

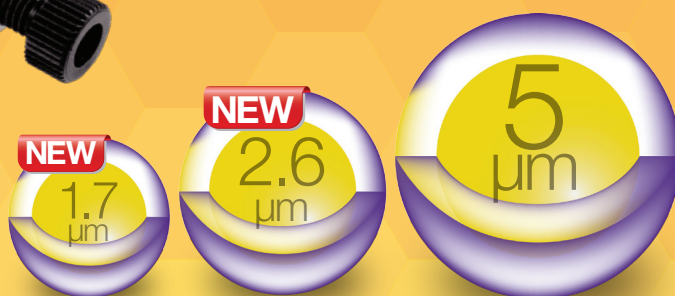
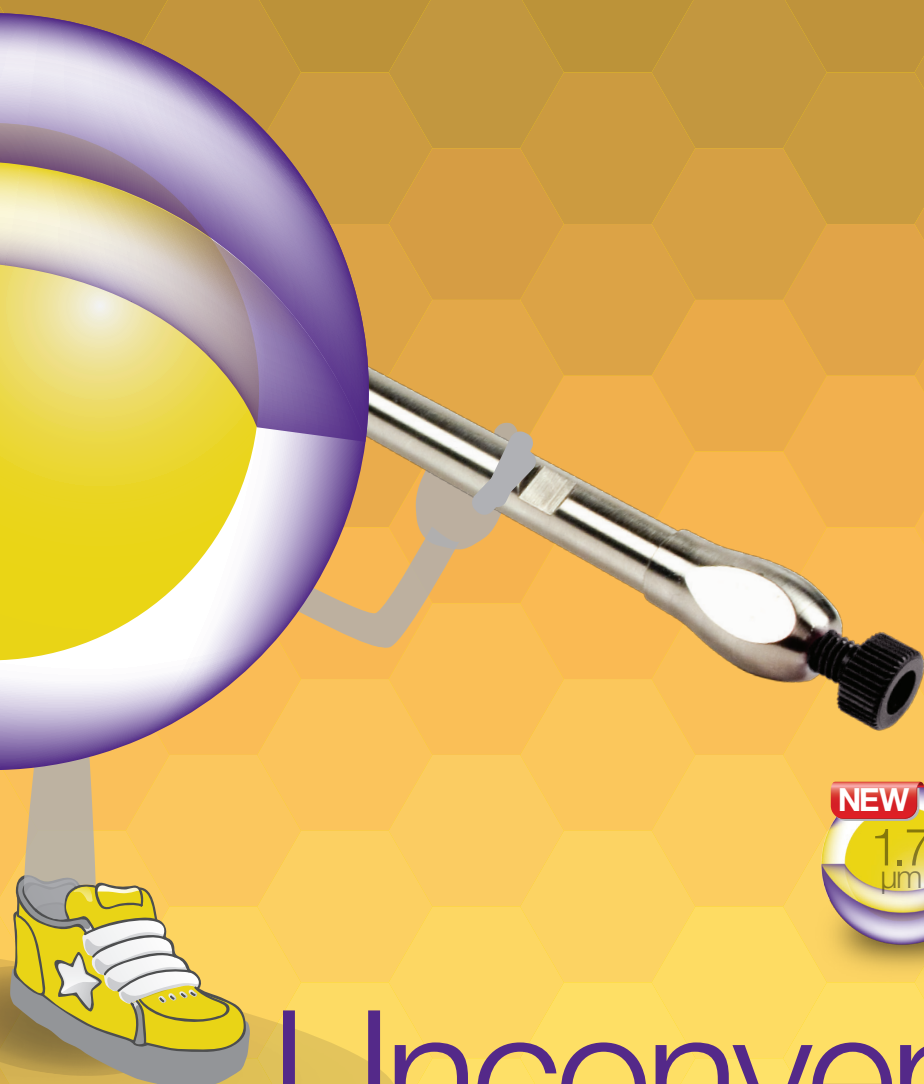


KINETEX[®]
Core-Shell Technology

Kinetex EVO C18

HPLC/UHPLC Core-Shell Columns

- Greater Polar Retention with 100% Aqueous Stability
- Robust Methods from pH 1-12
- Improved Peak Shape for Bases



Unconventionally Awesome!

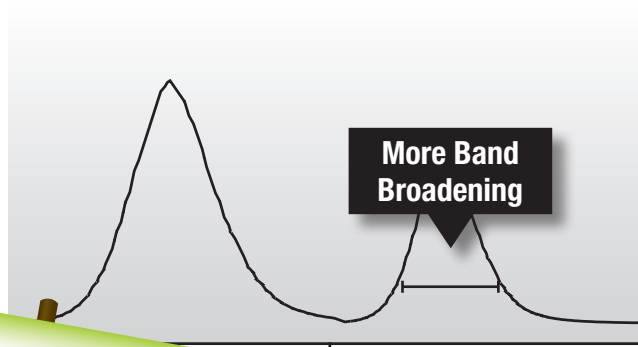
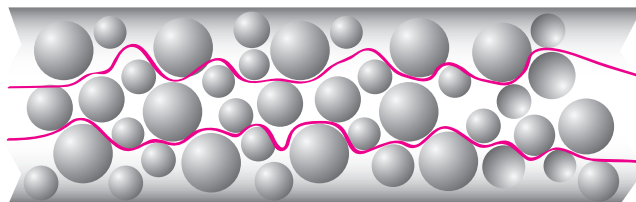
phenomenex[®]
...breaking with traditionSM



THE PAST

Fully Porous

You used to have to deal with chromatographic band broadening, low sensitivity, and long run times caused by classical fully porous silica.



**And don't forget about
system dependency and
extremely high back-
pressure caused by me!**

**Sub-
2 μm**

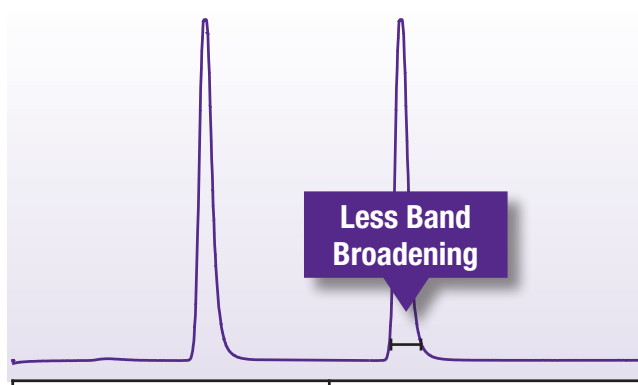
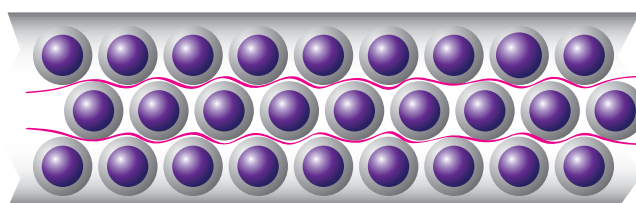
TM

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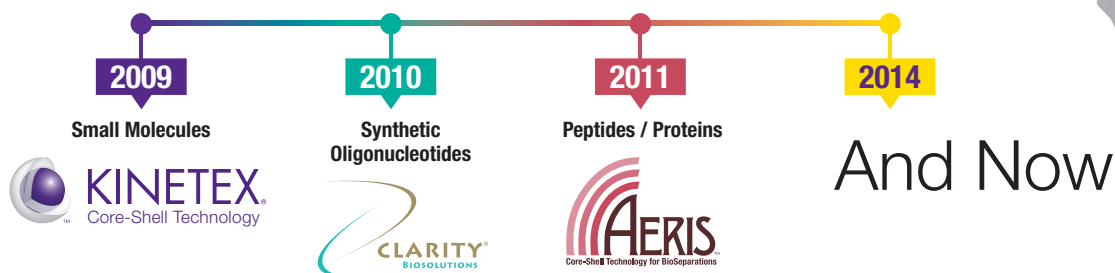
THE PRESENT

Core-Shell Technology

That was until Phenomenex, the leading Core-Shell Technology developer and manufacturer, came to liberate you with core-shell particles for each of your specific techniques and applications.



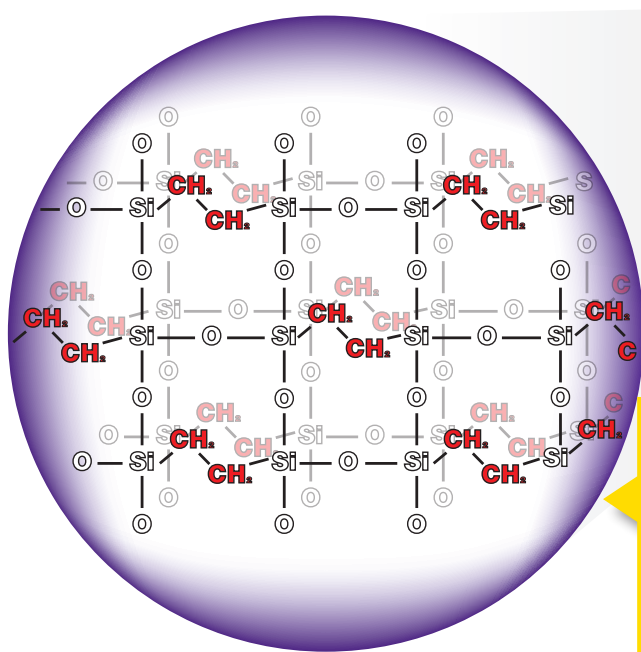
- **Improved Results**
- **Increased Productivity**
- **Easy Transferability**
- **Significant Cost Savings**



AMAZING NEW KINETEX EVO, NOW!

Introducing Kinetex® EVO C18

This is truly the next step in the evolution of the chromatographic particle. With Kinetex EVO C18 you now have the freedom to achieve improved results, cost savings, and overall higher productivity at low, neutral, and high pH!



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.

- Develop robust methods from pH 1-12
- Get improved peak shape for bases
- Easily reduce run times and increase sensitivity

What emotion will Kinetex EVO C18 bring out in you ...



STRENGTHpp. 6-7	pH Stability
TRUSTpp. 8-9	Rugged & Reproducible
PRIDEpp. 10-11	Better Peak Shape
CONFIDENCEpp. 12-13	Excellent Loadability & Separation Power
HAPPINESSpp. 14-17	Incredibly High Efficiency
WONDERpp. 18-19	Increased Sensitivity
DESIREpp. 20-21	Novel Selectivity
ZESTpp. 22-23	Preparative LC
LOVEpp. 24-27	Ordering Information

	UHPLC	HPLC	PREP	
				20% higher efficiency than fully porous 1.7 µm columns
				Achieve sub-2 µm performance on HPLC and UHPLC systems
				3 µm or better efficiencies at 5 µm pressures for HPLC and PREP LC methods

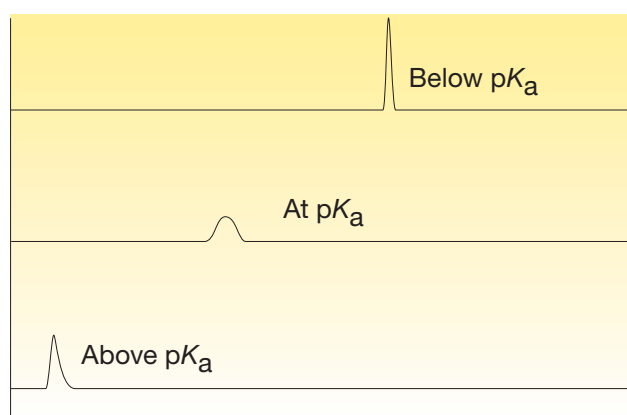
STRENGTH

pH at Your Control

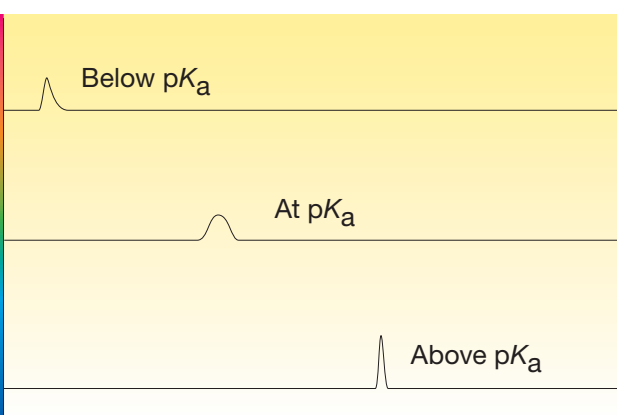
While low pH mobile phases are quite useful, once the door to both low and high pH is opened, your method development options rapidly increase.

The illustrations below exemplify how easy it can be to influence the retention behavior and peak shape of ionizable compounds by adjusting your mobile phase pH.

Effects of mobile phase pH on Acids



Effects of mobile phase pH on Bases



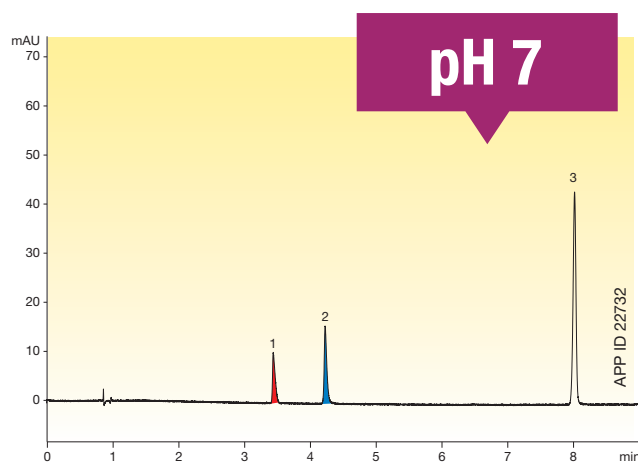
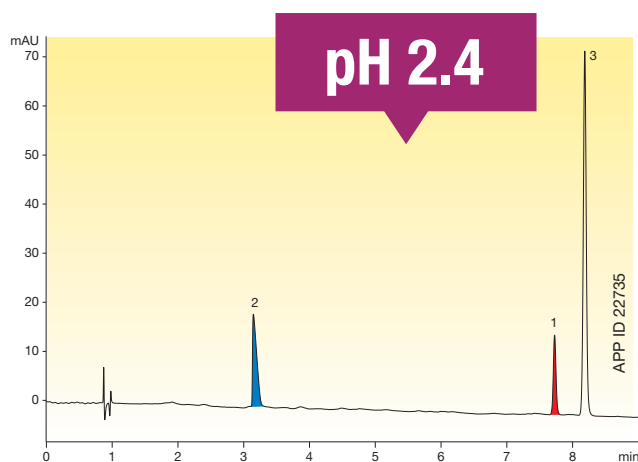
Use my pH 1-12 stability to influence retention of acids and bases!



STRENGTH

Show Those Peaks Who's Boss

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.



Conditions for all columns:

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

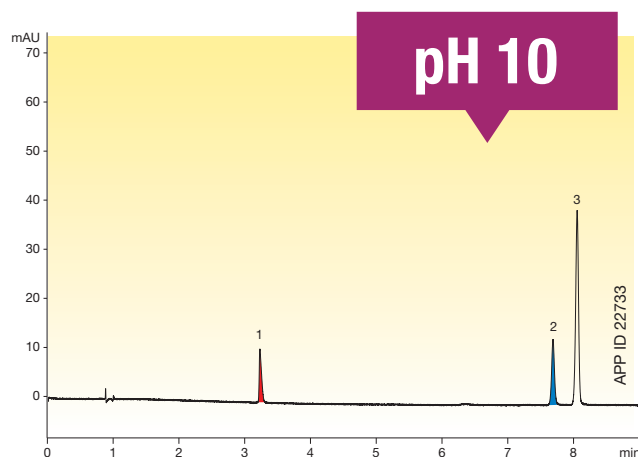
Gradient: 20-75 % B in 10 minutes

Flow Rate: 1.5 mL/min

Temperature: 30 °C

Detection: UV @ 254 nm

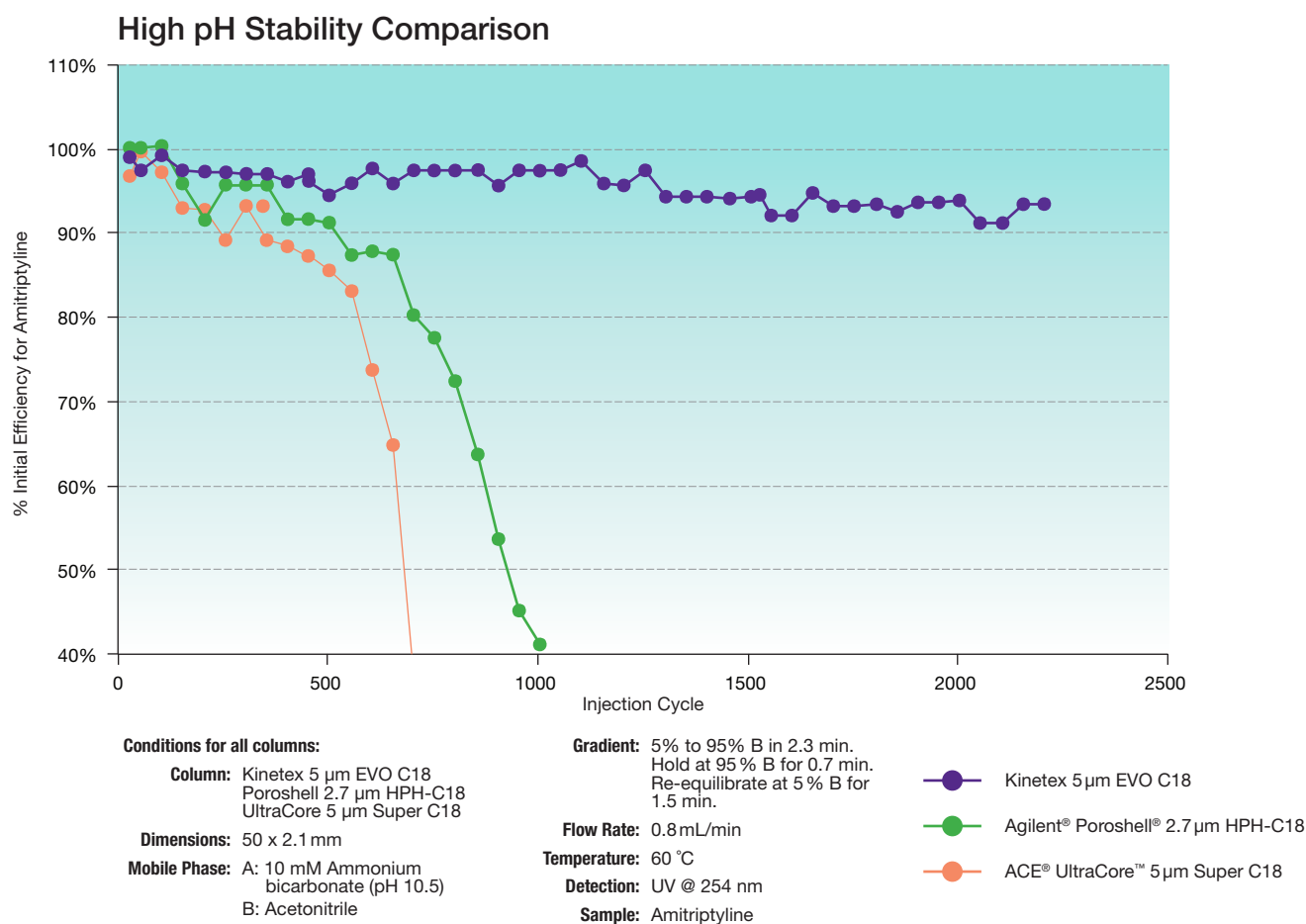
Sample:
1. Ibuprofen
2. Diphenhydramine
3. Ethyl Benzene



TRUST

Rugged and Wonderful

With its unique chemistry, the Kinetex® EVO C18 particle ensures improved pH stability at alkaline mobile phase conditions along with amazing core-shell performance. It's time for you to expand your method development options and go where other core-shell products can't!



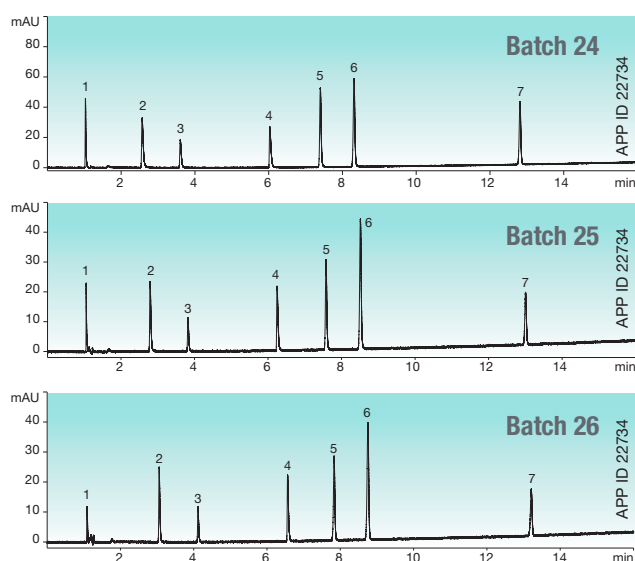
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TRUST

Dependability Batch-to-Batch, Column-to-Column

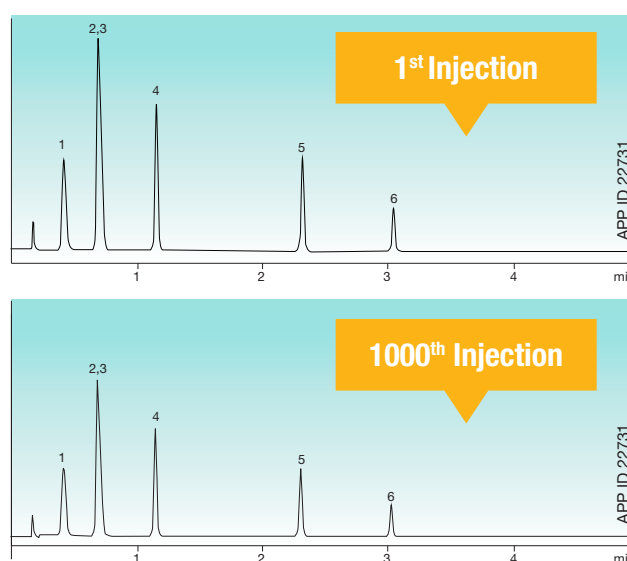
Exceptionally rigorous quality control and manufacturing steps ensure that Kinetex EVO C18 columns deliver the pinnacle of performance values and mechanical strength time after time. Simply put, that's reproducibility that you can trust and feel at ease with!

One of Many Internal Batch/Column QC Tests



Column: Kinetex 5 μ m EVO C18
Dimensions: 150 x 4.6 mm
Part No.: 00F-4633-E0
Mobile Phase: A: 0.1 % Formic acid in Water
 B: 0.1 % Formic acid in Acetonitrile
Gradient: 5-95 % B in 17.76 minutes
Flow Rate: 1.25 mL/min
Temperature: 30 °C
Detection: UV @ 254 nm
Sample: 1. Uracil
 2. Pindolol
 3. Chlorpheniramine
 4. Nortriptyline
 5. 3-Methyl-4-Nitrobenzoic acid
 6. 2-Hydroxy, 5-methylbenzaldehyde
 7. Hexanophenone

Customer Example – Run-to-Run Consistency



Column: Kinetex 5 μ m EVO C18
Dimensions: 50 x 2.1 mm
Part No.: 00B-4633-AN
Mobile Phase: A: 0.1 % Ethanolamine in Water (pH~10.5)
 B: 0.1 % Ethanolamine in Acetonitrile

Gradient:	Time (min)	% B
	0	10
	5	90

Flow Rate: 0.5 mL/min
Temperature: 40 °C
Detection: UV @ 230 nm
Sample: 1. Pyridine
 2. Aniline
 3. Unknown peak
 4. Benzyl alcohol
 5. Toluene
 6. Unknown peak

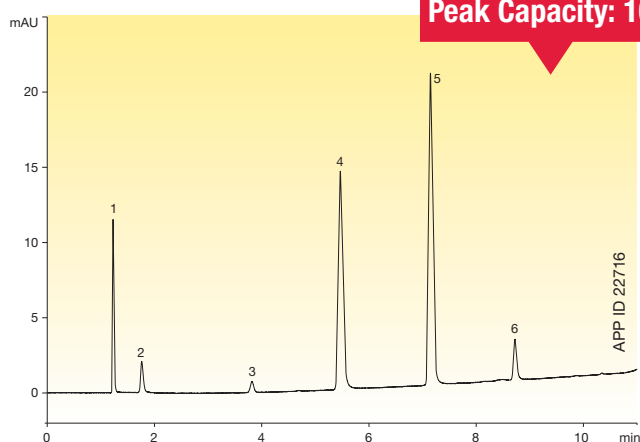
Data Courtesy of: Róbert Kormány, Egis Pharmaceuticals Plc., Hungary

PRIDE

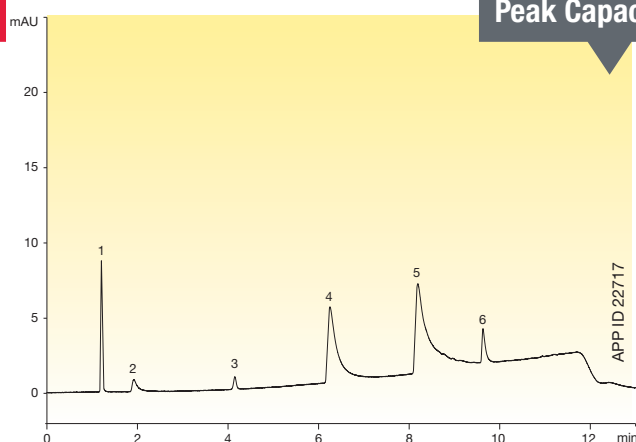
Wow! Look at Those Marvelous Peak Shapes!

You're going to be the talk of the lab and department when you switch to Kinetex® EVO C18 for your basic compound analyses. The unique organo-silica layer of ethane cross-linking found within each Kinetex EVO C18 particle creates a highly inert surface which provides the additional benefit of better peak shape for bases.

**Kinetex 5µm EVO
C18 150 x 4.6 mm**



**Supelco® Ascentis® Express
5µm C18 150 x 4.6 mm**



Conditions for all columns:

Column: Kinetex 5µm EVO C18
Ascentis Express 5µm C18

Dimensions: 150 x 4.6 mm

Mobile Phase: A: 20 mM Sodium phosphate dehydrate pH 7.0
B: Methanol

Gradient: 40% to 90% B over 10 minutes

Flow Rate: 1 mL/min

Temperature: Ambient

Detection: UV @ 254 nm

Sample: 1. Maleate
2. Pseudoephedrine
3. Scopolamine
4. Doxylamine
5. Chlorpheniramine
6. Diphenhydramine

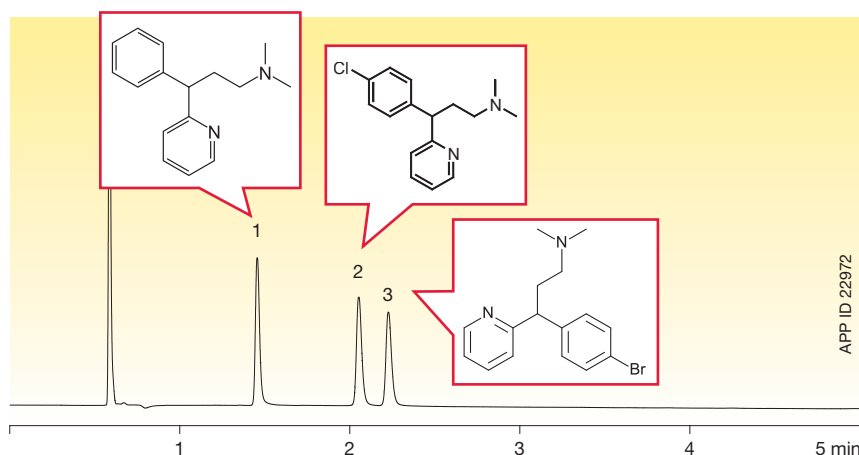
Ascentis and Supelco are registered trademarks of Sigma-Aldrich Co. Phenomenex is not affiliated with any of the above listed companies. Comparative separations may not be representative of all applications.

PRIDE

Amazing Ruggedness and Versatility

Even with the similar structured halogenated derivatives of a basic drug, resolution comes easy with the Kinetex EVO C18. The ability to use a high pH mobile phase in combination with the high efficiency and excellent peak shape given by the Kinetex EVO C18 column means that you now have the ultimate HPLC/UHPLC tool for basic compound analysis.

Kinetex 2.6µm EVO C18 150 x 4.6 mm



Are your columns stable from pH 1-12?
I AM!!!

Column: Kinetex 2.6µm EVO C18
Dimensions: 150 x 4.6 mm
Part No.: 00F-4725-E0
Mobile Phase: A: 10 mM Ammonium bicarbonate (pH 10.2)
 B: Acetonitrile
Gradient:

Time (min)	% B
0	50
4	60

Flow Rate: 1.25 mL/min
Temperature: Ambient
Detection: UV @ 210 nm
Sample: 1. Pheniramine
 2. Chlorpheniramine
 3. Brompheniramine

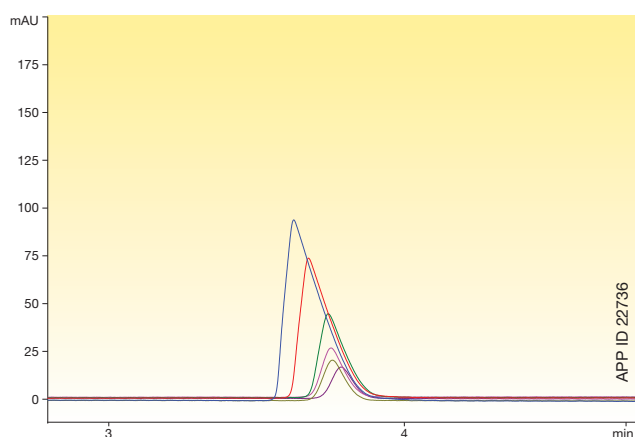


CONFIDENCE

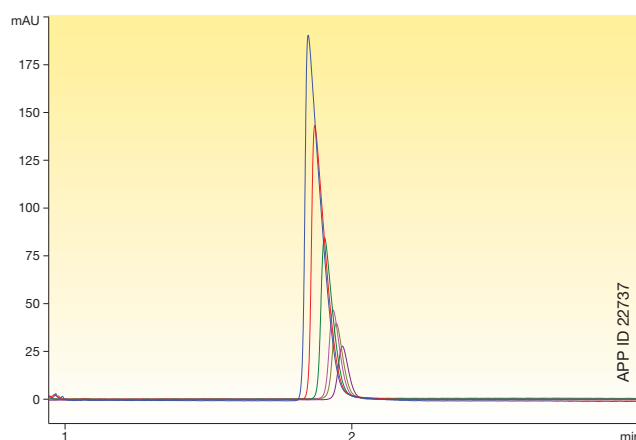
Do More Load-to-Load

Use Kinetex EVO C18 columns to avoid the effects of peak shape distortion for bases that traditional fully porous and core-shell columns display. Even across multiple loading conditions, sharp compound peak shape is kept consistently good and strong using a Kinetex EVO C18 LC column.

Core-Shell 5 μ m C18



Kinetex 5 μ m EVO C18



Conditions for all columns:

Column: Kinetex 5 μ m EVO C18
Core-Shell 5 μ m C18

Dimensions: 150 x 4.6 mm

Mobile Phase: 0.1 % TFA in Water / 0.1 % TFA in Acetonitrile (40:60)

Flow Rate: 1.5 mL/min

Temperature: 40 °C

Detection: UV @ 254 nm

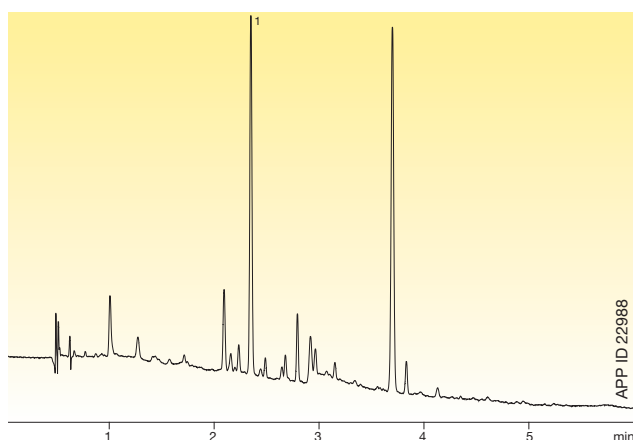
Sample: 1 μ g to 10 μ g Loads of Nortriptyline

CONFIDENCE

More Resolution and More Peaks

Utilize the amazing performance gains of Kinetex EVO C18 columns to achieve more resolution between the peaks you really care about. Now you can better identify and quantitate low-level metabolites, degradedants, or even post-translationally modified peptides.

Cefaclor Forced Degradation

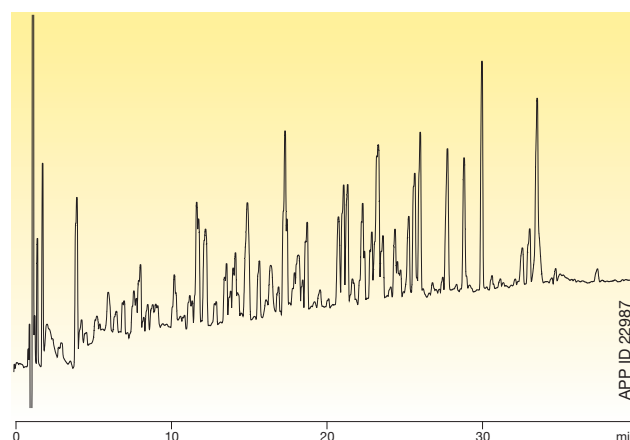


Column: Kinetex 2.6µm EVO C18
Dimensions: 100 x 4.6mm
Part No.: 00D-4725-E0
Mobile Phase: A: 0.1% H₃PO₄ in Water
 B: 0.1% H₃PO₄ in Acetonitrile
Gradient:

Time (min)	% B
0	5
6	40

Flow Rate: 1.75mL/min
Temperature: Ambient
Detection: UV @ 254 nm
Sample: 1. Cefaclor

Phosphorylase B Peptide Map



Column: Kinetex 2.6µm EVO C18
Dimensions: 150 x 4.6mm
Part No.: 00F-4725-E0
Mobile Phase: A: 0.1% TFA/2% Acetonitrile in Water
 B: 0.1% TFA/Acetonitrile (10:90)
Gradient:

Time (min)	% B
0	2
68	70

Flow Rate: 1.5mL/min
Temperature: 60 °C
Detection: UV @ 214 nm (Ambient)
Sample: Phosphorylase B Peptide Map



Need even more resolving power?

Try out the stunning Kinetex 1.7µm EVO C18 UHPLC particle!

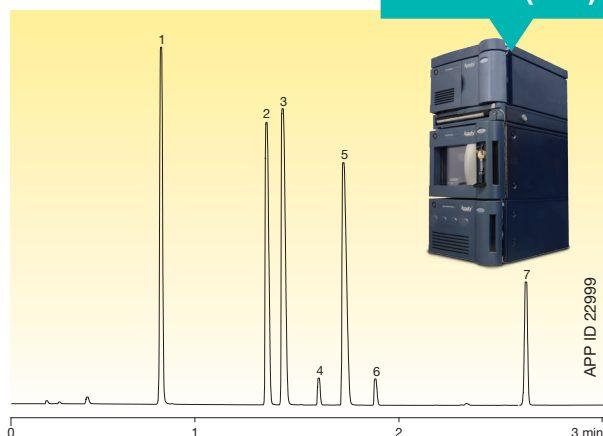
HAPPINESS

Easy Transfer Between All Your LC Instrumentation

The cross-particle scalability of Kinetex EVO C18 (from 5 μ m to 2.6 μ m to 1.7 μ m) particles sets it apart from other core-shell products outside the Kinetex product family. Now you can smoothly scale core-shell pH 1-12 methods from UHPLC to HPLC to Preparative HPLC. Imagine how much development time this will help save within your lab and even between other lab locations.

Kinetex 1.7 μ m EVO C18 50 x 2.1 mm

Fast UHPLC Method (R&D)



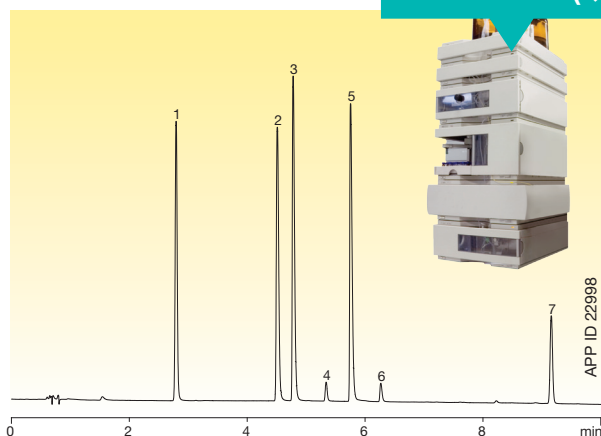
Column: Kinetex 1.7 μ m EVO C18
Dimensions: 50 x 2.1 mm
Part No.: 00B-4726-AN
Mobile Phase: A: 20 mM Potassium phosphate (pH 2.5)
 B: Acetonitrile

Gradient	Time (min)	% B
	0	5
	5	95
	6	95
	6.5	5
	10	5

Flow Rate: 0.4 mL/min
Temperature: 22 °C
System: Waters® ACQUITY® UPLC®
Detection: UV @ 210 nm
Sample: 1. 4-Hydroxybenzoic Acid
 2. Labetolol
 3. Propanolol
 4. Citalopram
 5. Protriptyline
 6. Paroxetine
 7. Ibuprofen

Kinetex 5 μ m EVO C18 150 x 4.6 mm

Low Pressure HPLC Method (QC)



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 (pH 2.5)
 B: Acetonitrile

Gradient	Time (min)	% B
	0	5
	15	95
	17	95
	17.5	5
	20	5

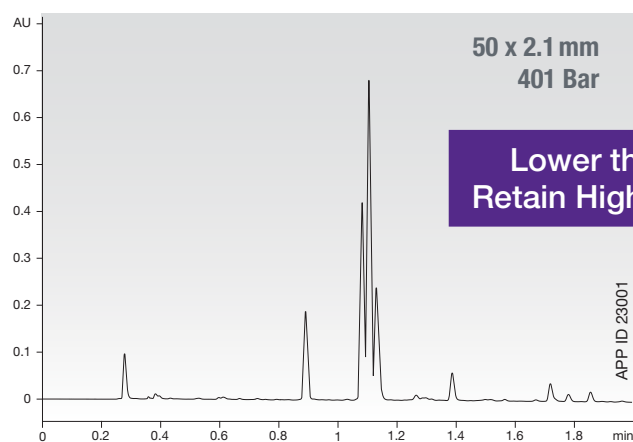
Flow Rate: 2 mL/min
Temperature: 22 °C
System: Agilent 1100
Detection: UV @ 210 nm
Sample: 1. 4-Hydroxybenzoic Acid
 2. Labetolol
 3. Propanolol
 4. Citalopram
 5. Protriptyline
 6. Paroxetine
 7. Ibuprofen

HAPPINESS

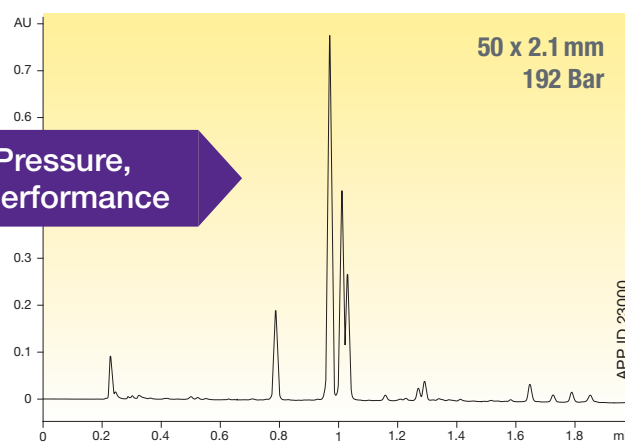
A Simple Upgrade for Potential Greater Performance!

For scientists who are interested in high performance and fast run times, 2.6µm Kinetex EVO C18 columns are an amazing UHPLC solution. Start by matching a Kinetex 2.6µm column to the sub-2µm column you're currently using. With lower backpressure and similar or better performance, you'll then have three options: keep the lower pressure for less system strain, increase the flow for higher productivity, or utilize a longer column length to increase potential resolving power.

Waters® ACQUITY® BEH™ 1.7µm C18



Kinetex 2.6µm EVO C18



Lower the Pressure,
Retain High Performance

Conditions for all columns unless otherwise noted:

Column: Kinetex 2.6µm EVO C18
ACQUITY BEH 1.7µm C18

Dimensions: 50 x 2.1 mm

Mobile Phase: A: 20 mM Potassium phosphate (pH 2.5)
B: Acetonitrile

Gradient:	Time (min)	% B
	0	5
	5	70
	6	70
	6.5	5
	10	5

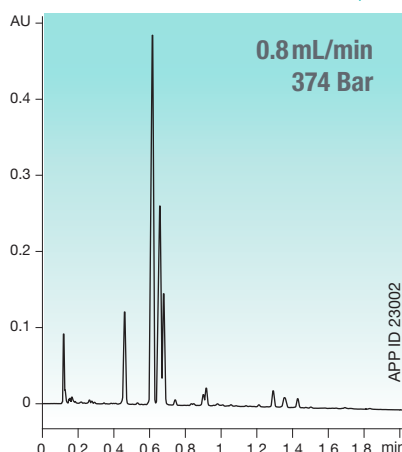
Flow Rate: 0.4 mL/min

Temperature: 22 °C

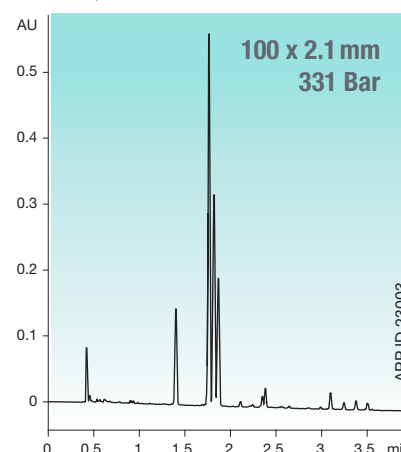
Detection: UV @ 210 nm

Sample: 1. Green Coffee Extract
(Chlorogenic Acid and Antioxidants)

Higher Flow Rate,
Increased Productivity



Longer Column,
Increased Resolution

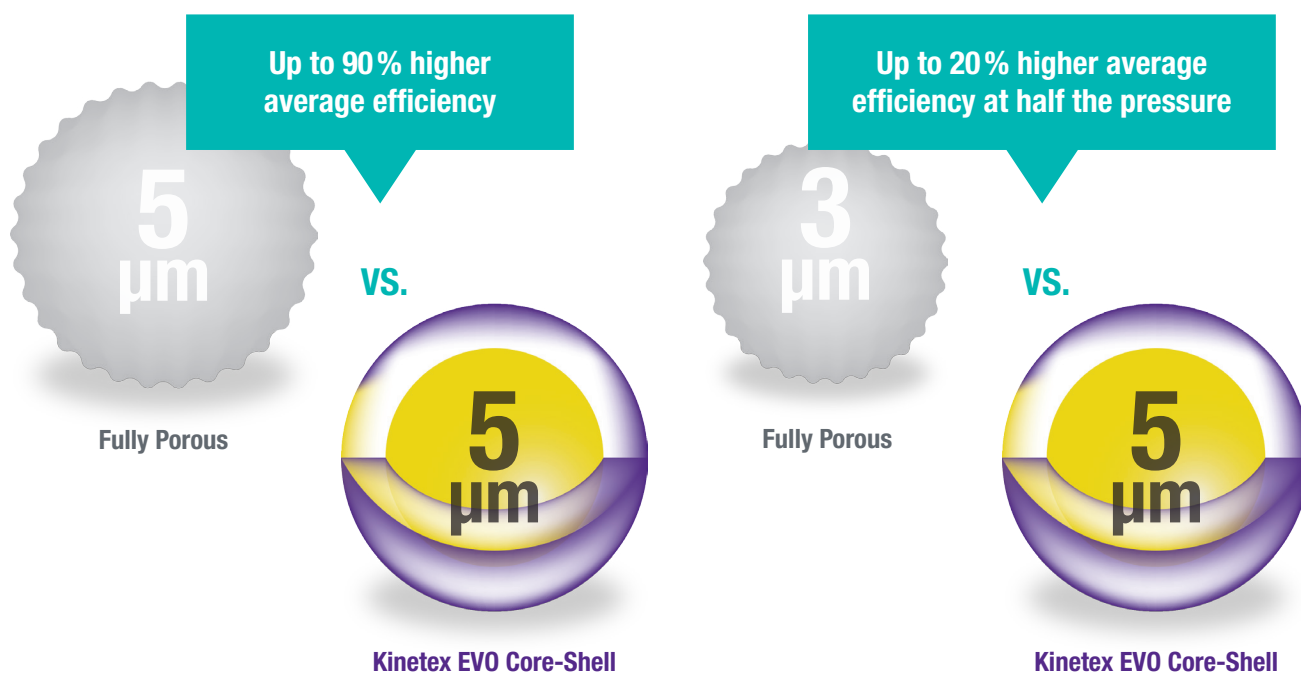


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HAPPINESS

Instant Improvement of 5 μm and 3 μm Methods

Now you can cheerfully improve the resolution, productivity, and sensitivity of your current 3 μm and 5 μm methods using Kinetex® 5 μm EVO C18 Core-Shell Technology. This revolutionary core-shell particle was specifically developed to give you great performance and true pH durability at very low HPLC backpressures.

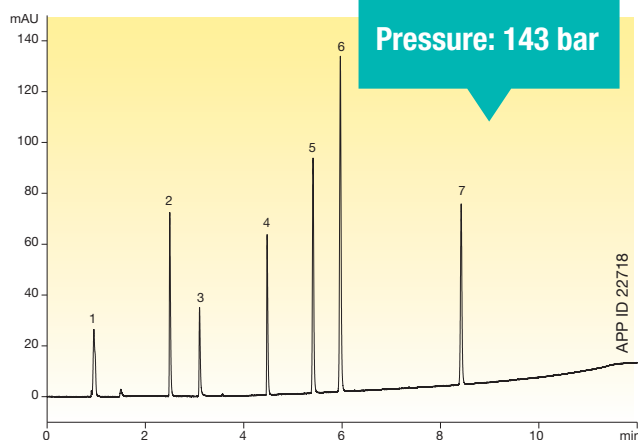


HAPPINESS

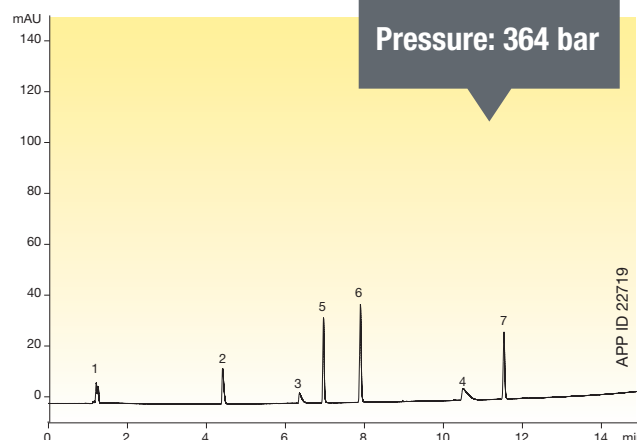
Drop in a Kinetex 5 μ m EVO C18 Column to Start Smiling

With the combination of rugged pH stability from 1-12 and the core-shell performance advantage, you can easily replace old hybrid silica columns and gain immediate method improvements without increasing backpressure. It's time to let chromatography cheer appear!

**Kinetex 5 μ m EVO
C18 150 x 4.6 mm**



**Waters® XBridge® 3.5 μ m
C18 150 x 4.6 mm**



Conditions for all columns:

Column: Kinetex 5 μ m EVO C18
 XBridge 5 μ m C18
 XBridge 3.5 μ m C18

Dimensions: 150 x 4.6 mm

Mobile Phase: A: 0.1 % Formic acid in Water
 B: 0.1 % Formic acid in Acetonitrile

Gradient: 5 % to 95 % B over 10 minutes

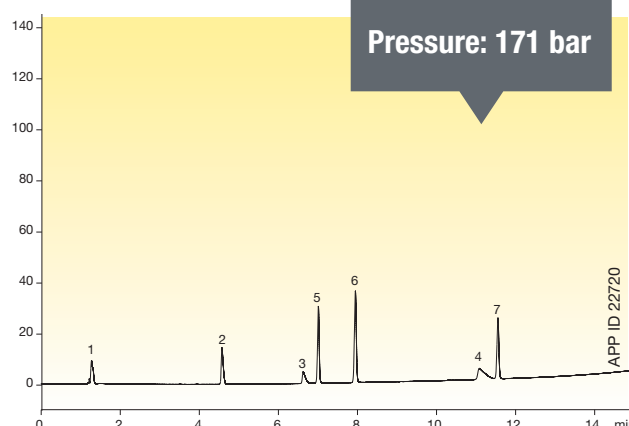
Flow Rate: 1.5 mL/min

Temperature: Ambient

Detection: UV @ 254 nm

Sample: 1. Uracil
 2. Pindolol
 3. Chlorpheniramine
 4. Nortriptyline
 5. 3-Methyl-4-Nitrobenzoic acid
 6. 5-Methyl Salicyl Aldehyde
 7. Hexaphenone

**Waters XBridge 5 μ m
C18 150 x 4.6 mm**

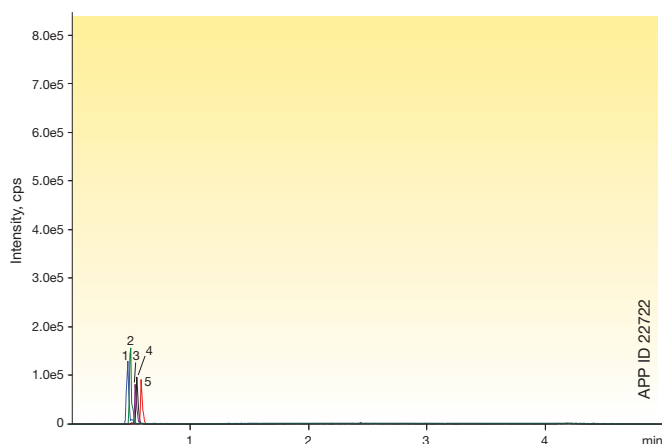


WONDER

Imagine No Suppression

Ever have that moment of panic when polar analytes elute way too early in low or neutral pH mobile phases? It's time to put that worry to rest and marvel at the way you can use the enhanced pH stability of Kinetex® EVO C18 columns to dramatically improve the retention of polar, basic compounds.

Low pH



Column: Kinetex 5µm EVO C18

Dimensions: 100 x 3.0mm

Part No.: 00D-4633-Y0

Mobile Phase: A: 0.1 % Formic acid in Water
B: 0.1 % Formic acid in Methanol

Gradient:	Time (min)	% B
	0	10
	3	90
	3.1	10
	5	10

Flow Rate: 0.75 mL/min

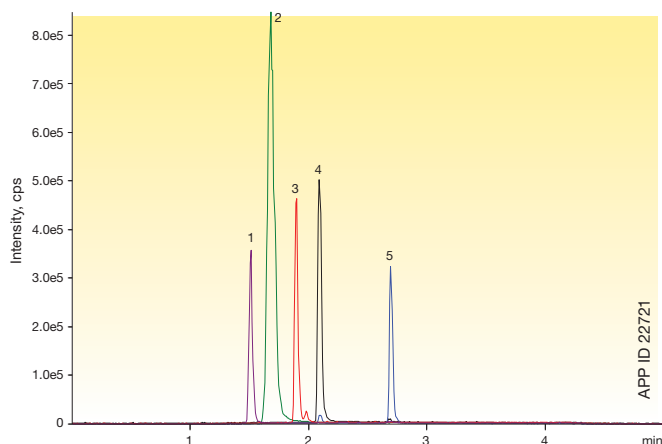
Temperature: Ambient

Detection: MS @ 254 amu (ambient)

Detector: AB SCIEX API 4000™

Sample: 1. 3-Hydroxycotinine
2. Nornicotine
3. Cotinine
4. Anabasine
5. Nicotine

High pH



Column: Kinetex 5µm EVO C18

Dimensions: 100 x 3.0mm

Part No.: 00D-4633-Y0

Mobile Phase: A: 20 mM Ammonium bicarbonate (unadjusted pH ~8.2)
B: Methanol

Gradient:	Time (min)	% B
	0	10
	3	90
	3.1	10
	5	10

Flow Rate: 0.75 mL/min

Temperature: Ambient

Detection: MS @ 254 amu (ambient)

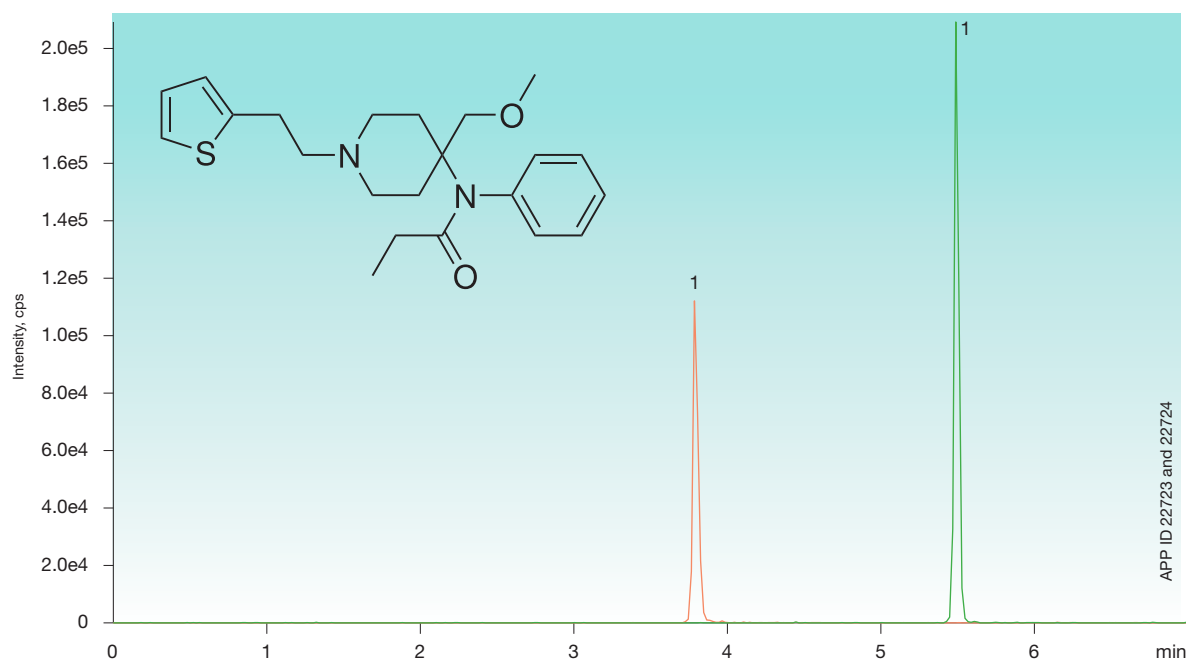
Detector: AB SCIEX API 4000™

Sample: 1. 3-Hydroxycotinine
2. Nornicotine
3. Cotinine
4. Anabasine
5. Nicotine

WONDER

Increased Sensitivity for LC/MS Applications

Alongside LC/UV analyses, the high performance and low pressure of the Kinetex 5 μ m EVO C18 make it a tremendous tool for LC/MS and LC/MS/MS. Increased polar basic retention provided by the Kinetex EVO C18 allows for greater use of organic within the mobile phase, subsequently leading to improved ionization and increased sensitivity.



Column: Kinetex 5 μ m EVO C18

Dimensions: 50 x 2.1 mm

Part No.: 00B-4633-AN

Mobile Phase: A: 0.1 % Formic acid in Water
B: 0.1 % Formic acid in Methanol

Gradient:	Time (min)	% B
	0	10
	0.5	10
	2	25
	4.5	80
	4.51	85
	5.5	85
	5.51	10
	7	10

Mobile Phase: A: 10 mM Ammonium bicarbonate (pH 8.2)
B: Methanol

Gradient:	Time (min)	% B
	0	10
	0.5	10
	2	25
	4.5	80
	4.51	85
	5.5	85
	5.51	10
	7	10

Flow Rate: 0.5 mL/min

Temperature: 40 °C

Detection: MS/MS (AB SCIEX API 4000™) ambient

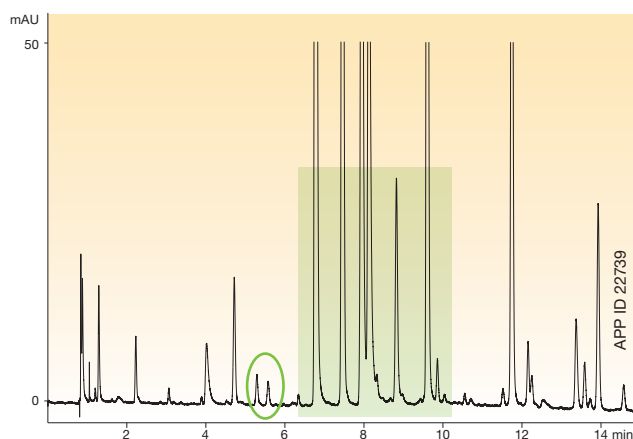
Sample: 1. Sufentanil

DESIRE

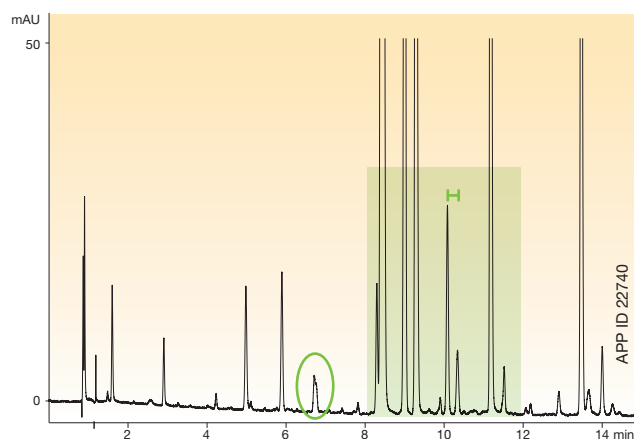
The 3 Best C18 Columns For You

With more C18's on the market than any other phase, it's important to understand how the best ones can benefit you! Switch between the combination of the all-purpose Kinetex® C18 and butyl side chain bonded XB-C18 to get small defined changes in retention and selectivity. Use the Kinetex EVO C18 for enhanced peak shape of bases and extra alkaline pH stability.

Kinetex 5µm EVO C18



Kinetex 5µm XB-C18



Conditions for all columns:

Column: Kinetex 5µm EVO C18
Kinetex 5µm XB-C18
Kinetex 5µm C18

Dimensions: 150 x 4.6 mm

Mobile Phase: A: 20 mM Potassium phosphate (pH 2.3)
B: Acetonitrile

Gradient: 5-50 % B in 20 minutes

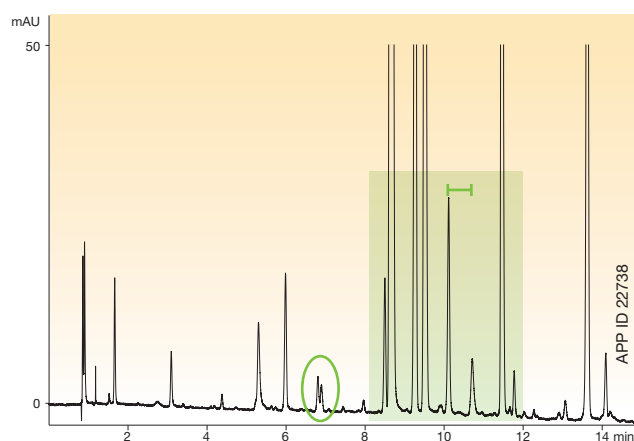
Flow Rate: 1.5 mL/min

Temperature: 30 °C

Detection: UV @ 254 nm

Sample: Nutraceutical Mix

Kinetex 5µm C18

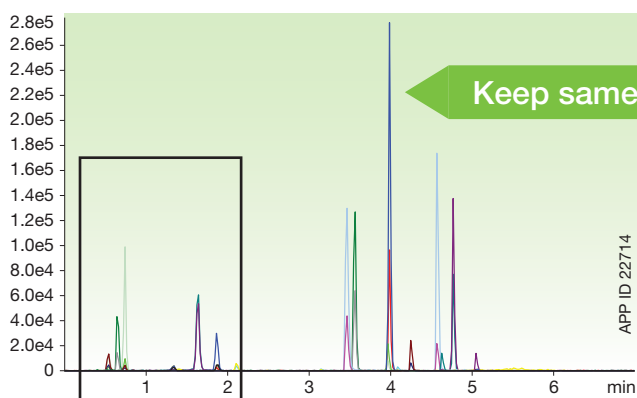


DESIRE

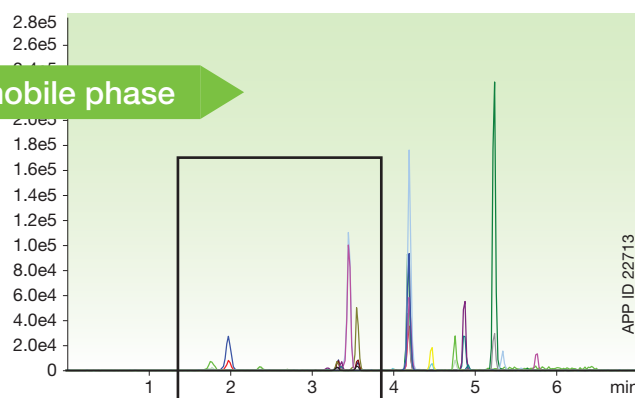
Built For Your Needs

Two exceptional selectivities give you retention enhancement without performance loss. Use the multi-functional Kinetex Biphenyl or pH stable Kinetex EVO C18 to reach the desired solution for your method.

Kinetex 5µm C18

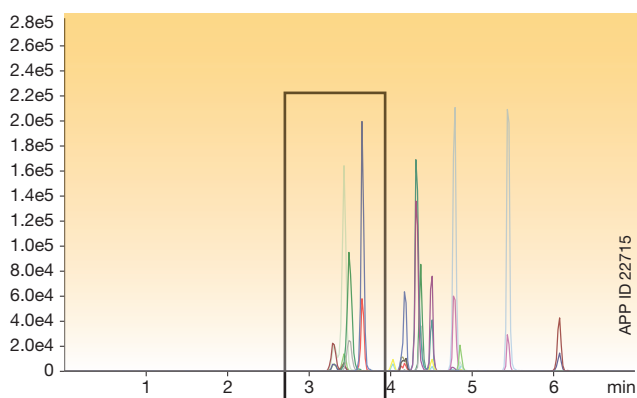


Kinetex 5µm Biphenyl



Switch to high pH mobile phase

Kinetex 5µm EVO C18



Conditions for all columns:

Column: Kinetex 5µm C18

Kinetex 5µm Biphenyl

Kinetex 5µm EVO C18

Dimensions: 50 x 2.1 mm

Mobile Phase: A: 0.1 % Formic acid in Water

B: 0.1 % Formic acid in Methanol

Mobile Phase: A: 10 mM Ammonium bicarbonate (pH 8.2)

B: Methanol

Gradient:	Time (min)	% B
	0	10
	0.5	10
	2	25
	4.5	80
	4.51	85
	5.5	85
	5.51	10
	7	10

Flow Rate: 0.5 mL/min

Temperature: Ambient

Detection: MS/MS (AB SCIEX API 4000™)

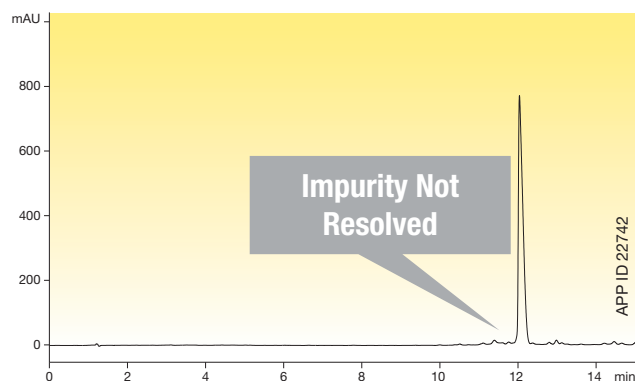
Sample: Opiates Mix

ZEST

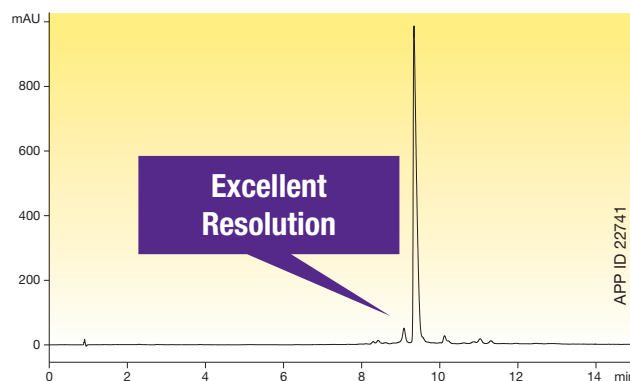
Get Enthusiastic About Prep LC

Reach new levels of purification with the ground-breaking combination of Kinetex® EVO C18 core-shell particles and AXIA™ preparative column technology. This technological combination provides genuine benefits including excellent loadability, high efficiency levels, and incredible pH stability. On top of all this, scaling and method optimization from analytical to prep is a breeze.

**Waters® XBridge® 5µm
C18 150 x 4.6mm**

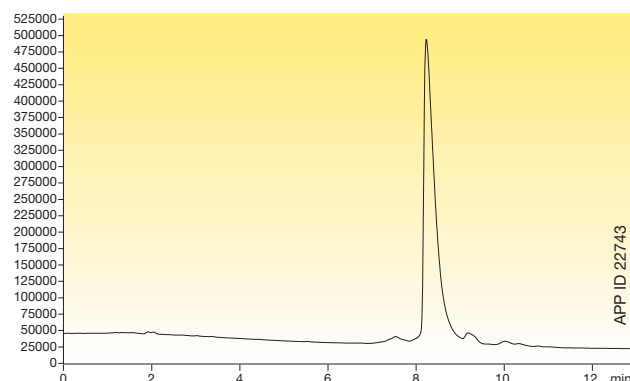


**Kinetex 5µm EVO
C18 150 x 4.6mm**



Analytical to PREP Scalability

**Kinetex 5µm EVO
C18 150 x 21.2mm AXIA**



Conditions for all columns:

Column: Kinetex 5µm EVO C18
XBridge 5µm C18

Dimensions: 150 x 4.6mm
150 x 21.2mm (Kinetex AXIA Packed)

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

Gradient: 20 % to 70 % B over 10 minutes

Flow Rate: 1.5 mL/min
30 mL/min (Kinetex AXIA)

Temperature: Ambient

Detection: UV @ 230 nm

Sample: Proprietary Pharmaceutical Sample

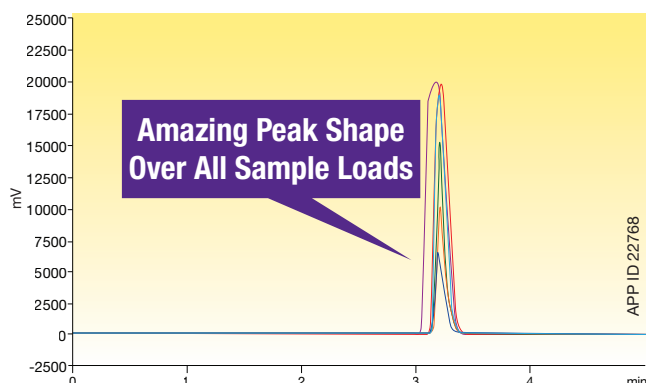
Waters and XBridge are registered trademarks of Waters Corporation. Phenomenex is not affiliated with Waters Corporation. Comparative separations may not be representative of all applications.

ZEST

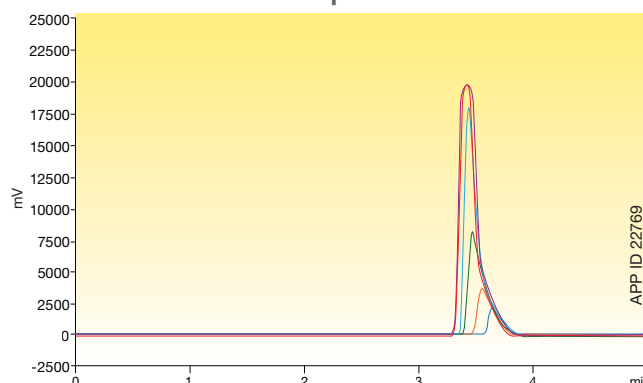
Got an Appetite For Better Results?

Kinetex EVO C18 will easily pave the way to enhanced purification and isolation levels with its incredible pH durability and core-shell performance gains. Get ready for a future of high yields and chromatographic improvements over traditional fully porous and hybrid materials.

Kinetex 5 μ m EVO C18
150 x 21.2 mm AXIA™



Waters® XBridge® 5 μ m C18
150 x 19 mm Prep OBD™



Conditions for all columns:

Column: Kinetex 5 μ m EVO C18 Axia packed
 XBridge 5 μ m C18 Prep OBD

Dimensions: 150 x 21.2 mm (Kinetex)
 150 x 19 mm (XBridge)

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

Gradient: 5-95 % B in 4 min.
 Hold for 1 min.
 Re-equilibrate for 2 min.

Flow Rate: 25 mL/min

Temperature: Ambient

Detection: UV @ 254 nm

Sample: Amitriptyline

Sample Load:

- 2 mg
- 4 mg
- 10 mg
- 20 mg
- 40 mg
- 80 mg

Get Method Development Flexibility For Your Small Molecule Analysis

Recommended Selectivities If You're Working With:

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

Upgrading Your Fully Porous Methods:

Fully Porous 3 μm or 5 μm • Kinetex 5 μm – Drop-in for easy performance improvements with no backpressure increase • 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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Choosing The Best Core-Shell Platform For You is Easy!

For Small Molecules

			5 μ m	3.6 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)				
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		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			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	

Phenomenex Application Specific Core-Shell Products

Material	Phase	Best Use	pH Stability	Available Particle Size(s)			
For Peptides (≤ 10,000 Da)							
Aeris™ PEPTIDE	XB-C18	Excellent hydrophobicity and methylene selectivity for peptide and peptide mapping separations	1.5 - 9.0	5 μm	3.6 μm	2.6 μm	1.7 μm
For Proteins (> 10,000 Da)							
Aeris WIDEPORE	XB-C18	Maximum hydrophobicity and high temp stability for hydrophilic and PEGylated proteins	1.5 - 9.0		3.6 μm		
	XB-C8	Medium hydrophobicity and high temp stability for moderately hydrophobic proteins and glycosylated proteins	1.5 - 9.0		3.6 μm		
	C4	Lowest hydrophobicity for very large or very hydrophobic proteins	1.5 - 9.0		3.6 μm		
For Synthetic Oligonucleotides (DNA/RNA)							
Clarity® Oligo-MS™	C18	Rapid, high efficiency reversed phase LC/MS analysis for QC and characterization	1.5 - 8.5*			2.6 μm	1.7 μm

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

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	AJ0-9298
Biphenyl	00A-4627-AN	00B-4627-AN	00D-4627-AN	—	AJ0-9209
XB-C18	00A-4605-AN	00B-4605-AN	00D-4605-AN	—	AJ0-8782
C18	00A-4601-AN	00B-4601-AN	00D-4601-AN	00F-4601-AN	AJ0-8782
C8	—	00B-4608-AN	00D-4608-AN	—	AJ0-8784
Phenyl-Hexyl	—	00B-4603-AN	00D-4603-AN	—	AJ0-8788

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-Y0	00D-4633-Y0	00F-4633-Y0	AJ0-9297
Biphenyl	00B-4627-Y0	00D-4627-Y0	00F-4627-Y0	AJ0-9208
XB-C18	00B-4605-Y0	00D-4605-Y0	00F-4605-Y0	AJ0-8775
C18	00B-4601-Y0	00D-4601-Y0	00F-4601-Y0	AJ0-8775
C8	00B-4608-Y0	00D-4608-Y0	—	AJ0-8777
Phenyl-Hexyl	00B-4603-Y0	00D-4603-Y0	—	AJ0-8781

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	AJ0-9296
Biphenyl	00B-4627-E0	00D-4627-E0	00F-4627-E0	00G-4627-E0	AJ0-9207
XB-C18	00B-4605-E0	00D-4605-E0	00F-4605-E0	00G-4605-E0	AJ0-8768
C18	00B-4601-E0	00D-4601-E0	00F-4601-E0	00G-4601-E0	AJ0-8768
C8	00B-4608-E0	00D-4608-E0	00F-4608-E0	00G-4608-E0	AJ0-8770
Phenyl-Hexyl	00B-4603-E0	00D-4603-E0	00F-4603-E0	00G-4603-E0	AJ0-8774

for 4.6 mm ID

5 µm Semi-Preparative Columns (mm)			SecurityGuard SemiPrep Cartridges***
Phases	150 x 10	250 x 10	10 x 10
C18	00F-4601-N0	00G-4601-N0	AJ0-9278
Biphenyl	00F-4627-N0	00G-4627-N0	AJ0-9280

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	AJ0-9304
Biphenyl	00B-4627-P0-AX	00D-4627-P0-AX	00F-4627-P0-AX	00G-4627-P0-AX	AJ0-9272
XB-C18	00B-4605-P0-AX	00D-4605-P0-AX	00F-4605-P0-AX	00G-4605-P0-AX	AJ0-9145
C18	00B-4601-P0-AX	00D-4601-P0-AX	00F-4601-P0-AX	00G-4601-P0-AX	AJ0-9145
C8	00B-4608-P0-AX	00D-4608-P0-AX	00F-4608-P0-AX	00G-4608-P0-AX	AJ0-9205
Phenyl-Hexyl	00B-4603-P0-AX	00D-4603-P0-AX	00F-4603-P0-AX	00G-4603-P0-AX	AJ0-9147
HILIC	—	00D-4606-P0-AX	00F-4606-P0-AX	00G-4606-P0-AX	AJ0-9277

for 21.2 mm ID

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
EVO C18	00B-4633-U0-AX	00D-4633-U0-AX	00F-4633-U0-AX	00G-4633-U0-AX	AJ0-9305
Biphenyl	—	—	00F-4627-U0-AX	—	AJ0-9273
XB-C18	00B-4605-U0-AX	00D-4605-U0-AX	00F-4605-U0-AX	00G-4605-U0-AX	AJ0-9204
C18	00B-4601-U0-AX	00D-4601-U0-AX	00F-4601-U0-AX	00G-4601-U0-AX	AJ0-9204
C8	00B-4608-U0-AX	00D-4608-U0-AX	00F-4608-U0-AX	00G-4608-U0-AX	AJ0-9217
Phenyl-Hexyl	00B-4603-U0-AX	00D-4603-U0-AX	00F-4603-U0-AX	00G-4603-U0-AX	AJ0-9216

for 30 mm ID

**Protect Your
LC Investment!**



Remove interferences such as proteins, phospholipids, salts, and more in a quick and simple procedure
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Convenient and inexpensive way to remove particulates from HPLC samples
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Protect your Kinetex LC columns from contaminants and extend their lifetime.
www.phenomenex.com/guardit

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.

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

* PREP SecurityGuard Cartridges require holder, Part No.: AJ0-8223

** PREP SecurityGuard Cartridges require holder, Part No.: AJ0-8277

*** SemiPrep SecurityGuard Cartridges require holder, Part No.: AJ0-9281

Ordering Information



KINETEX
Core-Shell Technology

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	AJ0-9298
F5	00A-4723-AN	00B-4723-AN	—	00D-4723-AN	00F-4723-AN	AJ0-9322
Biphenyl	00A-4622-AN	00B-4622-AN	—	00D-4622-AN	00F-4622-AN	AJ0-9209
XB-C18	00A-4496-AN	00B-4496-AN	00C-4496-AN	00D-4496-AN	00F-4496-AN	AJ0-8782
C18	00A-4462-AN	00B-4462-AN	00C-4462-AN	00D-4462-AN	00F-4462-AN	AJ0-8782
C8	00A-4497-AN	00B-4497-AN	00C-4497-AN	00D-4497-AN	00F-4497-AN	AJ0-8784
HILIC	00A-4461-AN	00B-4461-AN	00C-4461-AN	00D-4461-AN	00F-4461-AN	AJ0-8786
Phenyl-Hexyl	00A-4495-AN	00B-4495-AN	00C-4495-AN	00D-4495-AN	00F-4495-AN	AJ0-8788

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	AJ0-9297
F5	—	00B-4723-Y0	—	00D-4723-Y0	00F-4723-Y0	AJ0-9321
Biphenyl	—	00B-4622-Y0	—	00D-4622-Y0	00F-4622-Y0	AJ0-9208
XB-C18	00A-4496-Y0	00B-4496-Y0	00C-4496-Y0	00D-4496-Y0	00F-4496-Y0	AJ0-8775
C18	00A-4462-Y0	00B-4462-Y0	00C-4462-Y0	00D-4462-Y0	00F-4462-Y0	AJ0-8775
C8	00A-4497-Y0	00B-4497-Y0	00C-4497-Y0	00D-4497-Y0	00F-4497-Y0	AJ0-8777
HILIC	00A-4461-Y0	—	—	—	00F-4461-Y0	AJ0-8779
Phenyl-Hexyl	—	00B-4495-Y0	—	00D-4495-Y0	00F-4495-Y0	AJ0-8781

for 3.0 mm ID

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
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

Terms and Conditions

Subject to Phenomenex Standard Terms & Conditions, which may be viewed at www.phenomenex.com/TermsAndConditions.

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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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KINETEX
Core-Shell Technology

Introducing Kinetex EVO C18!

- Develop robust methods from pH 1-12
- Get improved peak shape for bases
- Easily reduce run times and increase sensitivity

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