

These Phases ROCK Your LC Laboratory



Chromatographers in the following industries can benefit from the advantages of Core-Shell technology:



Agriculture



Forensics



Clinical



Life Science



Environmental



Pharmaceutical



Food and Beverage



Chemical/Industrial



Consumer Care

guarantee

If you are not completely satisfied with Kinetex core-shell columns, send in your comparative data to a similar product with the Kinetex column within 45 days for a FULL REFUND.

Efficiency



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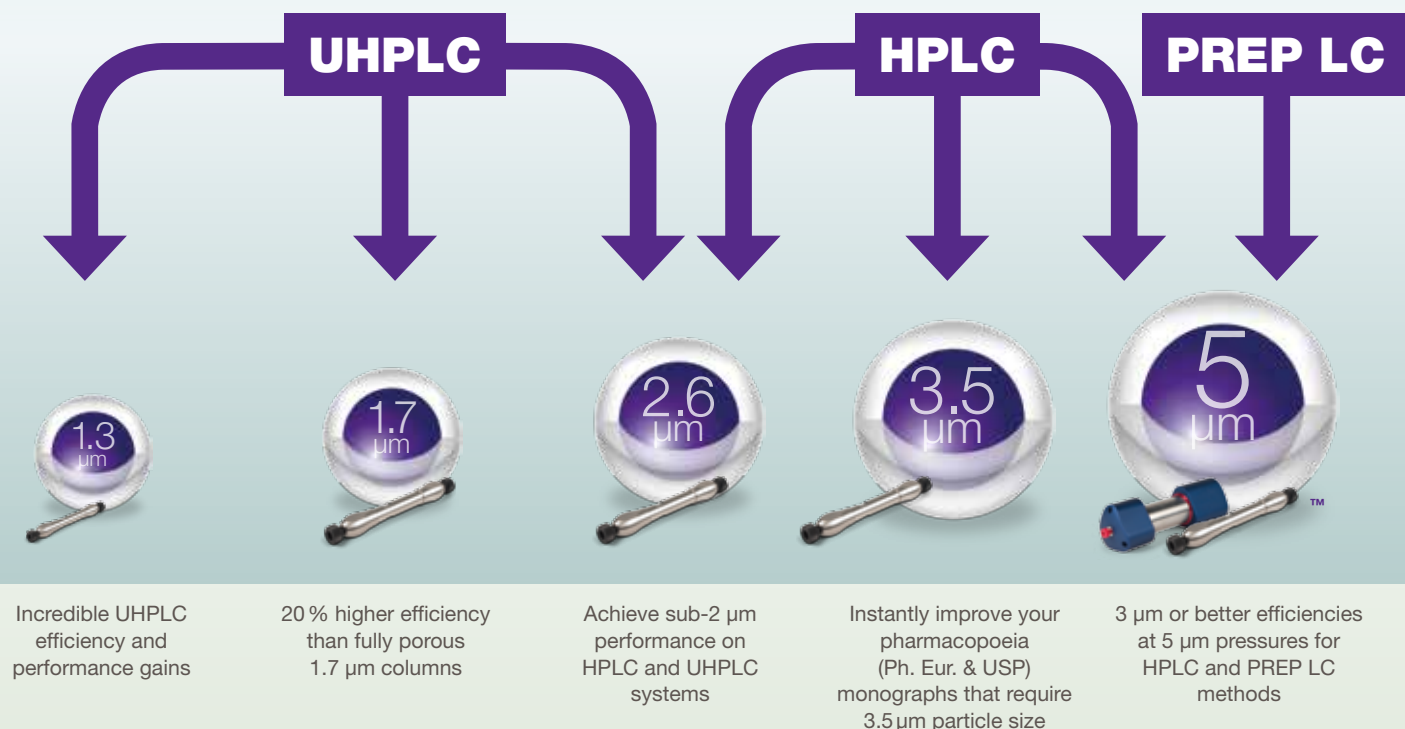
Resolution

Productivity

Selectivity

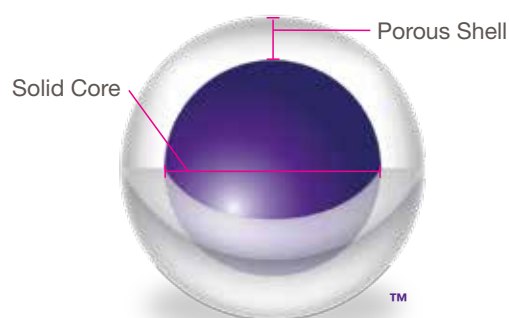


Complete Scalable Solution from UHPLC to HPLC to PREP LC



Better Performance than Fully Porous Particles

Using sol-gel processing techniques that incorporate nano structuring technology, a durable, homogeneous porous shell is grown on a solid silica core. This highly optimized process combined with industry leading column packing technology produces highly reproducible columns that generate extremely high plate counts.



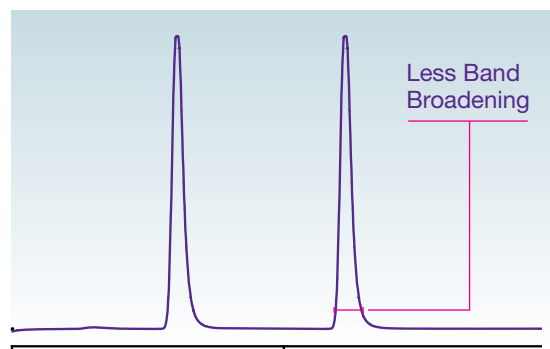
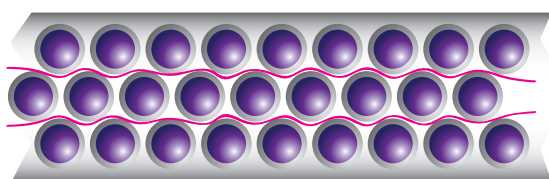
Fully Porous		Kinetex Core-Shell		Average Efficiency Gain with Kinetex*
	vs			90 % Higher
	vs			85 % Higher

Fully Porous		Kinetex Core-Shell		Average Efficiency Gain with Kinetex*
	vs			20 % Higher
	vs			50 % Higher

* May not be representative of all applications

Kinetex Core-Shell Technology

- Obtain higher throughput without sacrificing resolution
- Easy method transfer across LC system platforms
- Reduce solvent consumption with faster analysis
- Reach lower levels of detection and quantitation



2009

Small Molecules



KINETEX
Core-Shell Technology

2010

Synthetic
Oligonucleotides



2011

Peptides / Proteins



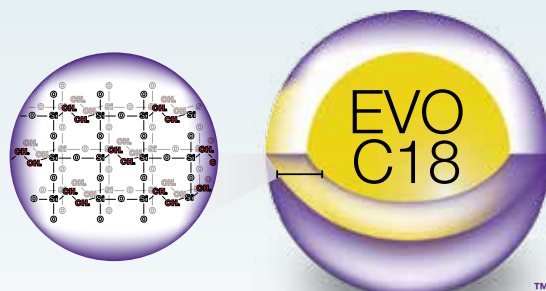
2014

Kinetex EVO



Kinetex EVO C18

Kinetex EVO C18 uses a patented organo-silica grafting process which incorporates uniform stabilizing ethane cross-linking to provide resistance to high pH attack while maintaining mechanical strength of the core-shell particle.



Core-Shell Advantage for UHPLC



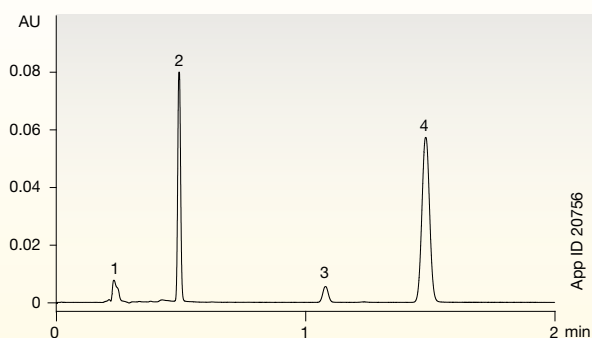
Get the Most Performance Out of Your UHPLC System

Kinetex 1.3 and 1.7 μm Core-Shell Technology produces increased efficiencies over traditional sub-2 μm columns on the market, yielding remarkable chromatographic resolution, higher peak capacities, and greater sensitivity, so you can get the most out of every UHPLC analysis.

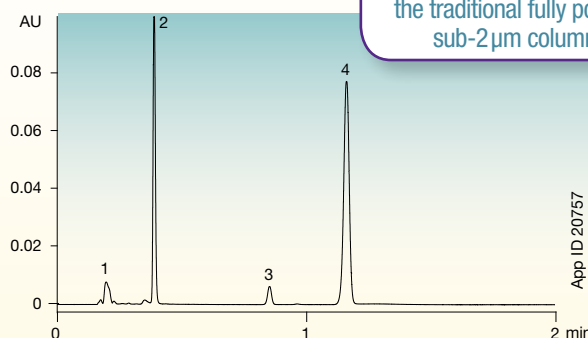


Incredible Efficiency Gains

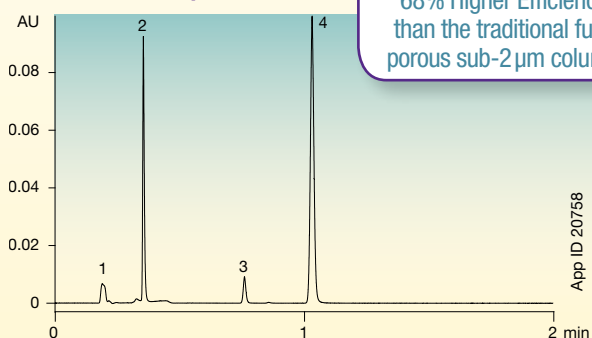
Waters® ACQUITY® BEH 1.7 μm C18



Kinetex 1.7 μm C18



Kinetex 1.3 μm C18



Easy Installation on UHPLC Systems:
www.phenomenex.com/kinetex

Conditions for all columns:

- Columns:** Kinetex 1.7 μm C18
Kinetex 1.3 μm C18
ACQUITY UPLC® BEH 1.7 μm C18
- Dimensions:** 50 x 2.1 mm
- Mobile Phase:** Acetonitrile / Water (50:50)
- Flow Rate:** 0.5 mL/min
- Temperature:** Ambient
- Detection:** UV @ 254 nm
- Instrument:** Waters® ACQUITY® UPLC®
- Sample:**
 1. Acetophenone
 2. Benzene
 3. Toluene
 4. Naphthalene



Efficiency calculated from peak 4 in each chromatogram. Waters, ACQUITY, and UPLC are registered trademarks, and BEH Technology is a trademark of Waters Corporation. Phenomenex is not affiliated with Waters Corporation. Comparative separations may not be representative of all applications.

Column Protection with No Loss in Performance

Trap contaminants and microparticulates within the SecurityGuard™ ULTRA guard cartridge system and learn how to greatly extend UHPLC column life at:

www.phenomenex.com/SecurityGuardULTRA



Core-Shell Advantage for HPLC and UHPLC



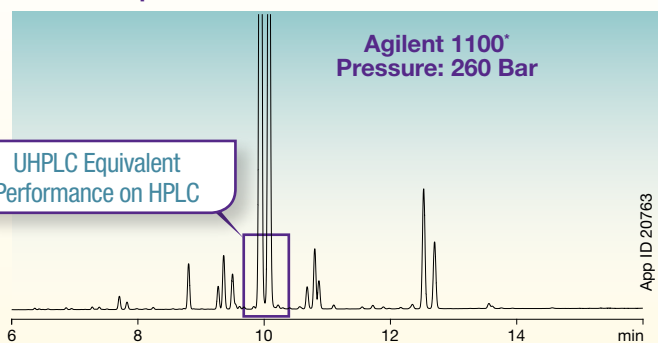
A Versatile Upgrade for HPLC and UHPLC

On a low volume HPLC or UHPLC system Kinetex 2.6 μm columns will perform like a fully porous sub-2 μm column, providing up to 3x the efficiency of 5 μm and double the efficiency of 3 μm fully porous media. Dramatically improve the productivity and performance of your existing methods with the use of shorter Kinetex columns, all while decreasing your solvent usage!

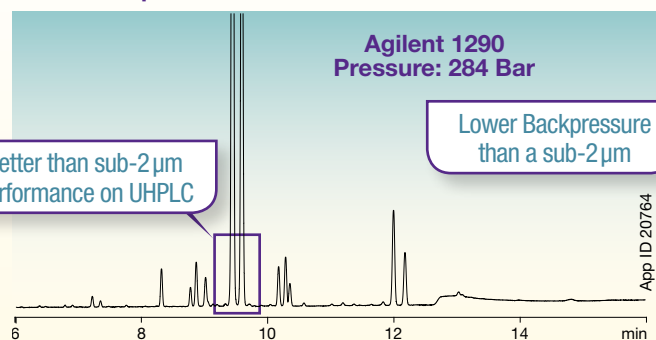


Sub-2 μm Performance with Kinetex 2.6 μm on HPLC and UHPLC Systems

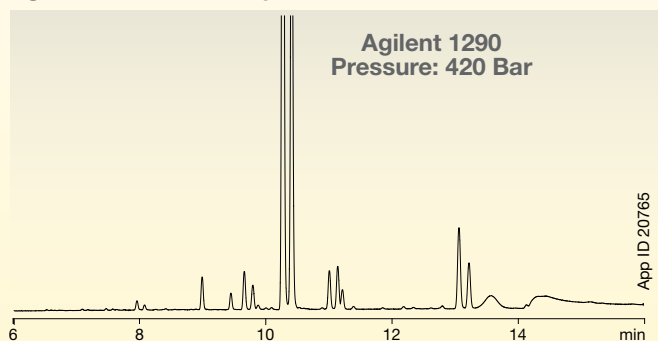
Kinetex 2.6 μm C18



Kinetex 2.6 μm C18



Agilent® ZORBAX® 1.8 μm SB-C18



Conditions for all columns same except where noted:

Columns: Kinetex 2.6 μm C18 (Agilent 1100*)
Kinetex 2.6 μm C18 (Agilent 1290)
ZORBAX 1.8 μm SB-C18 (Agilent 1290)

Dimensions: 100 x 4.6 mm

Mobile Phase: A: Water with 0.1% TFA
B: Acetonitrile with 0.1% TFA

Gradient:

Time (min)	% B
0	10
20	70

Flow Rate: 1.2 mL/min

Temperature: Ambient

Detection: UV @ 210 nm

Sample: Mupirocin degradants

*Agilent 1100 was optimized with the Core-Shell Performance Enhancement Kit AQO-8892.

Agilent and ZORBAX are registered trademarks of Agilent Technologies, Inc. Phenomenex is not affiliated with Agilent Technologies. Comparative separations may not be representative of all applications.

Maximize Performance with Kinetex 2.6 μm

Decrease the system dwell volume of your HPLC instrument with the pre-cut tubing and column fittings found in the Core-Shell Performance Enhancement Kit and instantly improve the observed performance of your Kinetex core-shell 2.6 μm column.

www.phenomenex.com/enhancement



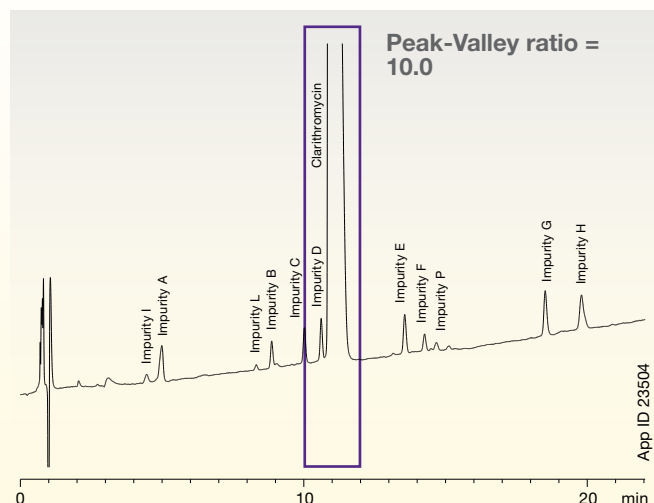
Instantly Improve Your 3.5 μ m Pharmacopoeia Methods

Immediately improve resolution, productivity, and sensitivity of your current 3.5 μ m HPLC methods following the requirements of Ph. Eur. or USP with the new Kinetex 3.5 μ m Core-Shell Technology. This core-shell particle was developed for use on standard or older model HPLC systems that may have low pressure limitations.



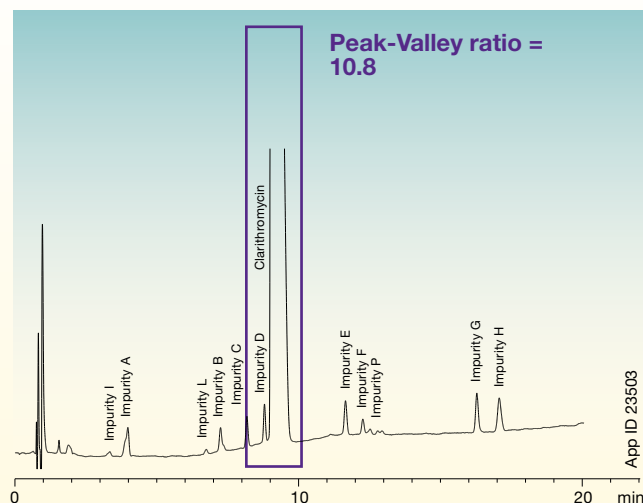
Clarithromycin according to Ph. Eur. Monograph 1651

Kromasil® 3.5 μ m C18



Using Kinetex 3.5 μ m XB-C18 for the Clarithromycin method provides the user with better resolution and narrower peaks for better quantification compared to a fully porous 3.5 μ m C18 material.

Kinetex 3.5 μ m XB-C18



Conditions for both columns:

Columns: Kinetex 3.5 μ m XB-C18

Kromasil 3.5 μ m C18

Dimensions: 100 x 4.6 mm

Mobile Phase: A: 4.76 g/L Potassium phosphate pH 4.4

B: Acetonitrile

Gradient	Time (min)	% B
	0	25
	32	65
	34	65

Injection: 10 μ L

Detection: UV @ 205 nm

Sample: Clarithromycin

Kromasil is registered trademark of AkzoNobel Pulp And Performance Chemicals AB. Phenomenex is not affiliated with AkzoNobel. Comparative separations may not be representative of all applications.

Allowable Adjustments to Pharmacopoeia Methods

Recent revisions of the Ph. Eur. and USP detail what "allowable adjustments" can be made to methods without resorting to revalidation. Find out what changes you are allowed to make by visiting:

www.phenomenex.com/allowable



Core-Shell Advantage for HPLC

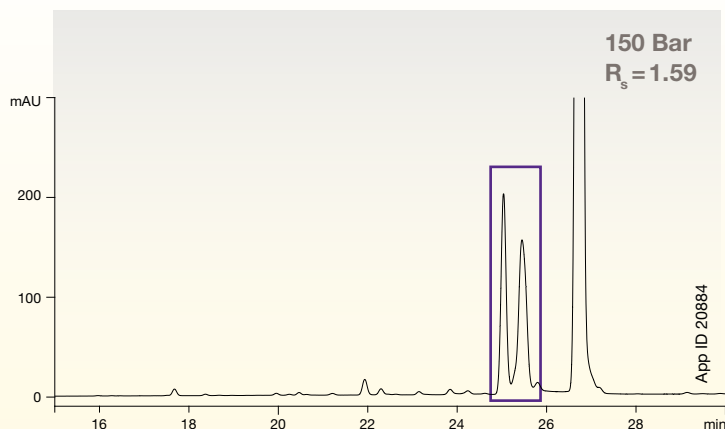


Instantly Improve 5 μ m and 3 μ m Methods

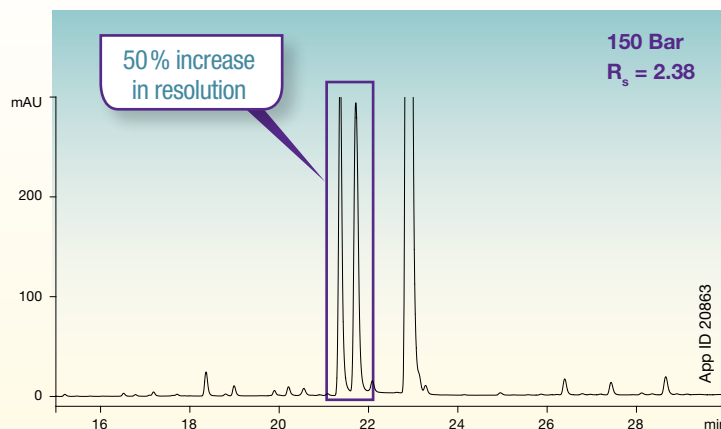
Immediately improve resolution, productivity, and sensitivity of your current 3 μ m and 5 μ m HPLC methods with Kinetex 5 μ m Core-Shell Technology. This core-shell particle was specifically developed for use on standard or older model HPLC systems that may have low pressure limitations.



GL Sciences Inertsil® 5 μ m ODS-3



Phenomenex Kinetex 5 μ m C18



Critical Advantages of Increased Resolution:

- Save time and money by adjusting method
- Separate critical pairs or difficult mixtures
- Less risk of failing system suitability requirements

Conditions for all columns:

Columns: Kinetex 5 μ m C18
Inertsil ODS-3 5 μ m C18

Dimensions: 250 x 4.6 mm

Mobile Phase: A: Water with 0.1 % TFA

B: Acetonitrile with 0.1 % TFA

Gradient:	Time (min)	% B
	0	10
	40	70

Flow Rate: 1.0 mL/min

Temperature: Ambient

Detection: UV @ 210 nm

Sample: Pharmaceutical degradation sample

Inertsil is a registered trademark of GL Sciences Inc. Phenomenex is not affiliated with GL Sciences Inc. Comparative separations may not be representative of all applications.

First and Only Core-Shell Material for Axia™ Preparative Purifications

Axia packed Kinetex 5 μ m columns will provide incredible gains in efficiency and performance for any of your Prep LC methods. Learn more online at:

www.phenomenex.com/kinetexprep



Preparative Column Packing Technology

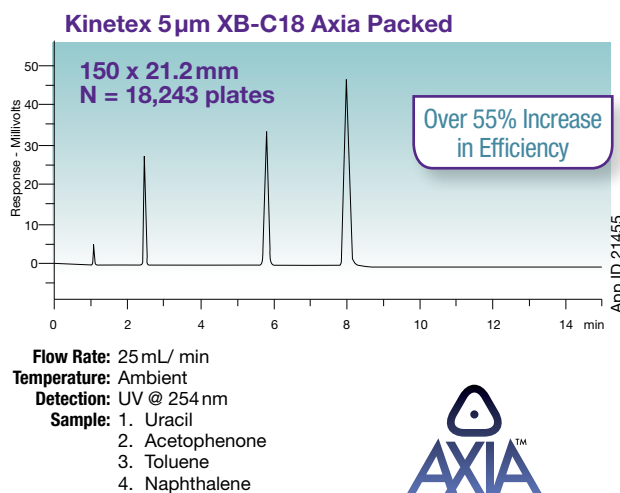
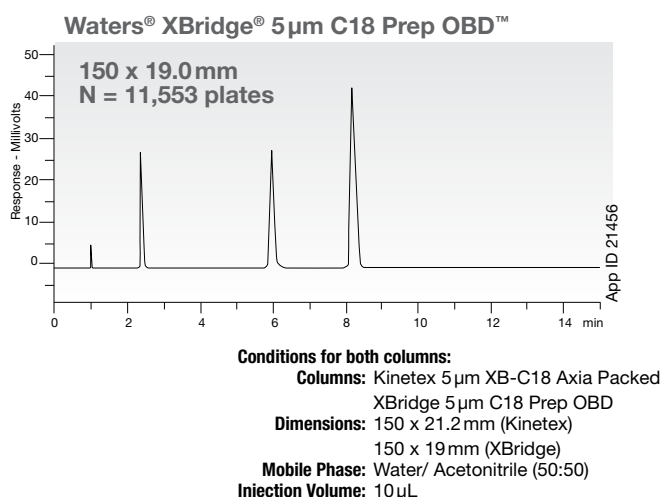
An advanced preparative column packing and hardware design, Axia incorporates patented Hydraulic Piston Compression technology that offers increased sorbent bed density and eliminates media bed collapse as a source of premature column failure in preparative HPLC columns. Unlike traditional column packing methods, the Axia packing method is completely automated and monitored by multiple sensors to allow for measurement and recording of all process parameters for every column. The result is a vastly improved packing process that offers the following benefits:

- Extended column lifetimes
- Improved reproducibility: Column-to-Column and Batch-to-Batch
- Efficiencies and peak symmetries on par with analytical separations
- Increased column stability under high flow rates



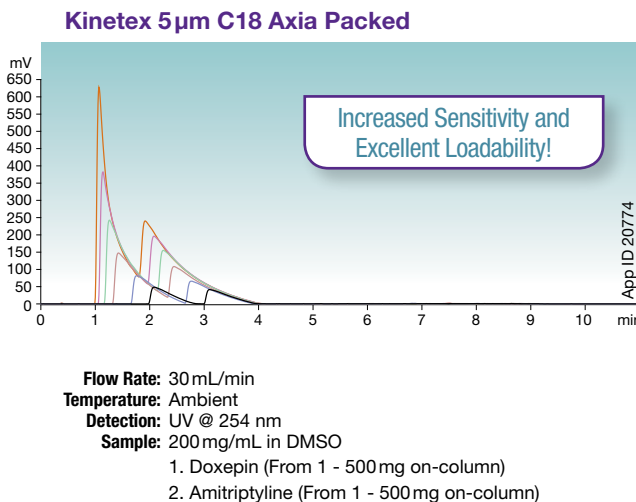
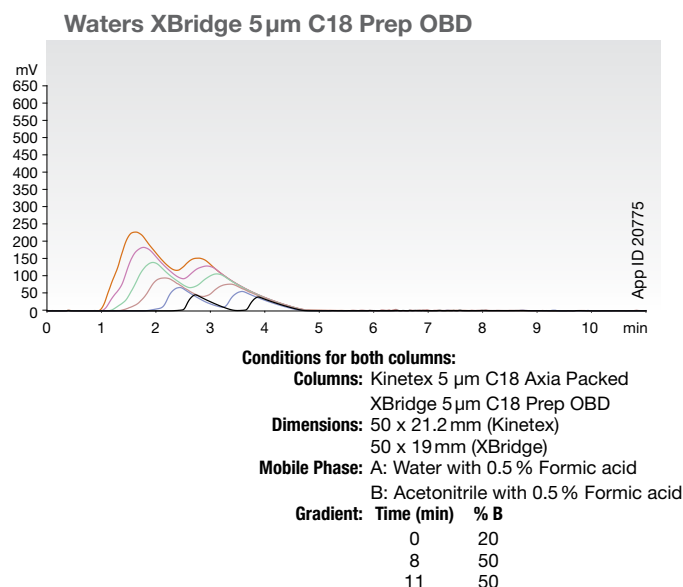
Higher Efficiency!

Start with sharper peaks by taking advantage of the high efficiencies of Kinetex 5µm Axia preparative columns.



Excellent Loadability!

With narrower peak widths than fully porous columns across every sample load, Axia packed Kinetex 5µm columns give you the capability of increased sample load and higher throughput for vastly improved purification performance and economics.

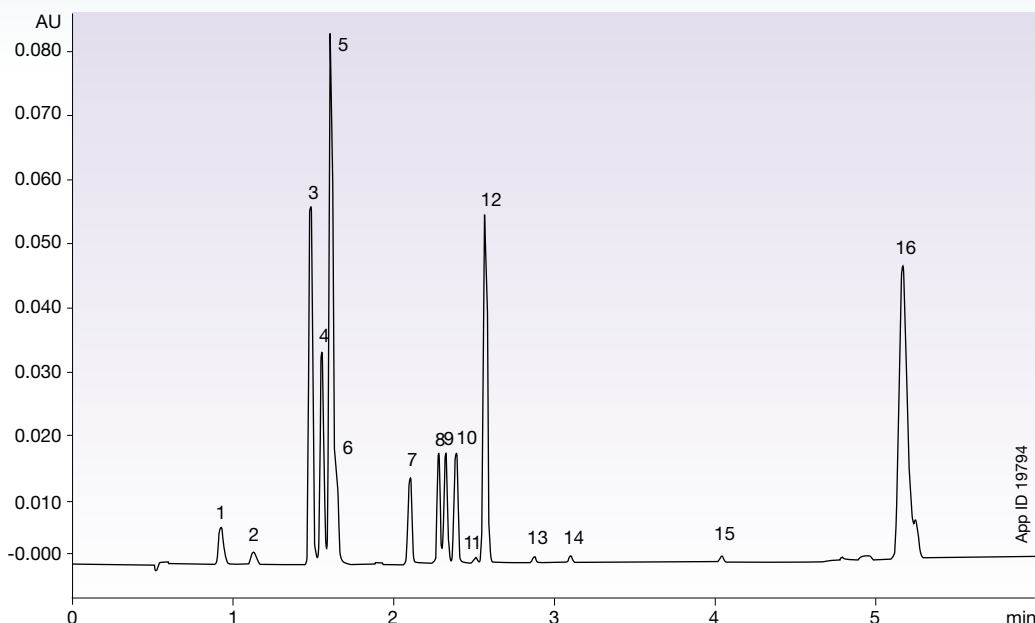


Waters and XBridge are registered trademarks of Waters Corp. OBD is a trademark of Waters Corp. Phenomenex is in no way affiliated with Waters Corp. Comparative separations may not be representative of all applications.

Significant Cost Savings with Kinetex Core-Shell Columns



Reduce Runtimes, Increase Productivity, and Cut Costs Today



Column: Kinetex 1.7 µm C18
Dimensions: 100 x 2.1 mm
Part No.: 00D-4475-AN
Mobile Phase: A: 5 mM Ammonium formate pH 3.25 / Acetonitrile (95:5)
 B: 5 mM Ammonium formate pH 3.25 / Acetonitrile (10:90)
Gradient:

Time (min)	% B
0	30
1.5	50
3	56.3
5	95
6	95
6.1	30

Flow Rate: 0.4 mL/min
Temperature: 50 °C
Detection: PDA 210-300 nm, extracted channel 280 nm
Instrument: Waters® ACQUITY® equipped with PDA

Sample:

1. Antidepressant drug (containing an HCl salt)
2. Hormone therapy #1 (containing a salt)
3. SERM drug (containing basic functional group)
4. CNS drug (containing basic functional group)
5. PPI drug (containing basic functional group)
6. CNS drug (containing basic functional group)
7. CNS drug (containing basic functional group)
8. Hormone therapy #2 (neutral)
9. Oral contraceptive hormone #1 (neutral)
10. Hormone therapy #3 (neutral)
11. Oral contraceptive hormone #2 (neutral)
12. Hormone therapy #4 (neutral)
13. Oral contraceptive hormone (neutral)
14. Hormone therapy #5 (neutral)
15. Hormone therapy #6 (acetate salt of 14)
16. Immunosuppressant drug (macromolecule, containing basic functional group)

It has been shown that the **1.7 µm Kinetex 100 x 2.1 mm column** was capable of resolving 16 different chemical entities with a 6 minute run time. This new analytical method will be used to replace 16 older methods thereby facilitating an **annualised cost saving for the site of €320,000 (\$346,000 USD).**

A. Charles, et. al., Pfizer Grange Castle,
 Grange Castle Business Park, Clondalkin,
 Dublin Republic of Ireland

Core-Shell Fits Your System



Typical UHPLC Instrumentation



Kinetex on Agilent® 1290



Kinetex on JASCO® X-LC



Kinetex on Shimadzu® Nexera®



Kinetex on Waters® ACQUITY® UPLC®



Core-Shell Fits Your System



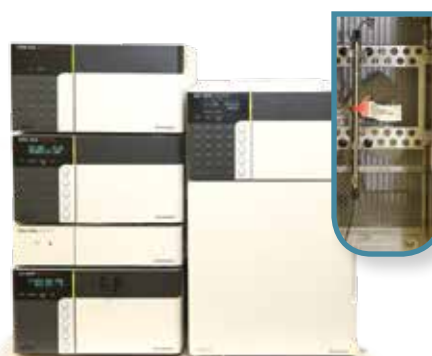
Typical HPLC Instrumentation



Kinetex on Agilent® 1100



Kinetex on Shimadzu® Prominence® LC-20A



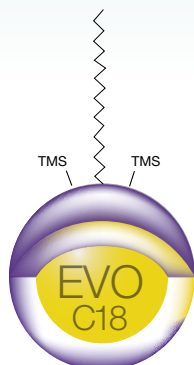
Kinetex on Waters® Alliance®



Kinetex on Gilson® HPLC

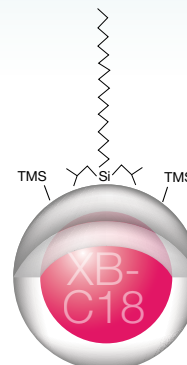


Kinetex EVO C18



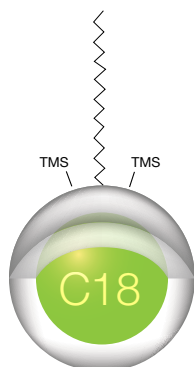
Available in: 1.7 μm , 2.6 μm and 5 μm
Novel pH 1-12 stable C18 that delivers robust methods and improved peak shape for bases.

Kinetex XB-C18



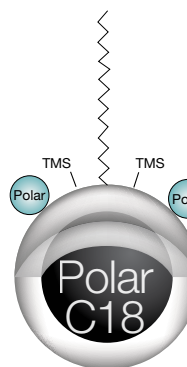
Available in: 1.7 μm , 2.6 μm , 3.5 μm and 5 μm
This unique C18 phase yields increased hydrogen bonding with hydrophobic selectivity, resulting in improved peak shape for basic compounds and increased retention of acidic compounds.

Kinetex C18



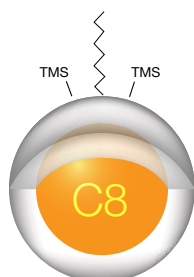
Available in: 1.3 μm , 1.7 μm , 2.6 μm and 5 μm
Balanced C18 phase that provides the highest degree of hydrophobic selectivity relative to the other Kinetex phases.

Kinetex Polar C18



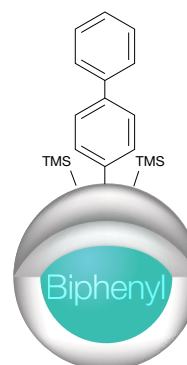
Available in: 2.6 μm
Combined C18 and polar modified surface that provide polar and non-polar retention alongside 100% aqueous stability

Kinetex C8



Available in: 1.7 μm , 2.6 μm and 5 μm
Moderate hydrophobic and steric selectivity is offered, bringing ultra-high performance to USP L7 and other octyl silane methods.

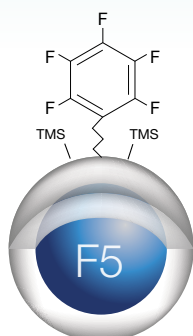
Kinetex Biphenyl



Available in: 1.7 μm , 2.6 μm and 5 μm
100 % aqueous stable reversed phase chemistry with hydrophobic, aromatic, and enhanced polar selectivity.

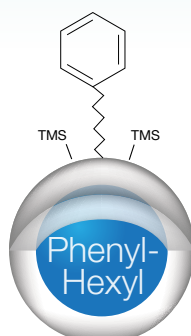
Selectivity - The Phases

Kinetex F5



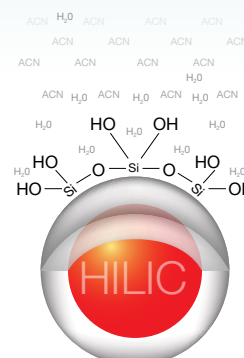
Available in: 1.7 μ m, 2.6 μ m, and 5 μ m
Highly reproducible pentafluorophenyl phase exceptional for halogenated, conjugated, isomeric, or highly polar compounds.

Kinetex Phenyl-Hexyl



Available in: 1.7 μ m, 2.6 μ m and 5 μ m
Aromatic and moderate hydrophobic selectivity result in the great retention and separation of aromatic hydrocarbons.

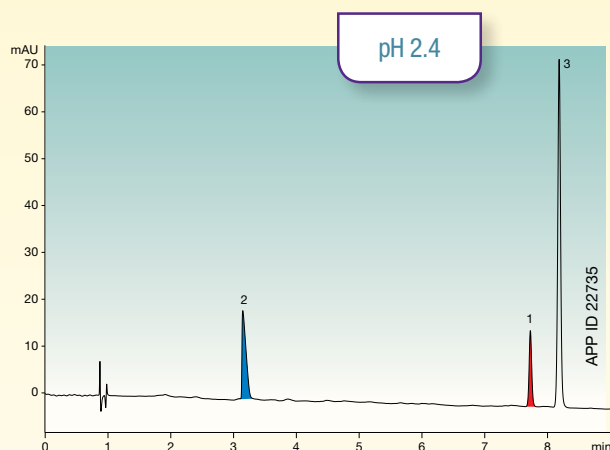
Kinetex HILIC



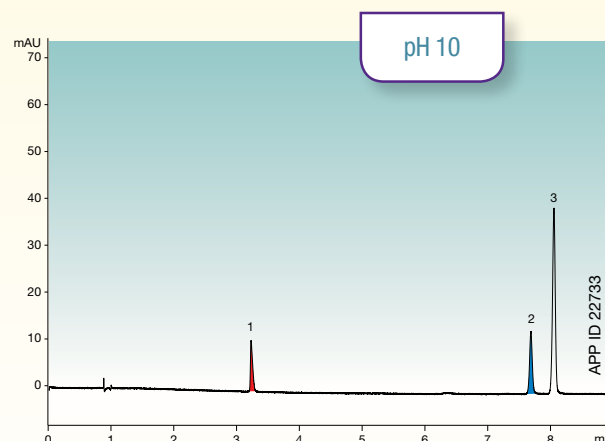
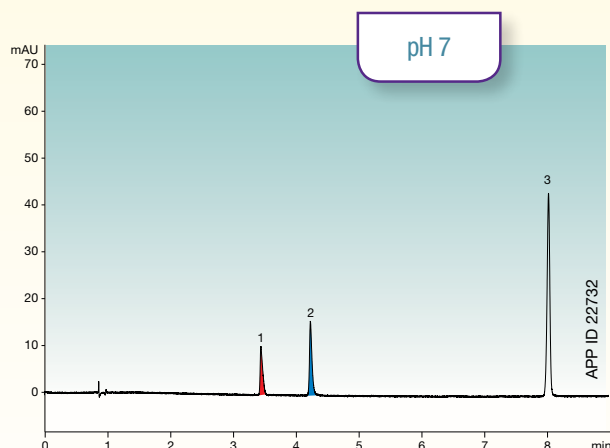
Available in: 1.7 μ m, 2.6 μ m and 5 μ m
Used under HILIC running conditions, this phase provides the highest polar selectivity for retention and separation of hydrophilic compounds.

pH Selectivity

With excellent performance across a large pH range, **Kinetex EVO C18** columns allow you to transform chromatograms and manipulate retention order, no matter the combination of compound functionalities. Now is your chance to break the mold and let your creative LC side flourish.



Column: Kinetex 5 μ m EVO C18
Dimensions: 150 x 4.6 mm
Part No.: 00F-4633-E0
Mobile Phase: A: 20 mM Potassium phosphate
B: Acetonitrile
Gradient: 20-75 % B in 10 minutes
Flow Rate: 1.5 mL/min
Temperature: 30 °C
Detection: UV @ 254 nm
Sample: 1. Ibuprofen
2. Diphenhydramine
3. Ethyl Benzene

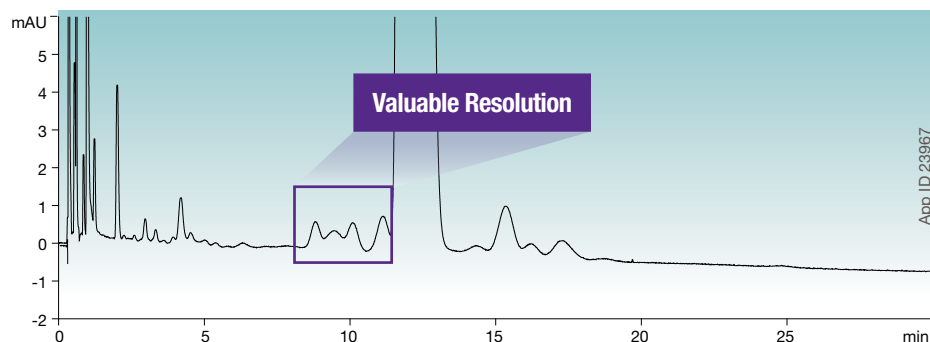


Selectivity – Polar C18



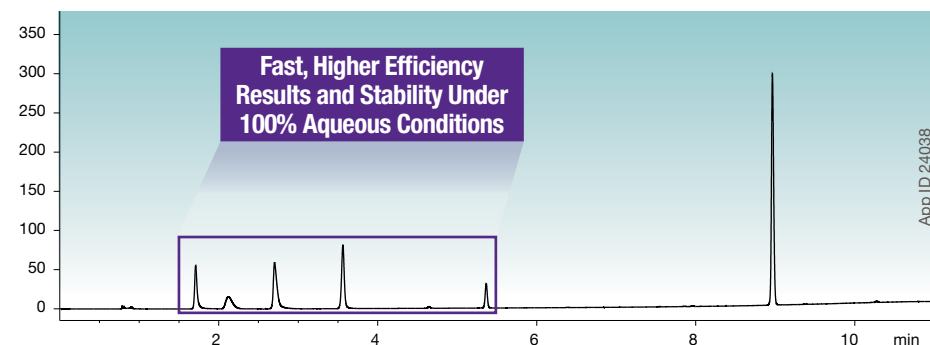
The Kinetex Polar C18 contains a C18 ligand alongside a polar modified surface that increases polar compound retention and improves resolution values. Additionally, the advanced proprietary bonding technology used with this phase ensures 100 % aqueous stability as well as balanced retention on non-polar compounds. This is an excellent all purpose phase for use with multi compound mixes that contain polar and nonpolar compounds, or even single class methods that have closely related compounds, impurities or metabolites.

UHPLC Analysis of Cyclosporine and Impurities



Column: Kinetex 2.6 μ m Polar C18
Dimensions: 50 x 2.1 mm
Part No.: 00B-4759-AN
Mobile Phase: Acetonitrile/Tert-butyl methyl ether/Water/
Phosphoric acid (430:50:520:1)
Flow Rate: 0.30 mL/min
Temperature: 80 °C
Detection: UV @ 210 nm
Sample: Cyclosporine

Water Soluble Vitamins



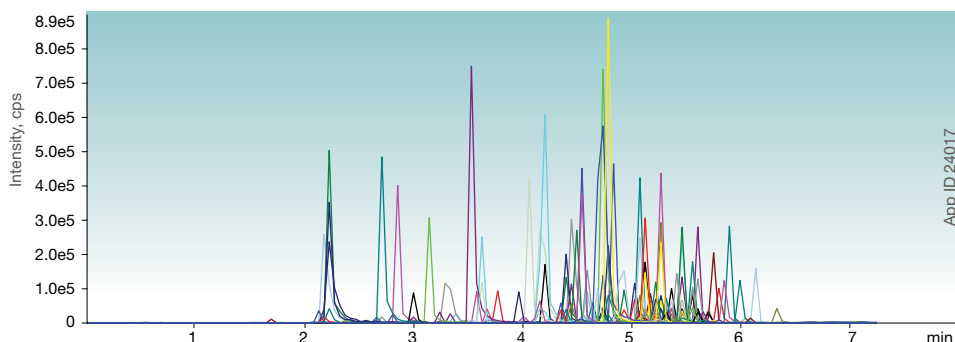
Column: Kinetex 2.6 μ m Polar C18
Dimensions: 100 x 4.6 mm
Part No.: 00B-4759-E0
Mobile Phase: A: 20 mM Potassium Phosphate
B: Methanol
Gradient:

Time (min)	% B
0	0
1	0
10	60

Flow Rate: 1.2 mL/min
Temperature: Ambient
Detection: UV @ 210 nm
Sample:

1. Thiamine
2. Nicotinamide
3. Pyridoxal
4. Pyridoxine
5. Pantothenic Acid
6. Riboflavin

Multi-Class 206 Pesticide Panel Screen

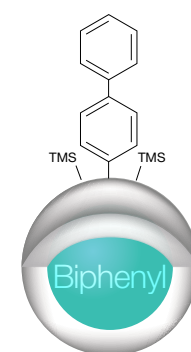
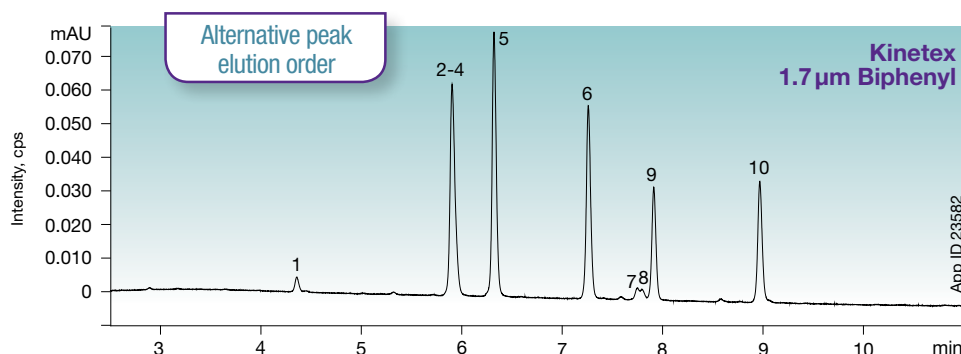
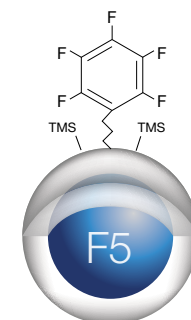
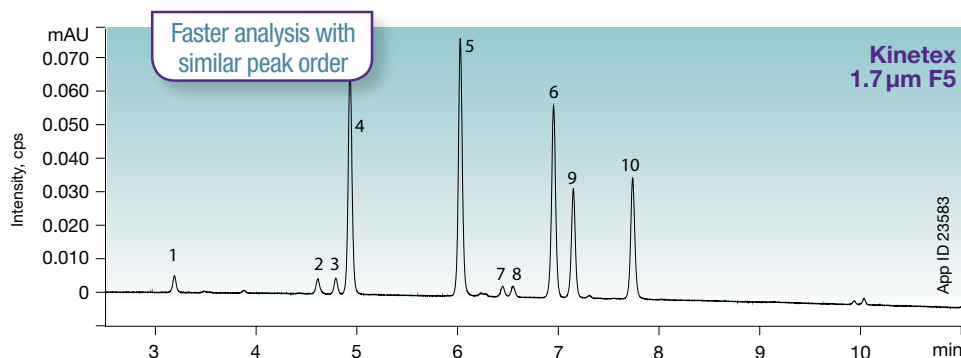
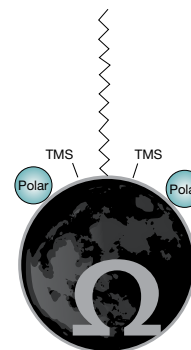
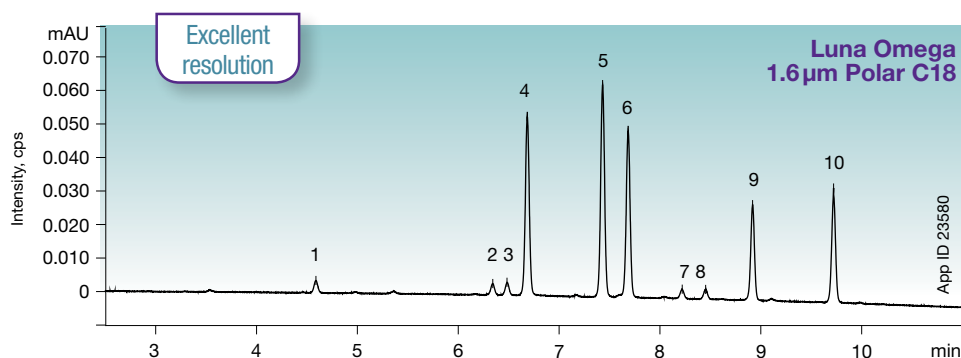


Column: Kinetex 2.6 μ m Polar C18
Dimension: 50 x 4.6 mm
Part No.: 00B-4759-E0
Mobile Phase: A: Water
B: 0.1 % Formic Acid in Methanol
Gradient: 5-100 % B in 5 min, hold 1 min
Flow Rate: 0.7 mL/min
Temperature: Ambient
Detection: MS/MS (SCIEX API 4000™)
Sample: 206 Pesticides.
Find the full compound list online at
www.phenomenex.com/Application/Detail/24017

Selectivity – Combine Kinetex and Luna® Omega

Combine the available Kinetex core-shell and Luna Omega fully porous stationary phases to expand your chromatography reach no matter whether you are working with UHPLC, HPLC, or Preparative instrumentation. The Polar C18 selectivity offers balanced polar/non-polar retention, while the Biphenyl and F5 offer excellent orthogonal alternatives to help adjust retention times and peak order.

Natural Cannabinoids



Conditions for all columns:

Columns: Luna Omega 1.6µm Polar C18
Kinetex 1.7µm Biphenyl
Kinetex 1.7µm F5

Dimension: 100 x 2.1 mm

Mobile Phase: A: 20 mM Ammonium Formate pH 3.2
B: Acetonitrile

Gradient:	Time (min)	% B
	0	60
	12	95
	13	95
	13.01	60
	15	60

Flow Rate: 0.4 mL/min

Temperature: 40 °C

Detection: UV @ 256 nm

Sample:

1. CBDV
2. Cannabidiol
3. CBG
4. Cannabidiolic Acid
5. CBG-A
6. Cannabinol
7. Delta 9 THC
8. Delta 8 THC
9. CBC
10. THCA-A

Recommended Selectivities If You're Working With:

Acids C18 F5 Phenyl-Hexyl	Bases EVO C18 XB-C18 Biphenyl Polar C18	Neutrals C18 C8 Biphenyl	Aromatics Biphenyl Phenyl-Hexyl F5
Acids, Bases, and Neutrals Polar C18 Biphenyl EVO C18 F5	Highly Polar Compounds Polar C18 F5 Biphenyl HILIC	High pH EVO C18	Isomers F5

Upgrading Your Fully Porous Methods:

Fully Porous 3 μm - 5 μm Kinetex 5 μm – Drop-in for easy performance improvements with no backpressure increase Kinetex 3.5 μm – Drop-in for easy performance improvements of pharmacopoeia methods Kinetex 2.6 μm – Dramatically improve results with efficiency/peak capacity gains	Fully Porous sub-2 μm Kinetex 2.6 μm – Get similar efficiencies at lower backpressure allowing for greater productivity gains Kinetex 1.7 μm – Up to 20 % greater efficiencies resulting in drop-in improvements Kinetex 1.3 μm – Incredible efficiency gains on high end UHPLC systems	Fully Porous Preparative LC Kinetex 5 μm – Drop-in for easy performance improvement with no backpressure increase
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Simple Selection of the Suitable Column

	5 μ m	3.5 μ m	2.6 μ m	1.7 μ m	1.3 μ m
UHPLC					
HPLC					
PREP LC					

Phase	Best Use	pH Stability	Available Particle Size(s)				
Polar C18	C18 provides all purpose non-polar interactions, while novel polar modified surface increases polar compound retention and provides 100% aqueous stability.	1.5 - 8.5*			2.6 μ m		
EVO C18	Robust reversed phase methods even in alkaline conditions with improved peak shape for polar basic compounds	1 - 12	5 μ m		2.6 μ m	1.7 μ m	
C18	All purpose phase that offers the hydrophobic retention and methylene selectivity chromatographers expect from a C18 column	1.5 - 8.5*	5 μ m		2.6 μ m	1.7 μ m	1.3 μ m
XB-C18	C18 phase with protective butyl side chains for improved peak shape for basic compounds under neutral and acidic conditions	1.5 - 8.5*	5 μ m	3.5 μ m	2.6 μ m	1.7 μ m	
C8	USP L7 phase that provides less hydrophobic and methylene selectivity than a C18	1.5 - 8.5*	5 μ m		2.6 μ m	1.7 μ m	
F5	Highly reproducible pentafluorophenyl propyl phase that offers a unique combination of polar, hydrophobic, aromatic, and shape selectivity	1.5 - 8.5	5 μ m		2.6 μ m	1.7 μ m	
Biphenyl	100% aqueous stable and allows for excellent reversed phase retention and enhanced polar and aromatic selectivity	1.5 - 8.5*	5 μ m		2.6 μ m	1.7 μ m	
Phenyl-Hexyl	Reversed phase chemistry that allows for greater retention and separation of aromatic hydrocarbons	1.5 - 8.5*	5 μ m		2.6 μ m	1.7 μ m	
HILIC	Unbonded silica phase for HILIC conditions to provide selectivity for polar compounds	2.0 - 7.5	5 μ m		2.6 μ m	1.7 μ m	

*pH stability under gradient conditions. pH stability is 1.5-10 under isocratic conditions.

Choose from an extensive selection of phases for greater flexibility in UHPLC/HPLC method development. Kinetex columns come in a variety of stationary phases to cover a full spectrum of applications ranging from acids and bases, to isomers and extremely polar compounds.

Conditions for all columns:

Column: Kinetex 2.6 μ m Biphenyl

Kinetex 2.6 μ m C18

Kinetex 2.6 μ m XB-C18

Kinetex 2.6 μ m Phenyl-Hexyl

Dimensions: 50 x 4.6 mm

Mobile Phase: A: Water

B: Acetonitrile

Gradient: 20 to 60 % B in 6 minutes

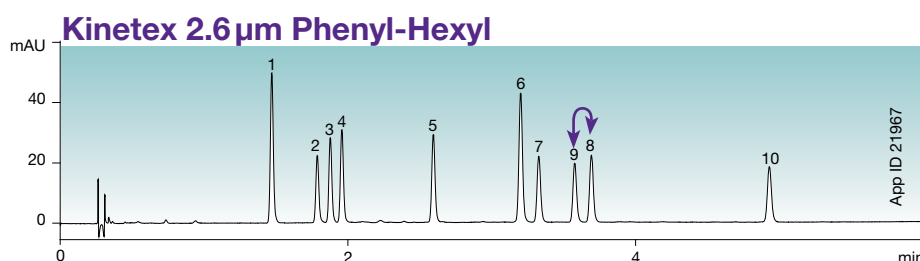
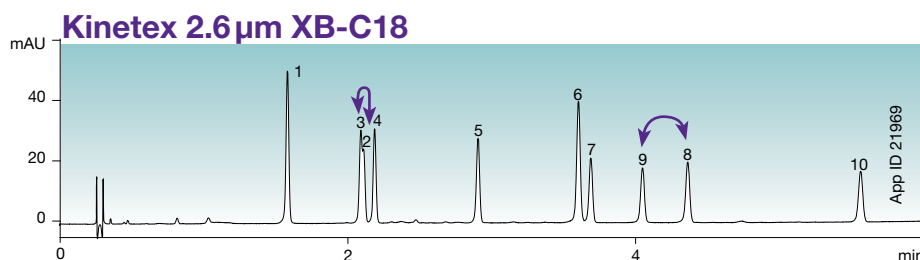
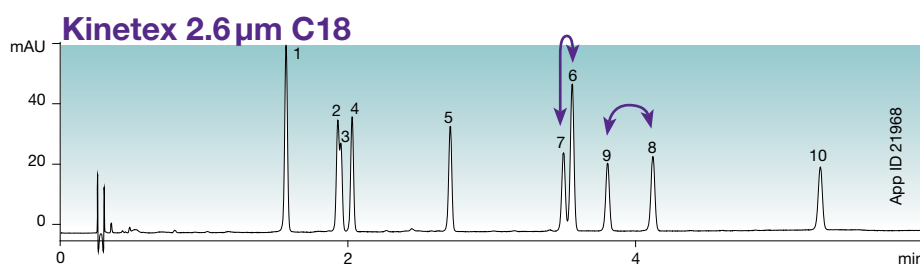
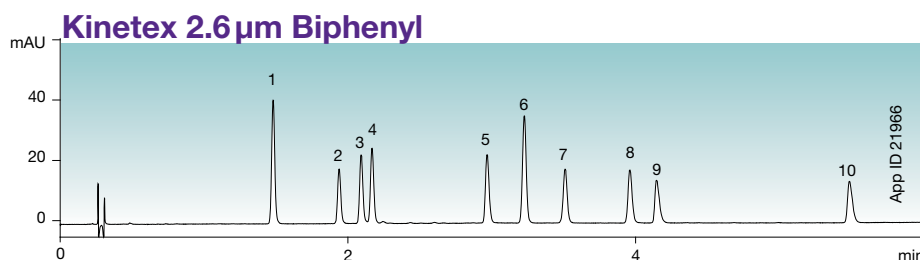
Flow Rate: 1.85 mL/min

Temperature: 30 °C

Detection: UV @ 220 nm

Samples:

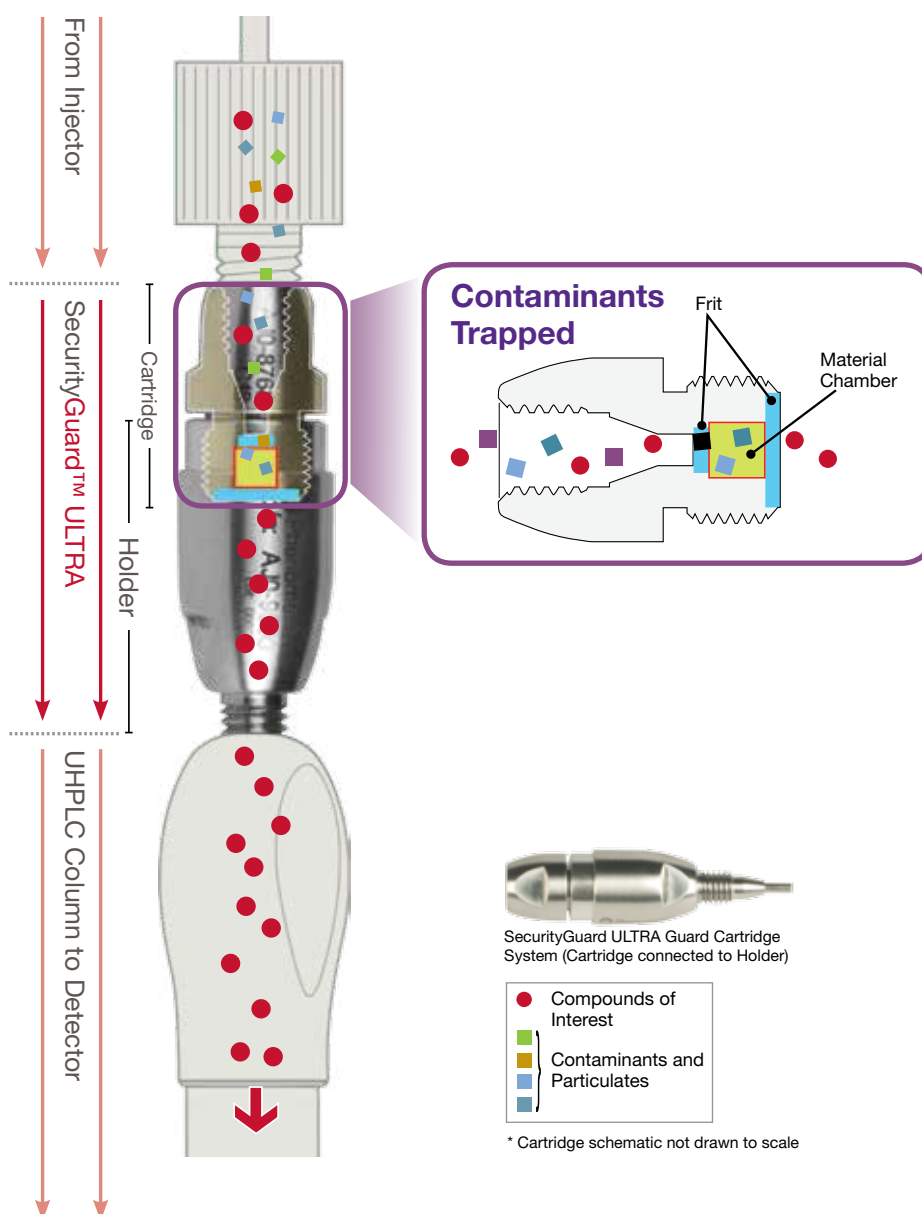
1. Estriol
2. Hydrocortisone
3. Prednisone
4. Cortisone
5. Corticosterone
6. β -Estradiol
7. Cortisone Acetate
8. 17-Hydroxyprogesterone
9. 21-Hydroxyprogesterone
10. Deoxycorticosterone



Protect Any UHPLC Column

Protect your UHPLC column, including Kinetex[®] core-shell columns, from damaging contaminants and microparticulates with the SecurityGuard ULTRA guard cartridge system!

- Simple to use
- Extend column lifetime
- Pressure rated to 20,000 psi (1,378 bar)
- Fits virtually all manufacturers' columns 2.1 to 4.6 mm ID



See it in action:
www.phenomenex.com/SecurityGuardULTRA

Ordering Information

5 µm Minibore Columns (mm)					SecurityGuard™ ULTRA Cartridges†
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
EVO C18	00A-4633-AN	00B-4633-AN	00D-4633-AN	00F-4633-AN	AJO-9298
F5	00A-4724-AN	00B-4724-AN	00D-4724-AN	00F-4724-AN	AJO-9322
Biphenyl	00A-4627-AN	00B-4627-AN	00D-4627-AN	—	AJO-9209
XB-C18	00A-4605-AN	00B-4605-AN	00D-4605-AN	—	AJO-8782
C18	00A-4601-AN	00B-4601-AN	00D-4601-AN	00F-4601-AN	AJO-8782
C8	—	00B-4608-AN	00D-4608-AN	—	AJO-8784
Phenyl-Hexyl	—	00B-4603-AN	00D-4603-AN	—	AJO-8788

for 2.1 mm ID

5 µm MidBore™ Columns (mm)				SecurityGuard ULTRA Cartridges†
Phases	50 x 3.0	100 x 3.0	150 x 3.0	3/pk
EVO C18	00B-4633-YO	00D-4633-YO	00F-4633-YO	AJO-9297
F5	00B-4724-YO	00D-4724-YO	00F-4724-YO	AJO-9321
Biphenyl	00B-4627-YO	00D-4627-YO	00F-4627-YO	AJO-9208
XB-C18	00B-4605-YO	00D-4605-YO	00F-4605-YO	AJO-8775
C18	00B-4601-YO	00D-4601-YO	00F-4601-YO	AJO-8775
C8	00B-4608-YO	00D-4608-YO	—	AJO-8777
Phenyl-Hexyl	00B-4603-YO	00D-4603-YO	—	AJO-8781

for 3.0 mm ID

5 µm Analytical Columns (mm)					SecurityGuard ULTRA Cartridges†
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	3/pk
EVO C18	00B-4633-E0	00D-4633-E0	00F-4633-E0	00G-4633-E0	AJO-9296
F5	00B-4724-E0	00D-4724-E0	00F-4724-E0	00G-4724-E0	AJO-9320
Biphenyl	00B-4627-E0	00D-4627-E0	00F-4627-E0	00G-4627-E0	AJO-9207
XB-C18	00B-4605-E0	00D-4605-E0	00F-4605-E0	00G-4605-E0	AJO-8768
C18	00B-4601-E0	00D-4601-E0	00F-4601-E0	00G-4601-E0	AJO-8768
C8	00B-4608-E0	00D-4608-E0	00F-4608-E0	00G-4608-E0	AJO-8770
Phenyl-Hexyl	00B-4603-E0	00D-4603-E0	00F-4603-E0	00G-4603-E0	AJO-8774

for 4.6 mm ID

5 µm Semi-Preparative Columns (mm)			SecurityGuard SemiPrep Cartridges***
Phases	150 x 10	250 x 10	10 x 10
EVO C18	00F-4633-N0	00G-4633-N0	AJO-9306
F5	—	00G-4724-N0	AJO-9323
C18	00F-4601-N0	00G-4601-N0	AJO-9278
Biphenyl	00F-4627-N0	00G-4627-N0	AJO-9280

for 10 mm ID

5 µm Axia™ Packed Preparative Columns (mm)					SecurityGuard PREP Cartridges*
Phases	50 x 21.2	100 x 21.2	150 x 21.2	250 x 21.2	15 x 21.2
EVO C18	00B-4633-P0-AX	00D-4633-P0-AX	00F-4633-P0-AX	00G-4633-P0-AX	AJO-9304
F5	—	—	00F-4724-P0-AX	00G-4724-P0-AX	AJO-9324
Biphenyl	00B-4627-P0-AX	00D-4627-P0-AX	00F-4627-P0-AX	00G-4627-P0-AX	AJO-9272
XB-C18	00B-4605-P0-AX	00D-4605-P0-AX	00F-4605-P0-AX	00G-4605-P0-AX	AJO-9145
C18	00B-4601-P0-AX	00D-4601-P0-AX	00F-4601-P0-AX	00G-4601-P0-AX	AJO-9145
C8	00B-4608-P0-AX	00D-4608-P0-AX	00F-4608-P0-AX	00G-4608-P0-AX	AJO-9205
Phenyl-Hexyl	00B-4603-P0-AX	00D-4603-P0-AX	00F-4603-P0-AX	00G-4603-P0-AX	AJO-9147
HILIC	—	00D-4606-P0-AX	00F-4606-P0-AX	00G-4606-P0-AX	AJO-9277

for 21.2 mm ID

† SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

* PREP SecurityGuard Cartridges require holder, Part No.: AJO-8223

** PREP SecurityGuard Cartridges require holder, Part No.: AJO-8277

*** SemiPrep SecurityGuard Cartridges require holder, Part No.: AJO-9281

5 µm Axia Packed Preparative Columns (mm)					SecurityGuard PREP Cartridges**
Phases	50 x 30	100 x 30	150 x 30	250 x 30	15 x 30
					/ea
EVO C18	00B-4633-U0-AX	00D-4633-U0-AX	00F-4633-U0-AX	00G-4633-U0-AX	AJO-9305
					/ea
F5	00B-4724-U0-AX	00D-4724-U0-AX	00F-4724-U0-AX	00G-4724-U0-AX	AJO-9325
Biphenyl	—	—	00F-4627-U0-AX	—	AJO-9273
XB-C18	00B-4605-U0-AX	00D-4605-U0-AX	00F-4605-U0-AX	00G-4605-U0-AX	AJO-9204
C18	00B-4601-U0-AX	00D-4601-U0-AX	00F-4601-U0-AX	00G-4601-U0-AX	AJO-9204
C8	00B-4608-U0-AX	00D-4608-U0-AX	00F-4608-U0-AX	00G-4608-U0-AX	AJO-9217
Phenyl-Hexyl	00B-4603-U0-AX	00D-4603-U0-AX	00F-4603-U0-AX	00G-4603-U0-AX	AJO-9216

for 30 mm ID

3.5 µm Analytical Columns (mm)			SecurityGuard ULTRA Cartridges†
Phases	100 x 4.6	150 x 4.6	3/pk
XB-C18	00D-4744-E0	00F-4744-E0	AJO-8768

for 4.6 mm ID

2.6 µm Microbore Columns (mm)			
Phases	50 x 1.0	100 x 1.0	150 x 1.0
XB-C18	00B-4496-A0	00D-4496-A0	00F-4496-A0

2.6 µm Minibore Columns (mm)						SecurityGuard™ ULTRA Cartridges†
Phases	30 x 2.1	50 x 2.1	75 x 2.1	100 x 2.1	150 x 2.1	3/pk
EVO C18	00A-4725-AN	00B-4725-AN	—	00D-4725-AN	00F-4725-AN	AJO-9298
Polar C18	00A-4759-AN	00B-4759-AN	—	00D-4759-AN	00F-4759-AN	AJO-9532
F5	00A-4723-AN	00B-4723-AN	—	00D-4723-AN	00F-4723-AN	AJO-9322
Biphenyl	00A-4622-AN	00B-4622-AN	—	00D-4622-AN	00F-4622-AN	AJO-9209
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
C8	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-8786
Phenyl-Hexyl	00A-4495-AN	00B-4495-AN	00C-4495-AN	00D-4495-AN	00F-4495-AN	AJO-8788

for 2.1 mm ID

2.6 µm MidBore™ Columns (mm)						SecurityGuard ULTRA Cartridges†
Phases	30 x 3.0	50 x 3.0	75 x 3.0	100 x 3.0	150 x 3.0	3/pk
EVO C18	—	00B-4725-Y0	—	00D-4725-Y0	00F-4725-Y0	AJO-9297
Polar C18	—	00B-4759-Y0	—	00D-4759-Y0	00F-4759-Y0	AJO-9531
F5	—	00B-4723-Y0	—	00D-4723-Y0	00F-4723-Y0	AJO-9321
Biphenyl	—	00B-4622-Y0	—	00D-4622-Y0	00F-4622-Y0	AJO-9208
XB-C18	00A-4496-Y0	00B-4496-Y0	00C-4496-Y0	00D-4496-Y0	00F-4496-Y0	AJO-8775
C18	00A-4462-Y0	00B-4462-Y0	00C-4462-Y0	00D-4462-Y0	00F-4462-Y0	AJO-8775
C8	00A-4497-Y0	00B-4497-Y0	00C-4497-Y0	00D-4497-Y0	00F-4497-Y0	AJO-8777
HILIC	00A-4461-Y0	—	—	—	00F-4461-Y0	AJO-8779
Phenyl-Hexyl	—	00B-4495-Y0	—	00D-4495-Y0	00F-4495-Y0	AJO-8781

for 3.0 mm ID

† SecurityGuard ULTRA Cartridges require holder, Part No.: AJO-9000

* PREP SecurityGuard Cartridges require holder, Part No.: AJO-8223

** PREP SecurityGuard Cartridges require holder, Part No.: AJO-8277

*** SemiPrep SecurityGuard Cartridges require holder, Part No.: AJO-9281

2.6 µm Analytical Columns (mm)						SecurityGuard ULTRA Cartridges [†]
Phases	30 x 4.6	50 x 4.6	75 x 4.6	100 x 4.6	150 x 4.6	3/pk
EVO C18	—	00B-4725-E0	—	00D-4725-E0	00F-4725-E0	AJ0-9296
Polar C18	—	00B-4759-E0	—	00D-4759-E0	00F-4759-E0	AJ0-9530
F5	—	00B-4723-E0	—	00D-4723-E0	00F-4723-E0	AJ0-9320
Biphenyl	—	00B-4622-E0	—	00D-4622-E0	00F-4622-E0	AJ0-9207
XB-C18	—	00B-4496-E0	00C-4496-E0	00D-4496-E0	00F-4496-E0	AJ0-8768
C18	00A-4462-E0	00B-4462-E0	00C-4462-E0	00D-4462-E0	00F-4462-E0	AJ0-8768
C8	—	00B-4497-E0	00C-4497-E0	00D-4497-E0	00F-4497-E0	AJ0-8770
HILIC	—	00B-4461-E0	00C-4461-E0	00D-4461-E0	00F-4461-E0	AJ0-8772
Phenyl-Hexyl	—	00B-4495-E0	00C-4495-E0	00D-4495-E0	00F-4495-E0	AJ0-8774

for 4.6 mm ID

1.7 µm Minibore Columns (mm)					SecurityGuard ULTRA Cartridges [†]
Phases	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1	3/pk
EVO C18	—	00B-4726-AN	00D-4726-AN	00F-4726-AN	AJ0-9298
F5	—	00B-4722-AN	00D-4722-AN	00F-4722-AN	AJ0-9322
Biphenyl	—	00B-4628-AN	00D-4628-AN	00F-4628-AN	AJ0-9209
XB-C18	00A-4498-AN	00B-4498-AN	00D-4498-AN	00F-4498-AN	AJ0-8782
C18	00A-4475-AN	00B-4475-AN	00D-4475-AN	00F-4475-AN	AJ0-8782
C8	00A-4499-AN	00B-4499-AN	00D-4499-AN	00F-4499-AN	AJ0-8784
HILIC	00A-4474-AN	00B-4474-AN	00D-4474-AN	—	AJ0-8786
Phenyl-Hexyl	—	00B-4500-AN	00D-4500-AN	00F-4500-AN	AJ0-8788

for 2.1 mm ID

1.7 µm MidBore Columns (mm)				SecurityGuard ULTRA Cartridges [†]
Phases	30 x 3.0	50 x 3.0	100 x 3.0	3/pk
XB-C18	00A-4498-Y0	00B-4498-Y0	00D-4498-Y0	AJ0-8775
C18	—	00B-4475-Y0	00D-4475-Y0	AJ0-8775
C8	00A-4499-Y0	00B-4499-Y0	00D-4499-Y0	AJ0-8777
HILIC	—	00B-4474-Y0	—	AJ0-8779

for 3.0 mm ID

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

[†] SecurityGuard ULTRA Cartridges require holder, Part No.: AJ0-9000.

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If you are not completely satisfied with Kinetex core-shell columns, send in your comparative data to a similar product with the Kinetex column within 45 days for a FULL REFUND.

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Comparative separations may not be representative of all applications.

Axia column and packing technology is patented by Phenomenex. U.S. Patent No. 7, 674, 383

Kinetex EVO is patented by Phenomenex. U.S. Patent Nos. 7,563,367 and 8,658,038 and foreign counterparts.

The opinions stated herein are solely those of the speaker and not necessarily those of any company or organization.

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These Phases ROCK Your LC Laboratory



Australia

t: +61 (0)2-9428-6444
f: +61 (0)2-9428-6445
auinfo@phenomenex.com

Austria

t: +43 (0)1-319-1301
f: +43 (0)1-319-1300
anfrage@phenomenex.com

Belgium

t: +32 (0)2 503 4015 (French)
t: +32 (0)2 511 8666 (Dutch)
f: +31 (0)30-2383749
beinfo@phenomenex.com

Canada

t: +1 (800) 543-3681
f: +1 (310) 328-7768
info@phenomenex.com

China

t: +86 400-606-8099
f: +86 (0)22 2532-1033
phen@agela.com

Denmark

t: +45 4824 8048
f: +45 4810 6265
nordicinfo@phenomenex.com

Finland

t: +358 (0)9 4789 0063
f: +45 4810 6265
nordicinfo@phenomenex.com

France

t: +33 (0)1 30 09 21 10
f: +33 (0)1 30 09 21 11
franceinfo@phenomenex.com

Germany

t: +49 (0)6021-58830-0
f: +49 (0)6021-58830-11
anfrage@phenomenex.com

India

t: +91 (0)40-3012 2400
f: +91 (0)40-3012 2411
indiainfo@phenomenex.com

Ireland

t: +353 (0)1 247 5405
f: +44 1625-501796
eireinfo@phenomenex.com

Italy

t: +39 051 6327511
f: +39 051 6327555
italiainfo@phenomenex.com

Luxembourg

t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

Mexico

t: 01-800-844-5226
f: 001-310-328-7768
tecnicomx@phenomenex.com

The Netherlands

t: +31 (0)30-2418700
f: +31 (0)30-2383749
nlinfo@phenomenex.com

New Zealand

t: +64 (0)9-4780951
f: +64 (0)9-4780952
nzinfo@phenomenex.com

Norway

t: +47 810 02 005
f: +45 4810 6265
nordicinfo@phenomenex.com

Puerto Rico

t: +1 (800) 541-HPLC
f: +1 (310) 328-7768
info@phenomenex.com

Spain

t: +34 91-413-8613
f: +34 91-413-2290
espinfo@phenomenex.com

Sweden

t: +46 (0)8 611 6950
f: +45 4810 6265
nordicinfo@phenomenex.com

United Kingdom

t: +44 (0)1625-501367
f: +44 (0)1625-501796
ukinfo@phenomenex.com

USA

t: +1 (310) 212-0555
f: +1 (310) 328-7768
info@phenomenex.com

All other countries Corporate Office USA

t: +1 (310) 212-0555
f: +1 (310) 328-7768
info@phenomenex.com