

**NEW**

The first fully scalable  
core-shell technology  
column

 **KINETEX**<sup>®</sup>  
Core-Shell Technology



TM

Instantly Improve Your 5 µm and 3 µm Methods  
with **Kinetex 5 µm.**  
**Guaranteed!\***

 **phenomenex**<sup>®</sup>  
*...breaking with tradition<sup>SM</sup>*



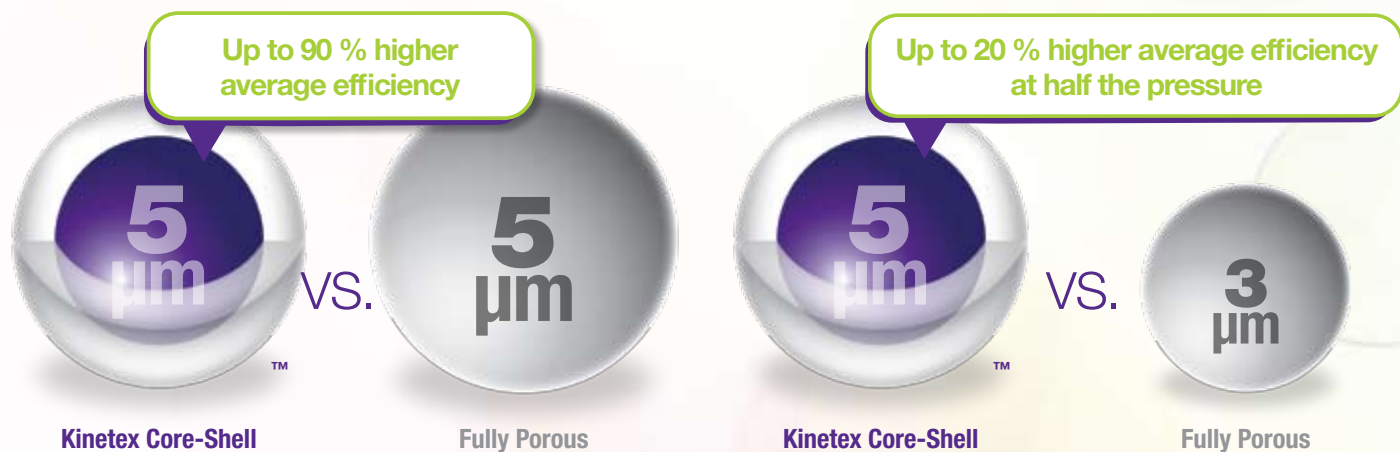
\* See ordering information page for complete guarantee details.

**NEW**

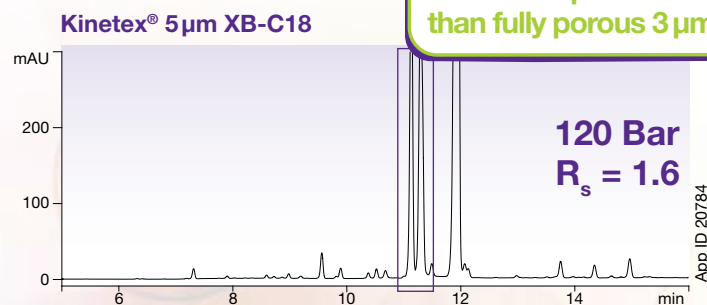
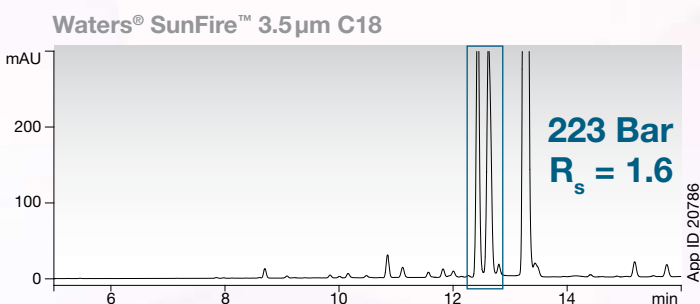
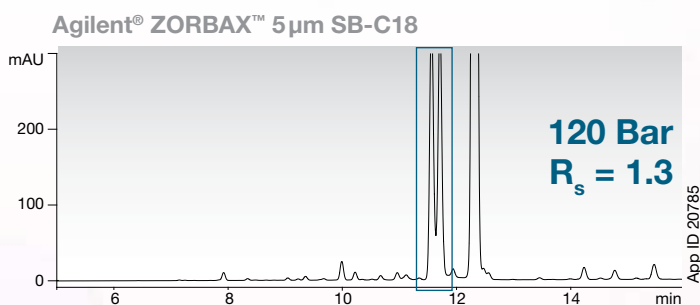
# Better Performance than 5 $\mu\text{m}$ and 3 $\mu\text{m}$ Fully Porous Columns with Kinetex 5 $\mu\text{m}$

**Isocratic** – Kinetex 5  $\mu\text{m}$  columns have clear efficiency gains over both 5 and 3  $\mu\text{m}$  fully porous columns at 5  $\mu\text{m}$  pressure

**Gradient** – Kinetex 5  $\mu\text{m}$  columns have 3  $\mu\text{m}$  or better peak capacities at 5  $\mu\text{m}$  pressure



## Simple to Use Solution for Improved Performance



23% Greater resolution than fully porous 5  $\mu\text{m}$   
85% Less pressure than fully porous 3  $\mu\text{m}$

### Conditions for all columns:

**Columns:** Kinetex 5  $\mu\text{m}$  XB-C18  
ZORBAX 5  $\mu\text{m}$  SB-C18  
SunFire 3.5  $\mu\text{m}$  C18

**Dimension:** 150 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:** Pharmaceutical degradation sample

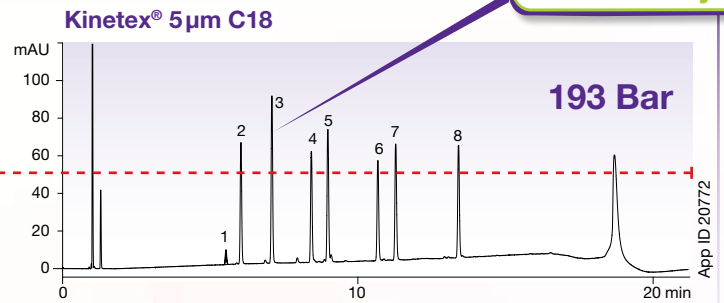
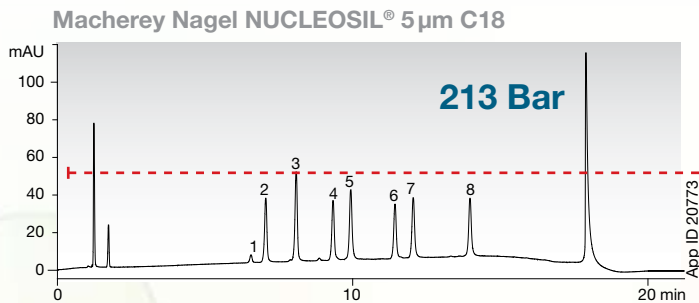
## Critical advantages of low HPLC system backpressures with Kinetex 5 $\mu\text{m}$ columns

- Longer column lifetime
- Higher throughput
- Increased system compatibility and method transferability

Waters is a registered trademark and SunFire is a trademark of Waters Corporation. Agilent and ZORBAX are registered trademarks of Agilent Technologies, Inc. Phenomenex is not affiliated with Agilent Technologies or Waters Corporation. Comparative separations may not be representative of all applications.

## Enhanced Sensitivity without Pressure Increase

90 % Increase in sensitivity



Conditions for both columns:

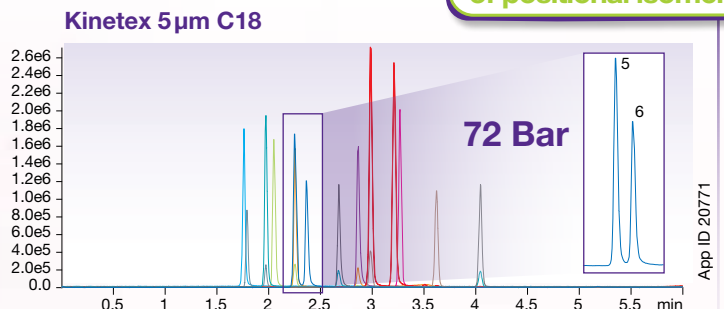
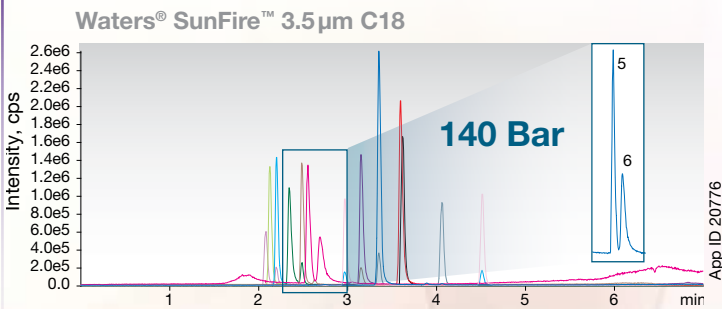
**Columns:** Kinetex 5 μm C18  
NUCLEOSIL 5 μm C18  
**Dimension:** 150 x 4.6 mm  
**Mobile Phase:** A: Milli-Q® Water  
B: Acetonitrile  
**Gradient:**

Time (min)	% B
0	30
15	95
16	95
17	30
20	30

**Flow Rate:** 1.5 mL/min  
**Temperature:** Ambient  
**Detection:** UV @ 205 nm  
**Sample:** 1. 6-Gingerol (1) 5. 6-Shogaol  
2. 6-Gingerol (2) 6. 10-Gingerol  
3. Capsaicin 7. 8-Shogaol  
4. 8-Gingerol 8. 10-Shogaol

## Increased Resolution at a Fraction of the Pressure

Baseline separation of positional isomers



Conditions for both columns:

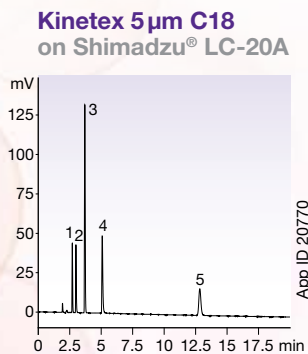
**Columns:** Kinetex 5 μm C18  
SunFire 3.5 μm C18  
**Dimension:** 50 x 2.1 mm  
**Mobile Phase:** A: 30 mm Ammonium formate  
B: Acetonitrile  
**Gradient:**

Time (min)	% B
0	5
5	60
5.1	100
6	100
7	5

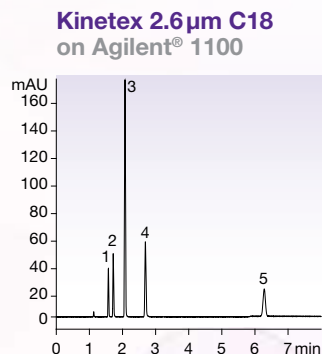
**Flow Rate:** 0.5 mL/min  
**Temperature:** Ambient  
**Detection:** MS/MS (API 4000™)  
**Sample:** 1. DMIP 8. Harman  
2. IQx 9. Norharman  
3. IQ 10. PhiP  
4. 8-MeIQ 11. AaC  
5. 4,8-DiMe-IQx 12. MeAaC  
6. 7,8-DiMe-IQx 13. MeIQ  
7. Trp-P-2

## Analytical Scalability and Portability HPLC to UHPLC

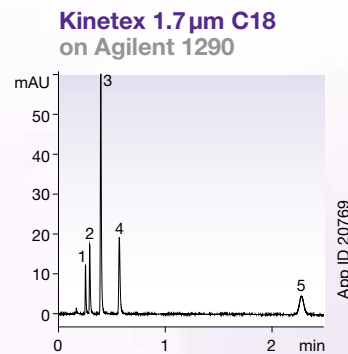
No change in selectivity



**Columns:** Kinetex 5 μm C18  
**Dimension:** 250 x 4.6 mm  
**Part No.:** 00G-4601-E0



**Columns:** Kinetex 2.6 μm C18  
**Dimension:** 150 x 4.6 mm  
**Part No.:** 00F-4462-E0



**Columns:** Kinetex 1.7 μm C18  
**Dimension:** 50 x 3.0 mm  
**Part No.:** 00B-4475-Y0  
**Mobile Phase:** 680:320:2

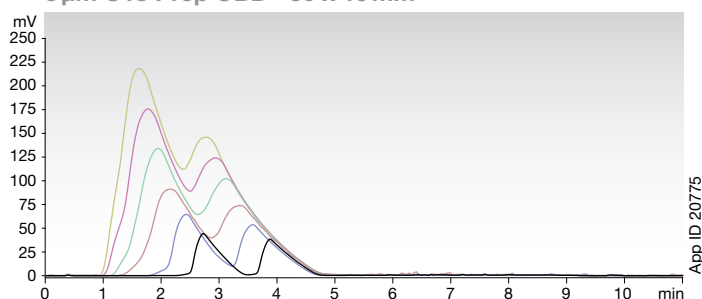
Conditions are same except as noted:  
**Mobile Phase:** Water/Acetonitrile/Phosphoric acid (600:400:2)  
**Flow Rate:** 1 mL/min  
**Temperature:** Ambient  
**Detection:** UV @ 237 nm  
**Sample:** 1. Impurity A  
2. Impurity B  
3. Impurity C  
4. Acetylsalicylic acid  
5. Impurity D

# First and Only Core-Shell Material for Axia™ PREP Purifications



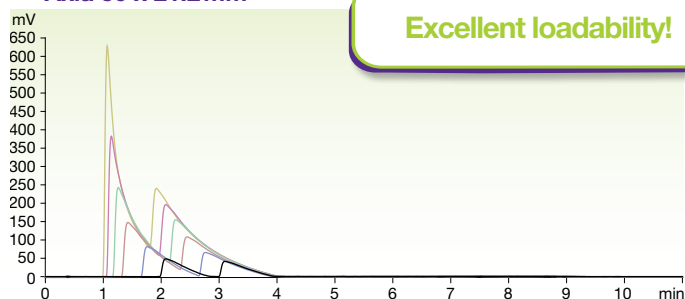
In addition to being completely scalable with the Kinetex® 1.7 and 2.6µm particles, the Kinetex 5µm column is now available in the revolutionary Axia preparative format. Axia packed Kinetex 5µm columns will provide incredible gains in efficiency and performance for all your reversed phase preparative chromatography methods.

**Waters® XBridge™  
5µm C18 Prep OBD™ 50 x 19mm**



App ID 20775

**Kinetex 5µm C18  
Axia 50 x 21.2mm**



App ID 20774

**Conditions for both columns:**  
**Columns:** Kinetex 5µm C18  
 XBridge 5µm C18  
**Dimension:** 50 x 21.2 mm (Kinetex)  
 50 x 19mm (XBridge)  
**Mobile Phase:** A: Water with 0.5 % Formic acid  
 B: Acetonitrile with 0.5 % Formic acid  
**Gradient:**

Time (min)	% B
0	20
8	50
11	50

**Flow Rate:** 30 mL/min  
**Temperature:** Ambient  
**Detection:** UV @ 254 nm  
**Sample:** 1. Doxepin (From 1 - 500 mg on column)  
 2. Amitriptyline (From 1 - 500 mg on column)

## Ordering Information

	NEW! 5µm Columns (mm)		SecurityGuard™ ULTRA Cartridges*				SecurityGuard ULTRA Cartridges*
	50 x 2.1	3/pk	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	3/pk
<b>XB-C18</b>	00B-4605-AN	AJ0-8782	00B-4605-E0	00D-4605-E0	00F-4605-E0	00G-4605-E0	AJ0-8768
<b>C18</b>	00B-4601-AN	AJ0-8782	00B-4601-E0	00D-4601-E0	00F-4601-E0	00G-4601-E0	AJ0-8768
<b>PFP</b>	00B-4602-AN	AJ0-8787	00B-4602-E0	00D-4602-E0	00F-4602-E0	00G-4602-E0	AJ0-8773
<b>Phenyl-Hexyl</b>	00B-4603-AN	AJ0-8788	00B-4603-E0	00D-4603-E0	00F-4603-E0	00G-4603-E0	AJ0-8774

\* SecurityGuard ULTRA cartridges require holder, Part No. AJ0-9000. for 4.6 mm ID

	NEW! 5µm Axia Packed Preparative Columns (mm)			
	50 x 21.2	100 x 21.2	150 x 21.2	250 x 21.2
<b>XB-C18</b>	00B-4605-P0-AX	00D-4605-P0-AX	00F-4605-P0-AX	00G-4605-P0-AX
<b>C18</b>	00B-4601-P0-AX	00D-4601-P0-AX	00F-4601-P0-AX	00G-4601-P0-AX
<b>PFP</b>	00B-4602-P0-AX	00D-4602-P0-AX	00F-4602-P0-AX	00G-4602-P0-AX
<b>Phenyl-Hexyl</b>	00B-4603-P0-AX	00D-4603-P0-AX	00F-4603-P0-AX	00G-4603-P0-AX



If you are not completely satisfied with Kinetex core-shell columns, send in your comparative data to a similar product within 45 days and KEEP THE COLUMN FOR FREE.

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