

METHAMPHETAMINE & AMPHETAMINE

Enantiomers from Urine

Rapid and Accurate Chiral Separation



Lux 3 μ m AMP Column

- High Efficiency
- LC/MS/MS Compatible
- Quality Tested for METH/AMP Chiral Analysis





A Trusted and Experienced Solution Provider

For over 30 years Phenomenex has developed separation solutions for the forensics and toxicology industries. This strong focus, combined with innovative manufacturing, packing and sorbent technologies has now lead to the development of a novel LC column specifically designed to help you overcome the challenging drug separation of amphetamine and methamphetamine enantiomers.

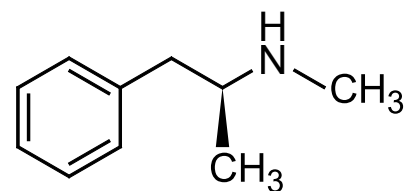
Lux 3 μm AMP

Designed and Tested for Chiral Separation of Amphetamine and Methamphetamine Enantiomers

Lux 3 μm AMP is a unique LC media that was specifically developed for the chiral analysis of amphetamine and substituted amphetamines, including methamphetamine.

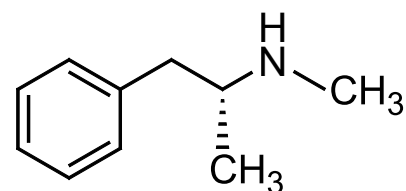


D-Methamphetamine



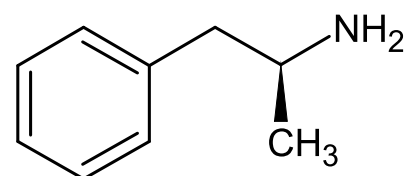
S(+)-Methamphetamine

L-Methamphetamine



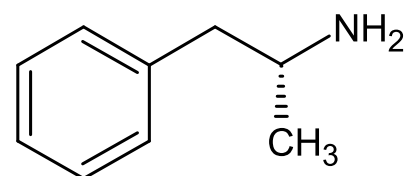
R(-)-Methamphetamine

D-Amphetamine



S(+)-Amphetamine

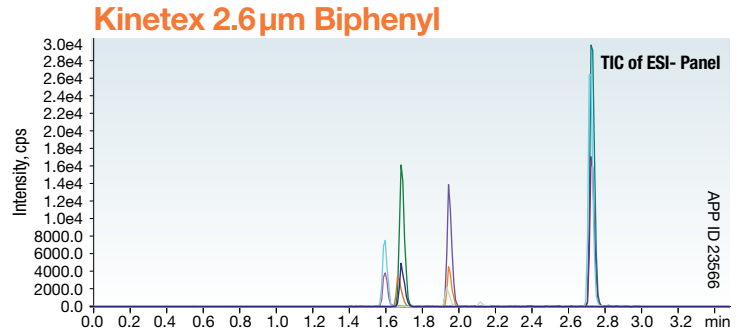
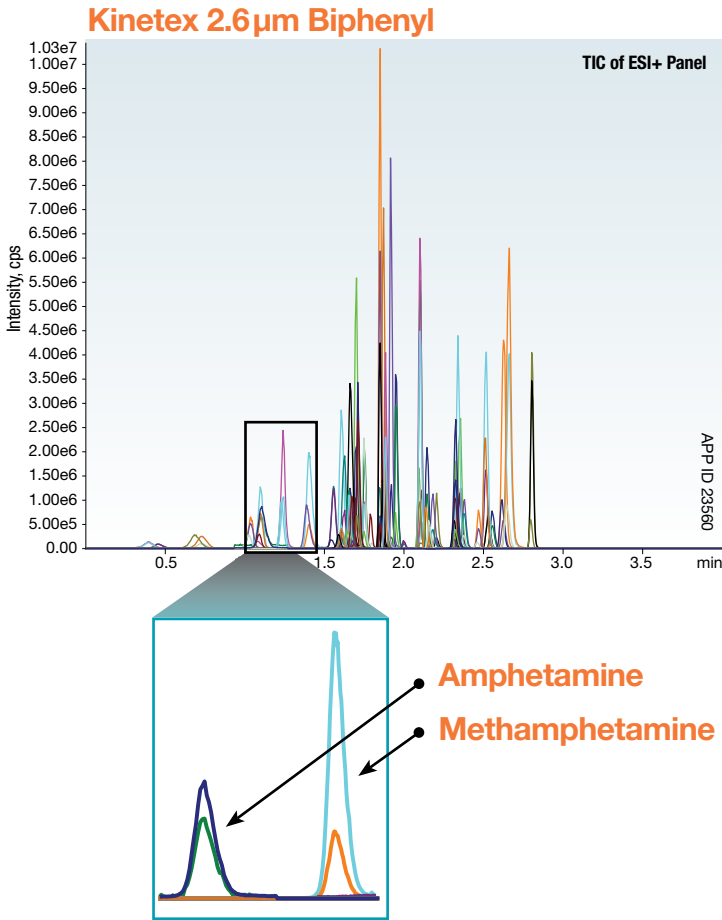
L-Amphetamine



R(-)-Amphetamine

Reversed Phase Screening

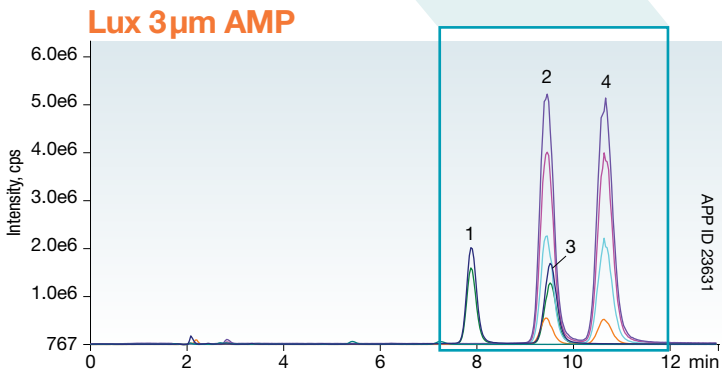
The high performance and versatility of the Kinetex® 2.6µm Biphenyl core-shell column makes it an excellent choice for a rapid reversed phase separation of multi-class screens like illicit and abused drugs from urine.



Column: Kinetex 2.6µm Biphenyl	Sample:
Dimension: 30 x 2.1 mm	Positive Mode (ESI+)
Part No.: 00A-4622-AN	1. 6-MAM
SecurityGuard™: AJ0-9209	2. 7-Aminoclonazepam
ULTRA	3. 3 alpha-
Cartridge:	hydroxylalprazolam
SecurityGuard™: AJ0-9000	4. Alprazolam
Holder:	5. Amitriptyline
Mobile Phase: A: 10 mM Ammonium Formate in Water (pH unadjusted)	6. Amphetamine
B: 0.1 % Formic Acid in Methanol	7. Benzoylcegonine
Gradient:	8. Buprenorphine
Time (min)	% B
0.0	10
0.2	10
2.5	90
2.9	90
3.0	10
3.5	10
Flow Rate: 0.4 mL/min	9. Carisoprodol
Temperature: 40 °C	10. Citalopram
Injection Volume: 25 µL	11. Codeine
Detection: MS/MS (SCIEX 6500 QTRAP®)	12. Cotinine
	13. Diazepam
	14. EDDP
	15. Fentanyl
	16. Fluoxetine
	17. Gabapentin
	18. Hydrocodone
	19. Hydromorphone
	20. Imipramine
	21. Lorazepam
	22. MDMA
	23. Meperidine
	24. Meprobamate
	25. Methadone
	26. Methamphetamine
	27. Methylphenidate
	28. Morphine
	29. Naloxone
	30. Norbuprenorphine
	31. Nordiazepam
	32. Nortentanyl
	33. Norhydrocodone
	34. Noroxycodone
	35. Normorphine
	36. Nortriptyline
	37. O-Desmethyltramadol
	38. Oxycodone
	39. Oxymorphone
	40. Paroxetine
	41. PCP
	42. Pregabalin
	43. Sertraline
	44. Tapentadol
	45. Temazepam
	46. Tramadol
	47. Zolpidem
	48. Zolpidem-4-carboxylic Acid
	Negative Mode (ESI-)
	1. Butalbital
	2. Phenobarbital
	3. Secobarbital
	4. THC-COOH

Enantiomeric Separation

Once presence of amphetamine or methamphetamine has been determined, enantiomeric confirmation can then easily be achieved with a Lux® 3µm AMP column.

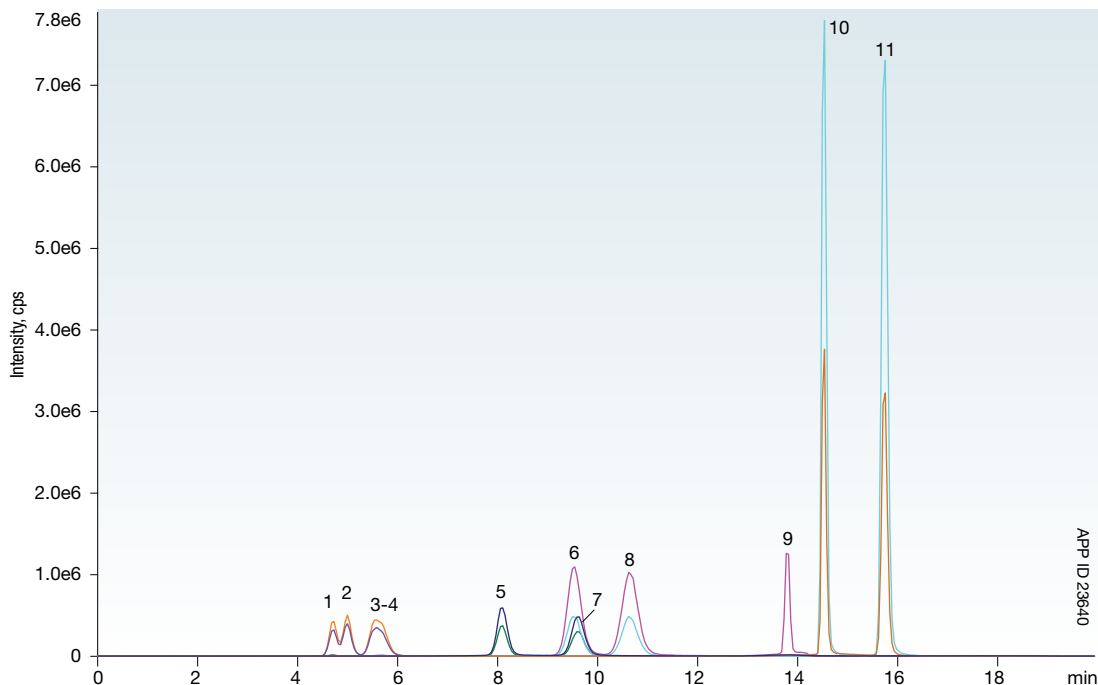


Column: Lux 3µm AMP	Gradient:	Time (min)	% B
Dimension: 150 x 3.0 mm		0	60
Part No.: 00F-4751-YO		10	60
Mobile Phase: A: 5 mM Ammonium Bicarbonate, adjusted to pH 11 with Ammonium Hydroxide		11	95
B: Methanol		16	95
		16.3	60
Flow Rate: 0.42 mL/min	Temperature: Ambient		
	Detection: MS/MS (SCIEX 4500 QTRAP®)		
	Sample:		
	1. R(-)-Amphetamine		
	2. R(-)-Methamphetamine		
	3. S(+)-Amphetamine		
	4. S(+)-Methamphetamine		

Comparative separations may not be representative of all applications.

Not Affected by Common Interferences

Another excellent benefit of the Lux[®] 3 μ m AMP is that its separation of amphetamine and methamphetamine enantiomers isn't affected by common drug and drug ingredients such as those seen below. In addition, the separation power of the Lux AMP column can also help with resolution between enantiomers of substituted amphetamines.



APP ID 23640

Column: Lux 3 μ m AMP
Dimension: 150 x 3.0 mm
Part No.: 00F-4751-Y0
Mobile Phase: A: 5 mM Ammonium Bicarbonate, adjusted to pH 11 with Ammonium Hydroxide
 B: Methanol
Flow Rate: 0.42 mL/min
Gradient:

Time (min)	% B
0	60
10	60
11	95
16	95
16.3	60

Temperature: Ambient
Detection: MS/MS (SCIEX 4500 QTRAP[®])

- 1S,2R(+)-Ephedrine
2. R,R(-)-Pseudoephedrine
3. S,S(+)-Pseudoephedrine
4. 1R,2S(-)-Ephedrine
5. R(-)-Amphetamine
6. R(-)-Methamphetamine
7. S(+)-Amphetamine
8. S(+)-Methamphetamine
9. Phentermine
10. MDMA
11. MDMA

Compounds included in this interference study but not illustrated chromatographically:

acetaminophen
 aspirin
 (\pm)-chlorpheniramine
 caffeine
 diphenhydramine
 dextromethorphan
 ibuprofen
 (\pm)-MDA
 (\pm)-MDEA
 phenylephrine
 norephedrine

1-Minute β -Glucuronidase Removal

To remove β -Glucuronidase before it can build up and foul your LC instrumentation, Mass Spectrometer, and column, we recommend the use of Beta-Gone. This novel sorbent offers a simple, fast, and highly targeted method to remove β -Glucuronidase from hydrolyzed urine samples prior to analysis. Within 1 minute, with no necessary method development, your samples will be ready for analysis.

www.phenomenex.com/beta-gone

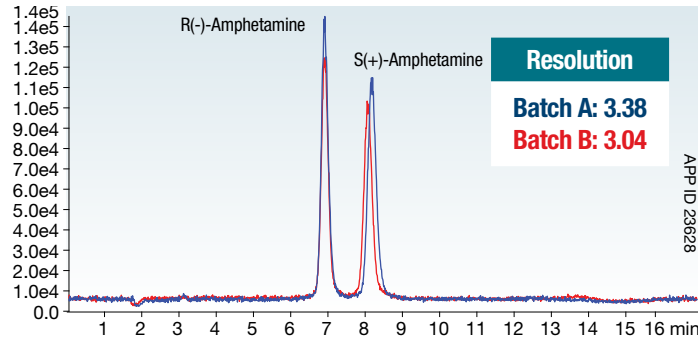


Comparative separations may not be representative of all applications.

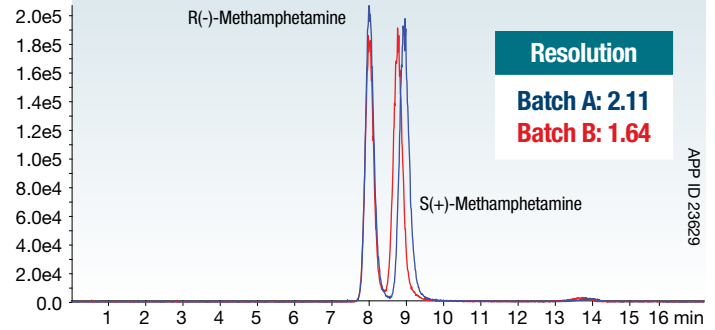
Exceptional Reliability

Lux® 3 µm AMP media and columns are designed to be consistent and incredibly accurate tools for amphetamine and methamphetamine analysis. Each batch is specifically tested by LC/MS for the analysis of amphetamine and methamphetamine, and columns are quality tested to ensure dependability and reproducibility.

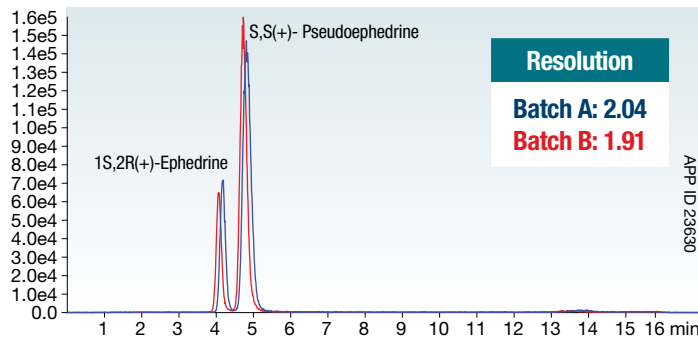
Amphetamine Enantiomers



Methamphetamine Enantiomers



Ephedrine and Pseudoephedrine



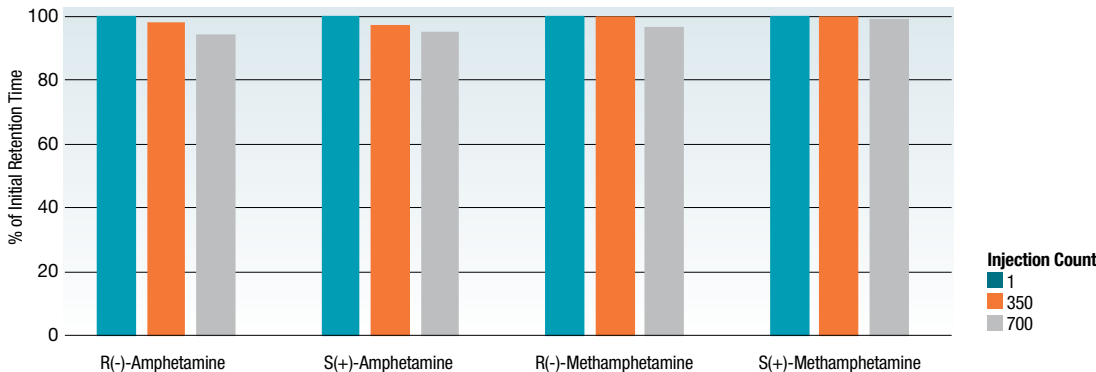
Column: Lux 3 µm AMP
Dimension: 150 x 3.0 mm
Part No.: 00F-4751-Y0
Mobile Phase: A: 5 mM Ammonium Bicarbonate, adjusted to pH 11 with Ammonium Hydroxide
 B: Methanol
Flow Rate: 0.42 mL/min
Gradient:

Time (min)	% B
0	60
10	60
11	95
13	95
13.1	60

Temperature: 22 °C
Sample:

- Ephedrine
- Pseudoephedrine
- R(-)-Amphetamine
- S(+)-Amphetamine
- R(-)-Methamphetamine
- S(+)-Methamphetamine

Excellent Lifetime



Comparative separations may not be representative of all applications.

guarantee

If Phenomenex products in this brochure do not provide at least an equivalent separation as compared to other products of the same phase and dimensions, return the product with comparative data within 45 days for a FULL REFUND.

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Ordering Information

NEW	Lux® 3 µm Analytical Columns		SecurityGuard™ Cartridges†	
	Phase	150 x 3.0	150 x 4.6	10/pk

AMP	00F-4751-Y0	00F-4751-E0	AJ0-8475	AJ0-8476
			for 3.0mm ID	for 4.6mm ID

†SecurityGuard Cartridges require holder, Part No.: KJ0-4282

NEW	Kinetex® 2.6 µm Analytical Columns			SecurityGuard™ ULTRA Cartridges‡	
	Phase	30 x 2.1	50 x 2.1	50 x 3.0	3/pk

Biphenyl	00A-4622-AN	00B-4622-AN	00B-4622-Y0	AJ0-9209	AJ0-9208
				for 2.1 mm ID	for 3.0 mm ID

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

β-Gone™ β-Glucuronidase Removal Products			
Part No.	Description	Unit	Price
8B-S139-TAK	1 mL Tubes, Recombinant Enzyme	100/Box	
8B-S322-DAK	1 mL Tubes, Non-Recombinant Enzyme	100/Box	
8E-S139-TGA	96-Well Plate, Recombinant Enzyme	1/Box	
8E-S322-DGA	96-Well Plate, Non-Recombinant Enzyme	1/Box	

Verex™ Certified Mass Spec Quality Vials		
Description	1000/pk	Price
Cert+ MSQ Vial Kit, 9 mm, 2 mL Clear w/ Patch + MSQ PTFE/Silicone	AR0-992A-13-M	
Cert+ MSQ Vial Kit, 9 mm, 2 mL Amber w/ Patch + MSQ PTFE/Silicone	AR0-992B-13-M	

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