Particles			
2.1 mm	30 mm	ea.	*9410532*
	50 mm	ea.	*9410552*
	100 mm	ea.	*9410512*
	150 mm	ea.	*9410562*
	200 mm	ea.	*9410522*
	250 mm	ea.	*9410572*
3.0 mm	30 mm	ea.	*941053E*
	50 mm	ea.	*941055E*
	100 mm	ea.	*941051E*
	150 mm	ea.	*941056E*
	200 mm	ea.	*941052E*
	250 mm	ea.	*941057E*
4.6 mm	30 mm	ea.	*9410535*
	50 mm	ea.	*9410555*
	100 mm	ea.	*9410515*
	150 mm	ea.	*9410565*
	200 mm	ea.	*9410525*
	250 mm	ea.	*9410575*

Pinnacle II PAH HPLC Columns

Particle: 4 µm, spherical
Pore Size: 110 Å
Carbon Load: proprietary
End-Cap: no
Surface Area: 180 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
2.1 mm	50 mm	ea.	*9219452*
	100 mm	ea.	*9219412*
	150 mm	ea.	*9219462*
	200 mm	ea.	*9219422*
	250 mm	ea.	*9219472*
3.0 mm	50 mm	ea.	*921945E*
	100 mm	ea.	*921941E*
	150 mm	ea.	*921946E*
	200 mm	ea.	*921942E*
	250 mm	ea.	*921947E*

Continued

ID	Length	qty.	cat.#
4.6 mm	50 mm	ea.	9219455
	100 mm	ea.	9219415
	150 mm	ea.	9219465
	200 mm	ea.	9219425
	250 mm	ea.	9219475

Raptor ARC-18 LC Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: Sterically protected C18
Particle: 1.8 µm, 2.7 µm, or 5 µm superficially porous particle (SPP or "core-shell" particle) silica
Pore Size: 90 Å
Carbon Load: 7% (1.8 µm), 7% (2.7 µm), 5% (5 µm)
End-Cap: no
Surface Area: 125 m^2/g (1.8 µm), 130 m^2/g (2.7 µm), or 100 m^2/g (5 µm)

Recommended Usage:
pH Range: 1.0–8.0
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm), 600 bar/8700 psi (2.7 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.

Properties:
- Well-balanced retention profile.
- Sterically protected and acid resistant to resist harsh, low-pH mobile phases.
- Ideal for use with sensitive detectors like mass spec.

Switch to an ARC-18 column when:
- You are analyzing large, multiclass lists by LC-MS/MS.
- Strongly acidic (pH 1–3) mobile phases are required.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	9314232
	50 mm	ea.	9314252
	100 mm	ea.	9314212
	150 mm	ea.	9314262
3.0 mm	50 mm	ea.	931425E
	100 mm	ea.	931421E
2.7 µm Particles			
2.1 mm	30 mm	ea.	9314A32
	50 mm	ea.	9314A52
	100 mm	ea.	9314A12
	150 mm	ea.	9314A62
3.0 mm	30 mm	ea.	9314A3E
	50 mm	ea.	9314A5E
	100 mm	ea.	9314A1E
	150 mm	ea.	9314A6E
4.6 mm	30 mm	ea.	9314A35
	50 mm	ea.	9314A55
	100 mm	ea.	9314A15
	150 mm	ea.	9314A65
5 µm Particles			
2.1 mm	50 mm	ea.	9314552
	100 mm	ea.	9314512
	150 mm	ea.	9314562
3.0 mm	30 mm	ea.	931453E
	50 mm	ea.	931455E
	100 mm	ea.	931451E
	150 mm	ea.	931456E
4.6 mm	50 mm	ea.	9314555
	100 mm	ea.	9314515
	150 mm	ea.	9314565
	250 mm	ea.	9314575

Raptor Biphenyl LC Columns (USP L11)

Stationary Phase Category: Phenyl (L11)
Ligand Type: Biphenyl
Particle: 1.8 µm, 2.7 µm, or 5 µm superficially porous particle (SPP or "core-shell" particle) silica
Pore Size: 90 Å
Carbon Load: 7% (1.8 µm); 7% (2.7 µm); 5% (5 µm)
End-Cap: yes
Surface Area: 125 m^2/g (1.8 µm); 130 m^2/g (2.7 µm); or 100 m^2/g (5 µm)

Recommended Usage:
pH Range: 2.0 to 8.0
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm); 600 bar/8700 psi (2.7 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.

Properties:
- Increased retention for dipolar, unsaturated, or conjugated solutes.
- Enhanced selectivity when used with methanolic mobile phase.
- Ideal for increasing sensitivity and selectivity in LC-MS analyses.

Switch to a Biphenyl column when:
- Limited selectivity is observed on a C18.
- You need to increase retention of hydrophilic aromatics.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	*9309232*
	50 mm	ea.	*9309252*
	100 mm	ea.	*9309212*
	150 mm	ea.	*9309262*
3.0 mm	50 mm	ea.	*930925E*
	100 mm	ea.	*930921E*
2.7 µm Particles			
2.1 mm	30 mm	ea.	*9309A32*
	50 mm	ea.	*9309A52*
	100 mm	ea.	*9309A12*
	150 mm	ea.	*9309A62*
3.0 mm	30 mm	ea.	*9309A3E*
	50 mm	ea.	*9309A5E*
	100 mm	ea.	*9309A1E*
	150 mm	ea.	*9309A6E*
4.6 mm	30 mm	ea.	*9309A35*
	50 mm	ea.	*9309A55*
	100 mm	ea.	*9309A15*
	150 mm	ea.	*9309A65*
5 µm Particles			
2.1 mm	50 mm	ea.	*9309552*
	100 mm	ea.	*9309512*
	150 mm	ea.	*9309562*
3.0 mm	30 mm	ea.	*930953E*
	50 mm	ea.	*930955E*
	100 mm	ea.	*930951E*
	150 mm	ea.	*930956E*
4.6 mm	50 mm	ea.	*9309555*
	100 mm	ea.	*9309515*
	150 mm	ea.	*9309565*
	250 mm	ea.	*9309575*

Raptor C18 LC Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: End-capped C18
Particle: 1.8 µm, 2.7 µm, or 5 µm superficially porous particle (SPP or "core-shell" particle) silica
Pore Size: 90 Å
Carbon Load: 9% (1.8 µm), 7% (2.7 µm), 5% (5 µm)
End-Cap: yes
Surface Area: 125 m^2/g (1.8 µm), 130 m^2/g (2.7 µm), or 100 m^2/g (5 µm)

Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm), 600 bar/8700 psi (2.7 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.

Properties:
- Compatible with moderately acidic to neutral mobile phases (pH 2–8).
- Excellent data quality in food, environmental, bioanalytical, and other applications.

Switch to a C18 column when:
- You need a general-purpose column for reversed-phase chromatography.
- You need to increase retention of hydrophobic compounds.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	*9304232*
	50 mm	ea.	*9304252*
	100 mm	ea.	*9304212*
	150 mm	ea.	*9304262*

Continued

ID	Length	qty.	cat.#
3.0 mm	50 mm	ea.	930425E
	100 mm	ea.	930421E
2.7 µm Particles			
2.1 mm	30 mm	ea.	9304A32
	50 mm	ea.	9304A52
	100 mm	ea.	9304A12
	150 mm	ea.	9304A62
3.0 mm	30 mm	ea.	9304A3E
	50 mm	ea.	9304A5E
	100 mm	ea.	9304A1E
	150 mm	ea.	9304A6E
4.6 mm	30 mm	ea.	9304A35
	50 mm	ea.	9304A55
	100 mm	ea.	9304A15
	150 mm	ea.	9304A65
5 µm Particles			
2.1 mm	50 mm	ea.	9304552
	100 mm	ea.	9304512
	150 mm	ea.	9304562
3.0 mm	30 mm	ea.	930453E
	50 mm	ea.	930455E
	100 mm	ea.	930451E
	150 mm	ea.	930456E
4.6 mm	50 mm	ea.	9304555
	100 mm	ea.	9304515
	150 mm	ea.	9304565
	250 mm	ea.	9304575

Raptor EtG/EtS LC Column

Stationary Phase Category: Proprietary
Ligand Type: Proprietary
Particle: 2.7 µm superficially porous particle (SPP or "core-shell" particle) silica
Pore Size: 90 Å
Carbon Load: Proprietary
End-Cap: Proprietary
Surface Area: 130 m^2/g
Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 40 °C
Maximum Pressure: 600 bar/8700 psi

Properties:
- Resolution of EtG and EtS from matrix interferences.
- Increased retention of EtG and EtS compared to traditional phases.

Switch to the Raptor EtG/EtS column when:
- Other columns can't resolve EtG and EtS from matrix components.
- You need high-throughput EtG/EtS analysis.
- Low-level detection limits are desired.

ID	Length	qty.	cat.#
2.1 mm	100 mm	ea.	9325A12

Raptor FluoroPhenyl LC Columns (USP L43)

Stationary Phase Category: Pentafluorophenyl propyl (L43)
Ligand Type: Fluorophenyl
Particle: 1.8 µm, 2.7 µm, or 5 µm superficially porous particle (SPP or "core-shell" particle) silica
Pore Size: 90 Å
Carbon Load: 4% (1.8 µm), 4% (2.7 µm), 3% (5 µm)
End-Cap: no
Surface Area: 125 m^2/g (1.8 µm), 130 m^2/g (2.7 µm), or 100 m^2/g (5 µm)
Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 80 °C
Maximum Pressure: 1034 bar/15,000 psi* (1.8 µm), 600 bar/8700 psi (2.7 µm); 400 bar/5800 psi (5 µm)
* For maximum lifetime, recommended maximum pressure for 1.8 µm particles is 830 bar/12,000 psi.

Properties:
- Capable of both reversed-phase and HILIC separations.
- Ideal for increasing sensitivity and selectivity in LC-MS analyses.
- Offers increased retention for charged bases.

Switch to a Raptor FluoroPhenyl LC column when:
- Limited retention and selectivity are observed on a C18 for basic compounds.
- You need increased retention of hydrophilic compounds.

ID	Length	qty.	cat.#
1.8 µm Particles			
2.1 mm	30 mm	ea.	9319232
	50 mm	ea.	9319252
	100 mm	ea.	9319212
	150 mm	ea.	9319262
3.0 mm	50 mm	ea.	931925E
	100 mm	ea.	931921E

Continued

ID	Length	qty.	cat.#
2.7 µm Particles			
2.1 mm	30 mm	ea.	*9319A32*
	50 mm	ea.	*9319A52*
	100 mm	ea.	*9319A12*
	150 mm	ea.	*9319A62*
3.0 mm	30 mm	ea.	*9319A3E*
	50 mm	ea.	*9319A5E*
	100 mm	ea.	*9319A1E*
	150 mm	ea.	*9319A6E*
4.6 mm	30 mm	ea.	*9319A35*
	50 mm	ea.	*9319A55*
	100 mm	ea.	*9319A15*
	150 mm	ea.	*9319A65*
5 µm Particles			
2.1 mm	50 mm	ea.	*9319552*
	100 mm	ea.	*9319512*
	150 mm	ea.	*9319562*
3.0 mm	30 mm	ea.	*931953E*
	50 mm	ea.	*931955E*
	100 mm	ea.	*931951E*
	150 mm	ea.	*931956E*
4.6 mm	50 mm	ea.	*9319555*
	100 mm	ea.	*9319515*
	150 mm	ea.	*9319565*
	250 mm	ea.	*9319575*

Raptor HILIC-Si LC Columns (USP L3)

Stationary Phase Category: bare silica (L3)
Ligand Type: none
Particle: 2.7 µm superficially porous particle (SPP or "core-shell" particle) silica
Pore Size: 90 Å
Carbon Load: n/a
End-Cap: n/a
Surface Area: 130 m^2/g
Recommended Usage:
pH Range: 2.0–8.0

Maximum Temperature: 80 °C
Maximum Pressure: 600 bar/8700 psi (2.7 µm)
Properties:
- Compatible with both HPLC and UHPLC instruments.
- Restek's 2.7 µm core-shell particles provide the speed of SPP and the performance of Raptor.

Switch to a Raptor HILIC-Si LC column when:
- Increased retention of small polar compounds is needed.
- You want to avoid using ion-pairing reagents.
- You want retention and sensitivity for hydrophilic compounds by LC-MS.

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	*9310A32*
	50 mm	ea.	*9310A52*
	100 mm	ea.	*9310A12*
	150 mm	ea.	*9310A62*
3.0 mm	50 mm	ea.	*9310A5E*
	100 mm	ea.	*9310A1E*
	150 mm	ea.	*9310A6E*
4.6 mm	50 mm	ea.	*9310A55*
	100 mm	ea.	*9310A15*
	150 mm	ea.	*9310A65*

Raptor Polar X LC Columns

Pore Size: 90 Å
Particle: 2.7 µm superficially porous particle (SPP or "core-shell" particle) silica
Surface Area: 130 m^2/g
End-Cap: Proprietary
Carbon Load: Proprietary
USP Phase Code: NA
Phase Category: Proprietary
Ligand Type: Proprietary
Recommended Usage:
pH Range: 2.0–8.0
Maximum Temperature: 60 °C

Maximum Pressure: 600 bar/8700 psi
Properties:
- Excellent resolution and separation of a wide variety of polar compounds.
- Combines HILIC and ion-exchange retention mechanisms together in a single ligand.
- Broadly applicable for polar compound analysis spanning different industries and methods.

Switch to a Raptor Polar X column when:
- You are analyzing neutral, acidic, basic, or permanently charged polar compounds.
- Performing LC-MS/MS analysis of polar compounds.
- You are struggling to retain *or* elute polar compounds and considering ion chromatography.

ID	Length	qty.	cat.#
2.1 mm	30 mm	ea.	*9311A32*
	50 mm	ea.	*9311A52*
	100 mm	ea.	*9311A12*

Roc C18 HPLC Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: monomeric C18
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 20%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
3.0 mm	100 mm	ea.	*953431E*
	150 mm	ea.	*953436E*
4.6 mm	100 mm	ea.	*9534315*
	150 mm	ea.	*9534365*
5 µm Particles			
3.0 mm	100 mm	ea.	*953451E*
	150 mm	ea.	*953456E*
	250 mm	ea.	*953457E*
4.6 mm	100 mm	ea.	*9534515*
	150 mm	ea.	*9534565*
	250 mm	ea.	*9534575*

Roc C8 HPLC Columns (USP L7)

Stationary Phase Category: C8, octylsilane (L7)
Ligand Type: monomeric C8
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 12%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
3.0 mm	100 mm	ea.	*953331E*
	150 mm	ea.	*953336E*
4.6 mm	100 mm	ea.	*9533315*
	150 mm	ea.	*9533365*
5 µm Particles			
3.0 mm	100 mm	ea.	*953351E*
	150 mm	ea.	*953356E*
	250 mm	ea.	*953357E*
4.6 mm	100 mm	ea.	*9533515*
	150 mm	ea.	*9533565*
	250 mm	ea.	*9533575*

Roc Cyano HPLC Columns (USP L10)

Stationary Phase Category: Cyano (L10)
Ligand Type: cyanopropyl
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 8%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
3.0 mm	100 mm	ea.	*953631E*
	150 mm	ea.	*953636E*
4.6 mm	100 mm	ea.	*9536315*
	150 mm	ea.	*9536365*
5 µm Particles			
3.0 mm	100 mm	ea.	*953651E*
	150 mm	ea.	*953656E*
	250 mm	ea.	*953657E*
4.6 mm	100 mm	ea.	*9536515*
	150 mm	ea.	*9536565*
	250 mm	ea.	*9536575*

Roc Phenyl-Hexyl HPLC Columns (USP L11)

Stationary Phase Category: phenyl (L11)
Ligand Type: phenyl-hexyl
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 15%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
3.0 mm	100 mm	ea.	*953531E*
	150 mm	ea.	*953536E*
4.6 mm	100 mm	ea.	*9535315*
	150 mm	ea.	*9535365*
5 µm Particles			
3.0 mm	100 mm	ea.	*953551E*
	150 mm	ea.	*953556E*
	250 mm	ea.	*953557E*
4.6 mm	100 mm	ea.	*9535515*
	150 mm	ea.	*9535565*
	250 mm	ea.	*9535575*

Roc Silica HPLC Columns (USP L3)

Stationary Phase Category: bare silica (L3)
Ligand Type: n/a
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: n/a

End-Cap: n/a
Surface Area: 300 m^2/g
pH Range: 2.5 to 8.0
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
3.0 mm	100 mm	ea.	*953031E*
	150 mm	ea.	*953036E*
4.6 mm	100 mm	ea.	*9530315*
	150 mm	ea.	*9530365*
5 µm Particles			
3.0 mm	100 mm	ea.	*953051E*
	150 mm	ea.	*953056E*
	250 mm	ea.	*953057E*
4.6 mm	100 mm	ea.	*9530515*
	150 mm	ea.	*9530565*
	250 mm	ea.	*9530575*

Ultra Amino Columns (USP L8)

Stationary Phase Category: amino (L8)
Ligand Type: aminopropylsilane
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 2%

End-Cap: no
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
3.0 mm	30 mm	ea.	*910733E*
	50 mm	ea.	*910735E*
	100 mm	ea.	*910731E*
	150 mm	ea.	*910736E*
4.6 mm	30 mm	ea.	*9107335*
	50 mm	ea.	*9107355*
	100 mm	ea.	*9107315*
	150 mm	ea.	*9107365*
5 µm Particles			
3.0 mm	50 mm	ea.	*910755E*
	100 mm	ea.	*910751E*
	150 mm	ea.	*910756E*
	200 mm	ea.	*910752E*
	250 mm	ea.	*910757E*
	30 mm	ea.	*910753E*
4.6 mm	30 mm	ea.	*9107535*
	50 mm	ea.	*9107555*
	100 mm	ea.	*9107515*
	150 mm	ea.	*9107565*
	200 mm	ea.	*9107525*
	250 mm	ea.	*9107575*

Ultra Aqueous C18 Columns (USP L1)

Stationary Phase Category: modified C18 (L1)
Ligand Type: proprietary polar modified and functionally bonded C18
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 15%

End-Cap: no
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9178332*
	50 mm	ea.	*9178352*
	100 mm	ea.	*9178312*
	150 mm	ea.	*9178362*
3.0 mm	30 mm	ea.	*917833E*
	50 mm	ea.	*917835E*
	100 mm	ea.	*917831E*
	150 mm	ea.	*917836E*
4.6 mm	30 mm	ea.	*9178335*
	50 mm	ea.	*9178355*
	100 mm	ea.	*9178315*
	150 mm	ea.	*9178365*
5 µm Particles			
2.1 mm	30 mm	ea.	*9178532*
	50 mm	ea.	*9178552*
	100 mm	ea.	*9178512*
	150 mm	ea.	*9178562*
	200 mm	ea.	*9178522*
	250 mm	ea.	*9178572*

Continued

ID	Length	qty.	cat.#
3.0 mm	30 mm	ea.	917853E
	50 mm	ea.	917855E
	100 mm	ea.	917851E
	150 mm	ea.	917856E
	200 mm	ea.	917852E
	250 mm	ea.	917857E
4.6 mm	30 mm	ea.	9178535
	50 mm	ea.	9178555
	100 mm	ea.	9178515
	150 mm	ea.	9178565
	200 mm	ea.	9178525
	250 mm	ea.	9178575

Ultra Aromax Columns (USP L11)

Stationary Phase Category: phenyl (L11)
Ligand Type: proprietary phenyl ligand
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 17%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	9127332
	50 mm	ea.	9127352
	100 mm	ea.	9127312
	150 mm	ea.	9127362
3.0 mm	30 mm	ea.	912733E
	50 mm	ea.	912735E
	100 mm	ea.	912731E
	150 mm	ea.	912736E
4.6 mm	30 mm	ea.	9127335
	50 mm	ea.	9127355
	100 mm	ea.	9127315
	150 mm	ea.	9127365
5 µm Particles			
2.1 mm	30 mm	ea.	9127532
	50 mm	ea.	9127552
	100 mm	ea.	9127512
	150 mm	ea.	9127562
	200 mm	ea.	9127522
	250 mm	ea.	9127572
3.0 mm	30 mm	ea.	912753E
	50 mm	ea.	912755E
	100 mm	ea.	912751E
	150 mm	ea.	912756E
	200 mm	ea.	912752E
	250 mm	ea.	912757E
4.6 mm	30 mm	ea.	9127535
	50 mm	ea.	9127555
	100 mm	ea.	9127515
	150 mm	ea.	9127565
	200 mm	ea.	9127525
	250 mm	ea.	9127575

Ultra Biphenyl Columns (USP L11)

Stationary Phase Category: phenyl (L11)
Ligand Type: unique Biphenyl
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 15%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9109332*
	50 mm	ea.	*9109352*
	100 mm	ea.	*9109312*
	150 mm	ea.	*9109362*
3.0 mm	30 mm	ea.	*910933E*
	50 mm	ea.	*910935E*
	100 mm	ea.	*910931E*
	150 mm	ea.	*910936E*
4.6 mm	30 mm	ea.	*9109335*
	50 mm	ea.	*9109355*
	100 mm	ea.	*9109315*
	150 mm	ea.	*9109365*
5 µm Particles			
2.1 mm	30 mm	ea.	*9109532*
	50 mm	ea.	*9109552*
	100 mm	ea.	*9109512*
	150 mm	ea.	*9109562*
	200 mm	ea.	*9109522*
	250 mm	ea.	*9109572*
3.0 mm	30 mm	ea.	*910953E*
	50 mm	ea.	*910955E*
	100 mm	ea.	*910951E*
	150 mm	ea.	*910956E*
	200 mm	ea.	*910952E*
	250 mm	ea.	*910957E*
4.6 mm	30 mm	ea.	*9109535*
	50 mm	ea.	*9109555*
	100 mm	ea.	*9109515*
	150 mm	ea.	*9109565*
	200 mm	ea.	*9109525*
	250 mm	ea.	*9109575*

Ultra C1 Columns (USP L13)

Stationary Phase Category: trimethylsilane (L13)
Ligand Type: monomeric C1
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 5%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9101332*
	50 mm	ea.	*9101352*
	100 mm	ea.	*9101312*
	150 mm	ea.	*9101362*
3.0 mm	30 mm	ea.	*910133E*
	50 mm	ea.	*910135E*
	100 mm	ea.	*910131E*
	150 mm	ea.	*910136E*
4.6 mm	30 mm	ea.	*9101335*
	50 mm	ea.	*9101355*
	100 mm	ea.	*9101315*
	150 mm	ea.	*9101365*

Continued

ID	Length	qty.	cat.#
5 µm Particles			
2.1 mm	30 mm	ea.	*9101532*
	50 mm	ea.	*9101552*
	100 mm	ea.	*9101512*
	150 mm	ea.	*9101562*
	200 mm	ea.	*9101522*
	250 mm	ea.	*9101572*
3.0 mm	30 mm	ea.	*910153E*
	50 mm	ea.	*910155E*
	100 mm	ea.	*910151E*
	150 mm	ea.	*910156E*
	200 mm	ea.	*910152E*
	250 mm	ea.	*910157E*
4.6 mm	30 mm	ea.	*9101535*
	50 mm	ea.	*9101555*
	100 mm	ea.	*9101515*
	150 mm	ea.	*9101565*
	200 mm	ea.	*9101525*
	250 mm	ea.	*9101575*

Ultra C18 Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: monomeric C18
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 20%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9174332*
	50 mm	ea.	*9174352*
	100 mm	ea.	*9174312*
	150 mm	ea.	*9174362*
3.0 mm	30 mm	ea.	*917433E*
	50 mm	ea.	*917435E*
	100 mm	ea.	*917431E*
	150 mm	ea.	*917436E*
4.6 mm	30 mm	ea.	*9174335*
	50 mm	ea.	*9174355*
	100 mm	ea.	*9174315*
	150 mm	ea.	*9174365*
5 µm Particles			
2.1 mm	30 mm	ea.	*9174532*
	50 mm	ea.	*9174552*
	100 mm	ea.	*9174512*
	150 mm	ea.	*9174562*
	200 mm	ea.	*9174522*
	250 mm	ea.	*9174572*
3.0 mm	30 mm	ea.	*917453E*
	50 mm	ea.	*917455E*
	100 mm	ea.	*917451E*
	150 mm	ea.	*917456E*
	200 mm	ea.	*917452E*
	250 mm	ea.	*917457E*
4.0 mm	100 mm	ea.	*9174514*
	150 mm	ea.	*9174564*
4.6 mm	30 mm	ea.	*9174535*
	50 mm	ea.	*9174555*
	100 mm	ea.	*9174515*
	150 mm	ea.	*9174565*
	200 mm	ea.	*9174525*
	250 mm	ea.	*9174575*

Ultra C4 Columns (USP L26)

Stationary Phase Category: C4, butylsilane (L26)
Ligand Type: monomeric C4
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 9%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9102332*
	50 mm	ea.	*9102352*
	100 mm	ea.	*9102312*
	150 mm	ea.	*9102362*
3.0 mm	30 mm	ea.	*910233E*
	50 mm	ea.	*910235E*
	100 mm	ea.	*910231E*
	150 mm	ea.	*910236E*
4.6 mm	30 mm	ea.	*9102335*
	50 mm	ea.	*9102355*
	100 mm	ea.	*9102315*
	150 mm	ea.	*9102365*
5 µm Particles			
2.1 mm	30 mm	ea.	*9102532*
	50 mm	ea.	*9102552*
	100 mm	ea.	*9102512*
	150 mm	ea.	*9102562*
	200 mm	ea.	*9102522*
	250 mm	ea.	*9102572*
3.0 mm	30 mm	ea.	*910253E*
	50 mm	ea.	*910255E*
	100 mm	ea.	*910251E*
	150 mm	ea.	*910256E*
	200 mm	ea.	*910252E*
	250 mm	ea.	*910257E*
4.6 mm	30 mm	ea.	*9102535*
	50 mm	ea.	*9102555*
	100 mm	ea.	*9102515*
	150 mm	ea.	*9102565*
	200 mm	ea.	*9102525*
	250 mm	ea.	*9102575*

Ultra C8 Columns (USP L7)

Stationary Phase Category: C8, octylsilane (L7)
Ligand Type: monomeric C8
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 12%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9103332*
	50 mm	ea.	*9103352*
	100 mm	ea.	*9103312*
	150 mm	ea.	*9103362*
3.0 mm	30 mm	ea.	*910333E*
	50 mm	ea.	*910335E*
	100 mm	ea.	*910331E*
	150 mm	ea.	*910336E*
4.6 mm	30 mm	ea.	*9103335*
	50 mm	ea.	*9103355*
	100 mm	ea.	*9103315*
	150 mm	ea.	*9103365*

Continued

ID	Length	qty.	cat.#
5 µm Particles			
2.1 mm	30 mm	ea.	*9103532*
	50 mm	ea.	*9103552*
	100 mm	ea.	*9103512*
	150 mm	ea.	*9103562*
	200 mm	ea.	*9103522*
	250 mm	ea.	*9103572*
3.0 mm	30 mm	ea.	*910353E*
	50 mm	ea.	*910355E*
	100 mm	ea.	*910351E*
	150 mm	ea.	*910356E*
	200 mm	ea.	*910352E*
	250 mm	ea.	*910357E*
4.0 mm	100 mm	ea.	*9103514*
	150 mm	ea.	*9103564*
4.6 mm	30 mm	ea.	*9103535*
	50 mm	ea.	*9103555*
	100 mm	ea.	*9103515*
	150 mm	ea.	*9103565*
	200 mm	ea.	*9103525*
	250 mm	ea.	*9103575*

Ultra Carbamate Columns

Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: proprietary

Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	50 mm	ea.	*9177352*
	100 mm	ea.	*9177312*
4.0 mm	50 mm	ea.	*9177354*
4.6 mm	50 mm	ea.	*9177355*
	100 mm	ea.	*9177315*
3.0 mm	50 mm	ea.	*917735E*
	100 mm	ea.	*917731E*
5 µm Particles			
4.6 mm	250 mm	ea.	*9177575*

For post-column derivatization/fluorescence detection applications using a 4.6 mm ID column, the total system dead volume, including the post-column reactor, must be less than 650 µL. For standard post-column reactor systems, we recommend a 250 mm x 4.6 mm, 5 µm column. Contact Restek Technical Service or your local Restek representative for more information.

Ultra Cyano Columns (USP L10)

Stationary Phase Category: cyano (L10)
Ligand Type: cyanopropylsilane
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 8%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9106332*
	50 mm	ea.	*9106352*
	100 mm	ea.	*9106312*
	150 mm	ea.	*9106362*
3.0 mm	30 mm	ea.	*910633E*
	50 mm	ea.	*910635E*
	100 mm	ea.	*910631E*
	150 mm	ea.	*910636E*

Continued

ID	Length	qty.	cat.#
4.6 mm	30 mm	ea.	9106335
	50 mm	ea.	9106355
	100 mm	ea.	9106315
	150 mm	ea.	9106365
5 µm Particles			
2.1 mm	30 mm	ea.	9106532
	50 mm	ea.	9106552
	100 mm	ea.	9106512
	150 mm	ea.	9106562
	200 mm	ea.	9106522
	250 mm	ea.	9106572
3.0 mm	30 mm	ea.	910653E
	50 mm	ea.	910655E
	100 mm	ea.	910651E
	150 mm	ea.	910656E
	200 mm	ea.	910652E
	250 mm	ea.	910657E
4.6 mm	30 mm	ea.	9106535
	50 mm	ea.	9106555
	100 mm	ea.	9106515
	150 mm	ea.	9106565
	200 mm	ea.	9106525
	250 mm	ea.	9106575

Ultra IBD Columns (USP L68)

Stationary Phase Category: polar-embedded alkyl (L68)
Ligand Type: proprietary polar functional embedded alkyl
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 12%

End-Cap: no
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	9175332
	50 mm	ea.	9175352
	100 mm	ea.	9175312
	150 mm	ea.	9175362
3.0 mm	30 mm	ea.	917533E
	50 mm	ea.	917535E
	100 mm	ea.	917531E
	150 mm	ea.	917536E
4.6 mm	30 mm	ea.	9175335
	50 mm	ea.	9175355
	100 mm	ea.	9175315
	150 mm	ea.	9175365
5 µm Particles			
2.1 mm	30 mm	ea.	9175532
	50 mm	ea.	9175552
	100 mm	ea.	9175512
	150 mm	ea.	9175562
	200 mm	ea.	9175522
	250 mm	ea.	9175572
3.0 mm	30 mm	ea.	917553E
	50 mm	ea.	917555E
	100 mm	ea.	917551E
	150 mm	ea.	917556E
	200 mm	ea.	917552E
	250 mm	ea.	917557E

Continued

ID	Length	qty.	cat.#
4.6 mm	30 mm	ea.	9175535
	50 mm	ea.	9175555
	100 mm	ea.	9175515
	150 mm	ea.	9175565
	200 mm	ea.	9175525
	250 mm	ea.	9175575

Ultra PFP Propyl Columns (USP L43)

Stationary Phase Category: fluorophenyl propyl (L43)
Ligand Type: pentafluorophenyl propyl
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 11%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	9179332
	50 mm	ea.	9179352
	100 mm	ea.	9179312
	150 mm	ea.	9179362
3.0 mm	30 mm	ea.	917933E
	50 mm	ea.	917935E
	100 mm	ea.	917931E
	150 mm	ea.	917936E
4.6 mm	30 mm	ea.	9179335
	50 mm	ea.	9179355
	100 mm	ea.	9179315
	150 mm	ea.	9179365
5 µm Particles			
2.1 mm	30 mm	ea.	9179532
	50 mm	ea.	9179552
	100 mm	ea.	9179512
	150 mm	ea.	9179562
	200 mm	ea.	9179522
	250 mm	ea.	9179572
3.0 mm	30 mm	ea.	917953E
	50 mm	ea.	917955E
	100 mm	ea.	917951E
	150 mm	ea.	917956E
	200 mm	ea.	917952E
	250 mm	ea.	917957E
4.6 mm	30 mm	ea.	9179535
	50 mm	ea.	9179555
	100 mm	ea.	9179515
	150 mm	ea.	9179565
	200 mm	ea.	9179525
	250 mm	ea.	9179575

Ultra Quat Columns

Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: proprietary

Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	50 mm	ea.	9181352
5 µm Particles			
4.6 mm	150 mm	ea.	9181565

Ultra Silica Columns (USP L3)

Stationary Phase Category: bare silica (L3)
Ligand Type: none
Particle: 3 µm or 5 µm, spherical
Pore Size: 100 Å
Carbon Load: n/a

End-Cap: n/a
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
2.1 mm	30 mm	ea.	*9100332*
	50 mm	ea.	*9100352*
	100 mm	ea.	*9100312*
	150 mm	ea.	*9100362*
3.0 mm	30 mm	ea.	*910033E*
	50 mm	ea.	*910035E*
	100 mm	ea.	*910031E*
	150 mm	ea.	*910036E*
4.6 mm	30 mm	ea.	*9100335*
	50 mm	ea.	*9100355*
	100 mm	ea.	*9100315*
	150 mm	ea.	*9100365*
5 µm Particles			
2.1 mm	30 mm	ea.	*9100532*
	50 mm	ea.	*9100552*
	100 mm	ea.	*9100512*
	150 mm	ea.	*9100562*
	200 mm	ea.	*9100522*
	250 mm	ea.	*9100572*
3.0 mm	30 mm	ea.	*910053E*
	50 mm	ea.	*910055E*
	100 mm	ea.	*910051E*
	150 mm	ea.	*910056E*
	200 mm	ea.	*910052E*
	250 mm	ea.	*910057E*
4.6 mm	30 mm	ea.	*9100535*
	50 mm	ea.	*9100555*
	100 mm	ea.	*9100515*
	150 mm	ea.	*9100565*
	200 mm	ea.	*9100525*
	250 mm	ea.	*9100575*

Viva Biphenyl Columns (USP L11)

Stationary Phase Category: phenyl (L11)
Ligand Type: Biphenyl
Particle: 5 µm, spherical
Pore Size: 300 Å
Carbon Load: 7%

End-Cap: yes
Surface Area: 100 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.0 mm	30 mm	ea.	*9516531*
	50 mm	ea.	*9516551*
	100 mm	ea.	*9516511*
	150 mm	ea.	*9516561*
	200 mm	ea.	*9516521*
	250 mm	ea.	*9516571*
2.1 mm	30 mm	ea.	*9516532*
	50 mm	ea.	*9516552*
	100 mm	ea.	*9516512*
	150 mm	ea.	*9516562*
	200 mm	ea.	*9516522*
	250 mm	ea.	*9516572*

Continued

ID	Length	qty.	cat.#
3.0 mm	30 mm	ea.	951653E
	50 mm	ea.	951655E
	100 mm	ea.	951651E
	150 mm	ea.	951656E
	200 mm	ea.	951652E
	250 mm	ea.	951657E
4.6 mm	30 mm	ea.	9516535
	50 mm	ea.	9516555
	100 mm	ea.	9516515
	150 mm	ea.	9516565
	200 mm	ea.	9516525
	250 mm	ea.	9516575

Viva C18 Columns (USP L1)

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: monomeric C18
Particle: 3 µm or 5 µm, spherical
Pore Size: 300 Å
Carbon Load: 9%

End-Cap: yes
Surface Area: 100 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
3 µm Particles			
1.0 mm	30 mm	ea.	9514331
	50 mm	ea.	9514351
	100 mm	ea.	9514311
	150 mm	ea.	9514361
2.1 mm	30 mm	ea.	9514332
	50 mm	ea.	9514352
	100 mm	ea.	9514312
	150 mm	ea.	9514362
3.0 mm	30 mm	ea.	951433E
	50 mm	ea.	951435E
	100 mm	ea.	951431E
	150 mm	ea.	951436E
4.6 mm	30 mm	ea.	9514335
	50 mm	ea.	9514355
	100 mm	ea.	9514315
	150 mm	ea.	9514365
5 µm Particles			
1.0 mm	30 mm	ea.	9514531
	50 mm	ea.	9514551
	100 mm	ea.	9514511
	150 mm	ea.	9514561
	200 mm	ea.	9514521
	250 mm	ea.	9514571
2.1 mm	30 mm	ea.	9514532
	50 mm	ea.	9514552
	100 mm	ea.	9514512
	150 mm	ea.	9514562
	200 mm	ea.	9514522
	250 mm	ea.	9514572
3.0 mm	30 mm	ea.	951453E
	50 mm	ea.	951455E
	100 mm	ea.	951451E
	150 mm	ea.	951456E
	200 mm	ea.	951452E
	250 mm	ea.	951457E
4.6 mm	30 mm	ea.	9514535
	50 mm	ea.	9514555
	100 mm	ea.	9514515
	150 mm	ea.	9514565
	200 mm	ea.	9514525
	250 mm	ea.	9514575

Viva C4 Columns (USP L26)

Stationary Phase Category: C4, butylsilane (L26)
Ligand Type: monomeric C4
Particle: 5 µm, spherical
Pore Size: 300 Å
Carbon Load: 3.5%

End-Cap: yes
Surface Area: 100 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.0 mm	30 mm	ea.	*9512531*
	50 mm	ea.	*9512551*
	100 mm	ea.	*9512511*
	150 mm	ea.	*9512561*
	200 mm	ea.	*9512521*
	250 mm	ea.	*9512571*
2.1 mm	30 mm	ea.	*9512532*
	50 mm	ea.	*9512552*
	100 mm	ea.	*9512512*
	150 mm	ea.	*9512562*
	200 mm	ea.	*9512522*
	250 mm	ea.	*9512572*
3.0 mm	30 mm	ea.	*951253E*
	50 mm	ea.	*951255E*
	100 mm	ea.	*951251E*
	150 mm	ea.	*951256E*
	200 mm	ea.	*951252E*
	250 mm	ea.	*951257E*
4.6 mm	30 mm	ea.	*9512535*
	50 mm	ea.	*9512555*
	100 mm	ea.	*9512515*
	150 mm	ea.	*9512565*
	200 mm	ea.	*9512525*
	250 mm	ea.	*9512575*

Viva C8 Columns (USP L7)

Stationary Phase Category: C8, octylsilane (L7)
Ligand Type: monomeric C8
Particle: 5 µm, spherical
Pore Size: 300 Å
Carbon Load: 5%

End-Cap: yes
Surface Area: 100 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.0 mm	30 mm	ea.	*9513531*
	50 mm	ea.	*9513551*
	100 mm	ea.	*9513511*
	150 mm	ea.	*9513561*
	200 mm	ea.	*9513521*
	250 mm	ea.	*9513571*
2.1 mm	30 mm	ea.	*9513532*
	50 mm	ea.	*9513552*
	100 mm	ea.	*9513512*
	150 mm	ea.	*9513562*
	200 mm	ea.	*9513522*
	250 mm	ea.	*9513572*
3.0 mm	30 mm	ea.	*951353E*
	50 mm	ea.	*951355E*
	100 mm	ea.	*951351E*
	150 mm	ea.	*951356E*
	200 mm	ea.	*951352E*
	250 mm	ea.	*951357E*

Continued

ID	Length	qty.	cat.#
4.6 mm	30 mm	ea.	9513535
	50 mm	ea.	9513555
	100 mm	ea.	9513515
	150 mm	ea.	9513565
	200 mm	ea.	9513525
	250 mm	ea.	9513575

Viva PFP Propyl Columns (USP L43)

Stationary Phase Category: fluorophenyl propyl (L43)
Ligand Type: pentafluorophenyl propyl
Particle: 5 µm, spherical
Pore Size: 300 Å
Carbon Load: 5%

End-Cap: yes
Surface Area: 100 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.0 mm	30 mm	ea.	9519531
	50 mm	ea.	9519551
	100 mm	ea.	9519511
	150 mm	ea.	9519561
	200 mm	ea.	9519521
	250 mm	ea.	9519571
2.1 mm	30 mm	ea.	9519532
	50 mm	ea.	9519552
	100 mm	ea.	9519512
	150 mm	ea.	9519562
	200 mm	ea.	9519522
	250 mm	ea.	9519572
3.0 mm	30 mm	ea.	951953E
	50 mm	ea.	951955E
	100 mm	ea.	951951E
	150 mm	ea.	951956E
	200 mm	ea.	951952E
	250 mm	ea.	951957E
4.6 mm	30 mm	ea.	9519535
	50 mm	ea.	9519555
	100 mm	ea.	9519515
	150 mm	ea.	9519565
	200 mm	ea.	9519525
	250 mm	ea.	9519575

Viva Silica Columns (USP L3)

Stationary Phase Category: bare silica (L3)
Ligand Type: none
Particle: 5 µm, spherical
Pore Size: 300 Å
Carbon Load: n/a

End-Cap: n/a
Surface Area: 100 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
1.0 mm	30 mm	ea.	9510531
	100 mm	ea.	9510511
	150 mm	ea.	9510561
	200 mm	ea.	9510521
	250 mm	ea.	9510571
2.1 mm	30 mm	ea.	9510532
	50 mm	ea.	9510552
	100 mm	ea.	9510512
	150 mm	ea.	9510562
	200 mm	ea.	9510522
	250 mm	ea.	9510572

Continued

ID	Length	qty.	cat.#
3.0 mm	30 mm	ea.	951053E
	50 mm	ea.	951055E
	100 mm	ea.	951051E
	150 mm	ea.	951056E
	200 mm	ea.	951052E
	250 mm	ea.	951057E
4.6 mm	30 mm	ea.	9510535
	50 mm	ea.	9510555
	100 mm	ea.	9510515
	150 mm	ea.	9510565
	200 mm	ea.	9510525
	250 mm	ea.	9510575

Allure Guard Cartridges

Description	Particle Size	Size	qty.	cat.#
Allure Acrylamide Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	916750212
Allure AK Guard Cartridge	5 µm	10 x 4.0 mm	3-pk.	915950210
Allure Organic Acids Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	916550212
	5 µm	10 x 4.0 mm	3-pk.	916550210
Allure PFP Propyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	916950212
	5 µm	10 x 4.0 mm	3-pk.	916950210
Allure Silica Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	916050212
	5 µm	10 x 4.0 mm	3-pk.	916050210

EXP Direct Connect Holder

Maximum holder pressure: 20,000 psi (1400 bar).

25808

Description	qty.	cat.#
EXP Direct Connect Holder for EXP Guard Cartridges (includes hex-head fitting & 2 ferrules)	ea.	25808

Intellectual Property: optimizetech.com/patents

EXP In-Line Holder

Maximum holder pressure: 20,000 psi (1400 bar) Swept volume: 1.4 µL (excluding packed bed)

25751

Description	qty.	cat.#
EXP In-Line Holder for EXP Guard Cartridges (includes hex-head fittings & 2 ferrules)	ea.	25751

Intellectual Property: optimizetech.com/patents

Force EXP Guard Column Cartridges

Description	Size	qty.	cat.#
Force Biphenyl EXP Guard Column Cartridge	5 x 2.1 mm	3-pk.	962950252
	5 x 3.0 mm	3-pk.	962950253
	5 x 4.6 mm	3-pk.	962950250
Force C18 EXP Guard Column Cartridge	5 x 2.1 mm	3-pk.	963450252
	5 x 3.0 mm	3-pk.	963450253
	5 x 4.6 mm	3-pk.	963450250
Force FluoroPhenyl EXP Guard Column Cartridge	5 x 2.1 mm	3-pk.	963950252
	5 x 3.0 mm	3-pk.	963950253
	5 x 4.6 mm	3-pk.	963950250

Maximum cartridge pressure: 600 bar/8700 psi.
Intellectual Property: optimizetech.com/patents

High-Pressure Frit-Type In-Line Filter

25041

Description	Porosity	qty.	cat.#
Frit-Type In-Line Filter	2.0 µm	ea.	25041

PEEK Tips for Trident Direct Guard Cartridge Systems

Description	qty.	cat.#
PEEK tip for Waters-style end fittings	ea.	25088
PEEK tip for standard fittings	ea.	25087

Pinnacle DB Guard Cartridges

Description	Particle Size	Size	qty.	cat.#
Pinnacle DB C18 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	941450212
	5 µm	10 x 4.0 mm	3-pk.	941450210
Pinnacle DB C8 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	941350212
	5 µm	10 x 4.0 mm	3-pk.	941350210
Pinnacle DB Aqueous C18 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	941850212
	5 µm	10 x 4.0 mm	3-pk.	941850210
Pinnacle DB Biphenyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	940950212
	5 µm	10 x 4.0 mm	3-pk.	940950210
Pinnacle DB PFP Propyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	941950212
	5 µm	10 x 4.0 mm	3-pk.	941950210
Pinnacle DB Cyano Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	941650212
	5 µm	10 x 4.0 mm	3-pk.	941650210
Pinnacle DB Silica Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	941050212
	5 µm	10 x 4.0 mm	3-pk.	941050210

Pinnacle II PAH Guard Cartridges

Description	Particle Size	Size	qty.	cat.#
Pinnacle II PAH Guard Cartridge	4 µm	10 x 2.1 mm	3-pk.	921950212
	4 µm	10 x 4.0 mm	3-pk.	921950210

Raptor EXP Guard Column Cartridges

Description	Particle Size	Size	qty.	cat.#
Raptor C18 EXP Guard Column Cartridge	UHPLC	5 x 2.1 mm	3-pk.	9304U0252
	UHPLC	5 x 3.0 mm	3-pk.	9304U0253
	2.7 µm	5 x 2.1 mm	3-pk.	9304A0252
	2.7 µm	5 x 3.0 mm	3-pk.	9304A0253
	2.7 µm	5 x 4.6 mm	3-pk.	9304A0250
	5 µm	5 x 2.1 mm	3-pk.	930450252
	5 µm	5 x 3.0 mm	3-pk.	930450253
	5 µm	5 x 4.6 mm	3-pk.	930450250
Raptor ARC-18 EXP Guard Column Cartridge	UHPLC	5 x 2.1 mm	3-pk.	9314U0252
	UHPLC	5 x 3.0 mm	3-pk.	9314U0253
	2.7 µm	5 x 2.1 mm	3-pk.	9314A0252
	2.7 µm	5 x 3.0 mm	3-pk.	9314A0253
	2.7 µm	5 x 4.6 mm	3-pk.	9314A0250
	5 µm	5 x 2.1 mm	3-pk.	931450252
	5 µm	5 x 3.0 mm	3-pk.	931450253
	5 µm	5 x 4.6 mm	3-pk.	931450250
Raptor Biphenyl EXP Guard Column Cartridge	UHPLC	5 x 2.1 mm	3-pk.	9309U0252
	UHPLC	5 x 3.0 mm	3-pk.	9309U0253
	2.7 µm	5 x 2.1 mm	3-pk.	9309A0252
	2.7 µm	5 x 3.0 mm	3-pk.	9309A0253
	2.7 µm	5 x 4.6 mm	3-pk.	9309A0250
	5 µm	5 x 2.1 mm	3-pk.	930950252
	5 µm	5 x 3.0 mm	3-pk.	930950253
	5 µm	5 x 4.6 mm	3-pk.	930950250
Raptor FluoroPhenyl EXP Guard Column Cartridge	UHPLC	5 x 2.1 mm	3-pk.	9319U0252
	UHPLC	5 x 3.0 mm	3-pk.	9319U0253

Continued

Description	Particle Size	Size	qty.	cat.#
Raptor FluoroPhenyl EXP Guard Column Cartridges	2.7 µm	5 x 2.1 mm	3-pk.	9319A0252
	2.7 µm	5 x 3.0 mm	3-pk.	9319A0253
	2.7 µm	5 x 4.6 mm	3-pk.	9319A0250
	5 µm	5 x 2.1 mm	3-pk.	931950252
	5 µm	5 x 3.0 mm	3-pk.	931950253
	5 µm	5 x 4.6 mm	3-pk.	931950250
Raptor HILIC-Si EXP Guard Column Cartridge	2.7 µm	5 x 2.1 mm	3-pk.	9310A0252
	2.7 µm	5 x 3.0 mm	3-pk.	9310A0253
	2.7 µm	5 x 4.6 mm	3-pk.	9310A0250
Raptor Polar X EXP Guard Column Cartridge	2.7 µm	5 x 2.1 mm	3-pk.	9311A0252

Maximum cartridge pressure: 1034 bar/15,000 psi* (UHPLC); 600 bar/8700 psi (2.7 µm); 400 bar/5800 psi (5 µm).
* For maximum lifetime, recommended maximum pressure for UHPLC particles is 830 bar/12,000 psi.
Intellectual Property: optimizetech.com/patents

Replacement Cap Frit Filters for Trident Guard Cartridges

Description	ID	Porosity	qty.	cat.#
Replacement Cap Frit Filters	4 mm	2.0 µm	5-pk.	25022
	4 mm	0.5 µm	5-pk.	25023
	2 mm	2.0 µm	5-pk.	25057
	2 mm	0.5 µm	5-pk.	25990

Replacement Filters for UltraLine UHPLC In-Line Filter

Description	qty.	cat.#
UltraLine Replacement Filters	5-pk.	24994


24994

Replacement PEEK Ferrules for Roc LC Guard Column Holder

Description	qty.	cat.#
Replacement PEEK Ferrules for Roc LC Guard Column Holder	3-pk.	26391


26391

Replacement Trident PEEK Ferrules

Description	qty.	cat.#
Replacement Trident PEEK Ferrules	10-pk.	27476


27476

Roc LC Guard Column Cartridges

Description	Size	qty.	cat.#
Roc C8 Guard Cartridge	10 x 4.0 mm	3-pk.	953350210
Roc C18 Guard Cartridge	10 x 4.0 mm	3-pk.	953450210
Roc Cyano Guard Cartridge	10 x 4.0 mm	3-pk.	953650210
Roc Phenyl-Hexyl Guard Cartridge	10 x 4.0 mm	3-pk.	953550210
Roc Silica Guard Cartridge	10 x 4.0 mm	3-pk.	953050210

Roc LC Guard Column Holder

Description	qty.	cat.#
Roc LC Guard Column Holder for 10 x 4.0 mm Roc Guard Cartridges	ea.	25812


25812

Trident HPLC In-Line Guard Cartridge Holders

Description	qty.	cat.#
Holder for 10 mm guard cartridge	ea.	25021
Holder with filter for 10 mm guard cartridge	ea.	25040


25021

Trident LC Column Protection System

Description	Type	Includes	qty.	cat.#
Trident LC Column Protection System	Level 1: Filter Holder Only	filter holder; cap frit filter (4 mm, 2.0 µm); and PEEK ferrule	ea.	*27470*
	Level 1: Filter Holder Only	filter holder; cap frit filter (4 mm, 2.0 µm); and PEEK ferrule	4-pk.	*27471*
	Level 2: Cartridge Holder Only	cartridge holder and PEEK ferrule	ea.	*27472*
	Level 2: Cartridge Holder Only	cartridge holder and PEEK ferrule	4-pk.	*27473*
	Level 3: Filter Holder and Cartridge Holder Power Pack	filter holder; cap frit filter (4 mm, 2.0 µm); cartridge holder; and PEEK ferrule	ea.	*27474*
	Level 3: Filter Holder and Cartridge Holder Power Pack	filter holder; cap frit filter (4 mm, 2.0 µm); cartridge holder; and PEEK ferrule	4-pk.	*27475*

Fittings on all LC columns have 10-32 threads; however, seat depth varies. An improper seat will yield a poor connection and may affect chromatography. While all Restek LC columns will provide a zero-dead-volume connection when used with a properly installed Trident LC column protection system, analysts should consult the manufacturer for non-Restek column connections. A detailed discussion about port configurations can be found at https://www.restek.com/Pages/faq_lc

Ultra Guard Cartridges

Description	Particle Size	Size	qty.	cat.#
Ultra C18 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*917450212*
	5 µm	10 x 4.0 mm	3-pk.	*917450210*
Ultra C8 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*910350212*
	5 µm	10 x 4.0 mm	3-pk.	*910350210*
Ultra C4 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*910250212*
	5 µm	10 x 4.0 mm	3-pk.	*910250210*
Ultra C1 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*910150212*
	5 µm	10 x 4.0 mm	3-pk.	*910150210*
Ultra Aromax Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*912750212*
	5 µm	10 x 4.0 mm	3-pk.	*912750210*
Ultra Aqueous C18 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*917850212*
	5 µm	10 x 4.0 mm	3-pk.	*917850210*
Ultra Biphenyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*910950212*
	5 µm	10 x 4.0 mm	3-pk.	*910950210*
Ultra IBD Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*917550212*
	5 µm	10 x 4.0 mm	3-pk.	*917550210*
Ultra PFP Propyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*917950212*
	5 µm	10 x 4.0 mm	3-pk.	*917950210*
Ultra Cyano Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*910650212*
	5 µm	10 x 4.0 mm	3-pk.	*910650210*
Ultra Amino Guard Cartridge	5 µm	10 x 4.0 mm	3-pk.	*910750210*
Ultra Silica Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*910050212*
	5 µm	10 x 4.0 mm	3-pk.	*910050210*
Ultra Carbamate Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*917750212*
	5 µm	10 x 4.0 mm	3-pk.	*917750210*
Ultra Quat Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*918150212*
	5 µm	10 x 4.0 mm	3-pk.	*918150210*

UltraLine UHPLC In-Line Filter

Specifications
Inlet/Outlet: Female/Female 10-32
Port Geometry: Parker (1/16 CPI)
Material: Stainless steel housing

Filter: 0.5 µm stainless steel, 0.125" W x 0.062" T, 5 µL volume
Pressure Rating: 15,000 psig (1034 bar)
Wrench Flat: 3/8"

24993

Description	qty.	cat.#
UltraLine UHPLC In-Line Filter (In-Line Assembly with Filter)	ea.	*24993*

UltraShield UHPLC PreColumn Filter

Specifications
Inlet/Outlet: Female/Male 10-32
Port Geometry: Parker (1/16 CPI)
Material: stainless steel, PEEK ferrule

Filter: 0.5 µm or 0.2 µm stainless steel
Pressure Rating: 15,000 psig (1034 bar)
Wrench Flat: 5/16"


24995

Description	Porosity	qty.	cat.#
UltraShield UHPLC PreColumn Filter	0.5 µm frit	ea.	*24995*
	0.5 µm frit	5-pk.	*24996*
	0.5 µm frit	10-pk.	*24997*
	0.2 µm frit	ea.	*25809*
	0.2 µm frit	5-pk.	*25810*
	0.2 µm frit	10-pk.	*25811*

Viva Guard Cartridges

Description	Particle Size	Size	qty.	cat.#
Viva C18 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*951450212*
	5 µm	10 x 4.0 mm	3-pk.	*951450210*
Viva C8 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*951350212*
	5 µm	10 x 4.0 mm	3-pk.	*951350210*
Viva C4 Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*951250212*
	5 µm	10 x 4.0 mm	3-pk.	*951250210*
Viva Biphenyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*951650212*
	5 µm	10 x 4.0 mm	3-pk.	*951650210*
Viva PFP Propyl Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*951950212*
	5 µm	10 x 4.0 mm	3-pk.	*951950210*
Viva Silica Guard Cartridge	5 µm	10 x 2.1 mm	3-pk.	*951050212*
	5 µm	10 x 4.0 mm	3-pk.	*951050210*

1/4" HPLC Frits


25071

Description	ID	Porosity	qty.	cat.#
1/4" HPLC Frits	4.6 mm	2.0 µm	10-pk.	*25071*
	4.6 mm	0.5 µm	10-pk.	*25072*
	3.2 mm	2.0 µm	10-pk.	*25073*
	3.2 mm	0.5 µm	10-pk.	*25074*
	2.1 mm	2.0 µm	10-pk.	*25075*
	2.1 mm	0.5 µm	10-pk.	*25076*

Bio-Safe Column System (PEEK)

Specifications
4.6 mm ID x 30 mm length column with end fittings.

2.0 µm frits.


26546

Description	qty.	cat.#
Bio-Safe Column System, PEEK, 4.6 mm x 30 mm, 2.0 µm	ea.	*26546*

Column End-Fittings


25077

Description	qty.	cat.#
Column End-Fitting with Distribution Cone	ea.	*25077*
Column End-Fitting with Flat Bottom	ea.	*25078*

Empty Chromatography Columns

Description	ID	OD	Length	qty.	cat.#
HPLC Column Assembly	2.1 mm	1/4"	30 mm	ea.	25118
	2.1 mm	1/4"	50 mm	ea.	25119
	2.1 mm	1/4"	100 mm	ea.	25120
	2.1 mm	1/4"	150 mm	ea.	25121
	2.1 mm	1/4"	200 mm	ea.	25122
	2.1 mm	1/4"	250 mm	ea.	25123
	4.6 mm	1/4"	30 mm	ea.	25130
	4.6 mm	1/4"	50 mm	ea.	25131
	4.6 mm	1/4"	100 mm	ea.	25132
	4.6 mm	1/4"	150 mm	ea.	25133
	4.6 mm	1/4"	200 mm	ea.	25134
	4.6 mm	1/4"	250 mm	ea.	25135

HPLC Column Tubing

Description	ID	OD	Length	qty.	cat.#
HPLC Column Tubing	2.1 mm	1/4"	30 mm	ea.	25100
	2.1 mm	1/4"	50 mm	ea.	25101
	2.1 mm	1/4"	100 mm	ea.	25102
	2.1 mm	1/4"	150 mm	ea.	25103
	2.1 mm	1/4"	200 mm	ea.	25104
	2.1 mm	1/4"	250 mm	ea.	25105
	4.6 mm	1/4"	30 mm	ea.	25112
	4.6 mm	1/4"	50 mm	ea.	25113
	4.6 mm	1/4"	100 mm	ea.	25114
	4.6 mm	1/4"	150 mm	ea.	25115
	4.6 mm	1/4"	200 mm	ea.	25116
	4.6 mm	1/4"	250 mm	ea.	25117

Restek Pack in a Box Kit


26408

Description	Certification/Compliance	Includes	qty.	cat.#
Pack in a Box Kit	CE	pump; mounting bracket; stainless steel tubing; column and reservoir connection fittings; empty column; solvent/slurry reservoir; pump priming syringe; seal tool; guide bushing; 1/4" union for use with 1/4" HPLC compression column hardware (compression hardware must be purchased separately); operation and start-up manuals.	kit	26408

Ultra Bulk Packing Materials (5 µm)

Description	Particle Size	Min qty.	qty.	cat.#
Ultra C1 Bulk Packing	5 µm	1	10 g/btl.	91015
Ultra C4 Bulk Packing	5 µm	1	10 g/btl.	91025
Ultra C8 Bulk Packing	5 µm	1	10 g/btl.	91035
Ultra C18 Bulk Packing	5 µm	1	10 g/btl.	91745
Ultra Amino Bulk Packing	5 µm	1	10 g/btl.	91075
Ultra Cyano Bulk Packing	5 µm	1	10 g/btl.	91065
Ultra Silica Bulk Packing	5 µm	1	10 g/btl.	91005

Ultra Aqueous C18 HPLC Prep Columns

Stationary Phase Category: modified C18 (L1)
Ligand Type: proprietary polar modified and functionally bonded C18
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 15%

End-Cap: no
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9178557*
21.2 mm	50 mm	ea.	*9178558*
30 mm	50 mm	ea.	*9178559*
10 mm	100 mm	ea.	*9178517*
21.2 mm	100 mm	ea.	*9178518*
30 mm	100 mm	ea.	*9178519*
10 mm	150 mm	ea.	*9178567*
21.2 mm	150 mm	ea.	*9178568*
30 mm	150 mm	ea.	*9178569*
10 mm	250 mm	ea.	*9178577*
21.2 mm	250 mm	ea.	*9178578*
30 mm	250 mm	ea.	*9178579*

Ultra Biphenyl Prep Columns

Stationary Phase Category: phenyl (L11)
Ligand Type: unique Biphenyl
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 15%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9109557*
21.2 mm	50 mm	ea.	*9109558*
30 mm	50 mm	ea.	*9109559*
10 mm	100 mm	ea.	*9109517*
21.2 mm	100 mm	ea.	*9109518*
30 mm	100 mm	ea.	*9109519*
10 mm	150 mm	ea.	*9109567*
21.2 mm	150 mm	ea.	*9109568*
30 mm	150 mm	ea.	*9109569*
10 mm	250 mm	ea.	*9109577*
21.2 mm	250 mm	ea.	*9109578*
30 mm	250 mm	ea.	*9109579*

Ultra C18 HPLC Prep Columns

Stationary Phase Category: C18, octadecylsilane (L1)
Ligand Type: monomeric C18
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 20%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9174557*
21.2 mm	50 mm	ea.	*9174558*
30 mm	50 mm	ea.	*9174559*
10 mm	100 mm	ea.	*9174517*
21.2 mm	100 mm	ea.	*9174518*
30 mm	100 mm	ea.	*9174519*
10 mm	150 mm	ea.	*9174567*
21.2 mm	150 mm	ea.	*9174568*
30 mm	150 mm	ea.	*9174569*
10 mm	250 mm	ea.	*9174577*
21.2 mm	250 mm	ea.	*9174578*
30 mm	250 mm	ea.	*9174579*

Ultra C8 HPLC Prep Columns

Stationary Phase Category: C8, octylsilane (L7)
Ligand Type: monomeric C8
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 12%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9103557*
21.2 mm	50 mm	ea.	*9103558*
30 mm	50 mm	ea.	*9103559*
10 mm	100 mm	ea.	*9103517*
21.2 mm	100 mm	ea.	*9103518*
30 mm	100 mm	ea.	*9103519*
10 mm	150 mm	ea.	*9103567*
21.2 mm	150 mm	ea.	*9103568*
30 mm	150 mm	ea.	*9103569*
10 mm	250 mm	ea.	*9103577*
21.2 mm	250 mm	ea.	*9103578*
30 mm	250 mm	ea.	*9103579*

Ultra Cyano HPLC Prep Columns

Stationary Phase Category: cyano (L10)
Ligand Type: cyanopropylsilane
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 8%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9106557*
21.2 mm	50 mm	ea.	*9106558*
30 mm	50 mm	ea.	*9106559*
10 mm	100 mm	ea.	*9106517*
21.2 mm	100 mm	ea.	*9106518*
30 mm	100 mm	ea.	*9106519*
10 mm	150 mm	ea.	*9106567*
21.2 mm	150 mm	ea.	*9106568*
30 mm	150 mm	ea.	*9106569*
10 mm	250 mm	ea.	*9106577*
21.2 mm	250 mm	ea.	*9106578*
30 mm	250 mm	ea.	*9106579*

Ultra IBD HPLC Prep Columns

Stationary Phase Category: polar-embedded alkyl (L68)
Ligand Type: proprietary polar functional embedded alkyl
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 12%

End-Cap: no
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9175557*
21.2 mm	50 mm	ea.	*9175558*
30 mm	50 mm	ea.	*9175559*
10 mm	100 mm	ea.	*9175517*
21.2 mm	100 mm	ea.	*9175518*
30 mm	100 mm	ea.	*9175519*
10 mm	150 mm	ea.	*9175567*
21.2 mm	150 mm	ea.	*9175568*
30 mm	150 mm	ea.	*9175569*
10 mm	250 mm	ea.	*9175577*
21.2 mm	250 mm	ea.	*9175578*
30 mm	250 mm	ea.	*9175579*

Ultra PFP Propyl Prep Columns

Stationary Phase Category: fluorophenyl propyl (L43)
Ligand Type: pentafluorophenyl propyl
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: 11%

End-Cap: yes
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9179557*
21.2 mm	50 mm	ea.	*9179558*
30 mm	50 mm	ea.	*9179559*
10 mm	100 mm	ea.	*9179517*
21.2 mm	100 mm	ea.	*9179518*
30 mm	100 mm	ea.	*9179519*
10 mm	150 mm	ea.	*9179567*
21.2 mm	150 mm	ea.	*9179568*
30 mm	150 mm	ea.	*9179569*
10 mm	250 mm	ea.	*9179577*
21.2 mm	250 mm	ea.	*9179578*
30 mm	250 mm	ea.	*9179579*

Ultra Silica HPLC Prep Columns

Stationary Phase Category: bare silica (L3)
Ligand Type: none
Particle: 5 µm, spherical
Pore Size: 100 Å
Carbon Load: n/a

End-Cap: n/a
Surface Area: 300 m^2/g
pH Range: 2.5 to 8
Maximum Temperature: 80 °C

ID	Length	qty.	cat.#
10 mm	50 mm	ea.	*9100557*
21.2 mm	50 mm	ea.	*9100558*
30 mm	50 mm	ea.	*9100559*
10 mm	100 mm	ea.	*9100517*
21.2 mm	100 mm	ea.	*9100518*
30 mm	100 mm	ea.	*9100519*
10 mm	150 mm	ea.	*9100567*
21.2 mm	150 mm	ea.	*9100568*
30 mm	150 mm	ea.	*9100569*
10 mm	250 mm	ea.	*9100577*
21.2 mm	250 mm	ea.	*9100578*
30 mm	250 mm	ea.	*9100579*

Notes:

Notes:

Learn more at **www.bgb-info.com/restek**

BGB GC LC MS CE

DR-BGB-2224

www.bgb-shop.com

Switzerland BGB Analytik AG • Rohrmattstrasse 4 • 4461 Böckten • Phone +41 61 991 00 46 • Fax +41 61 991 00 25 • sales@bgb-analytik.com

Austria BGB Analytik Vertrieb GmbH • Mühlestraße 1 • 79539 Lörrach • Phone +49 7621 5884270 • Fax +49 7621 5884289 • sales.de@bgb-analytik.com

Turkey and Azerbaijan BGB Analytik Laboratuvar Malzemeleri Ticaret LTD.ŞTİ • Starport Residence • Yenişehir Mah. Osmanlı Bulvarı. • Sümbül Sok. No:10, Daire: 193 • 34912 Kurtköy, Pendik, İstanbul • Phone +90 2169092048 • sales.tr@bgb-analytik.com