

strata™ X



**Strata-X-Drug**

KEEP IT CLEAN

Solid Phase Extraction Solutions  
for Drugs of Abuse Analysis

- ▶ Neutral Drugs of Abuse
- ▶ Basic Drugs of Abuse

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



# Strata™-X-Drug B: Basic Drugs of Abuse

Working with basic drugs?

Here are 3 reasons why Strata-X-Drug B SPE is your cleanup solution.

# B

## 1. Extract 9 Drug Classes using 3 Methods and Only 1 Sorbent

	Opiates, 6-MAM, PCP, Amphetamines, Propoxyphene, Healthcare Opiates, and Methadone*	Marijuana Metabolites	Cocaine Metabolites
<b>Condition</b>	Not Required		
<b>Load</b>	Pre-treated urine sample	Pre-treated urine sample	Pre-treated urine sample
<b>Wash 1</b>	2 mL of 100 mM Sodium acetate buffer (pH 5.0)	2 mL of 100 mM Sodium acetate buffer (pH 5.0)	2 mL of 0.1 N Hydrochloric acid
<b>Wash 2</b>	2 mL Methanol	2 mL of Acetonitrile/100 mM Sodium acetate buffer (pH 5.0) (30:70)	2 mL Methanol
<b>Dry</b>	10 minutes under full vacuum	15 minutes under full vacuum	10 minutes under full vacuum
<b>Elute</b>	2 mL of Ethyl acetate/Isopropanol/Ammonium hydroxide (70:20:10)	2 mL of Ethyl acetate/Isopropanol (85:15)	2 mL of Ethyl acetate/Isopropanol/Ammonium hydroxide (70:20:10)

\* Opiates, 6-MAM, PCP, Amphetamines, Propoxyphene, Healthcare Opiates and Methadone can be extracted simultaneously or separately using the same SPE methodology. Methods are written for 60 mg/6 mL Strata-X-Drug B; however they can be scaled to accommodate smaller or larger sample sizes and sorbent masses.

## 2. Specialized QC Tests (see page 4)

## 3. Reliable Results for 22 Drugs of Abuse (see page 5)

# Strata™-X-Drug N: Neutral Drugs of Abuse

Working with neutral drugs?

Here are 3 reasons why Strata-X-Drug N SPE is your cleanup solution.

# N

## 1. Extract 13 Neutral Drugs from 2 Drug Classes

	Barbiturates	Benzodiazepines
Condition	Not Required	
Load	Pre-treated urine sample	Pre-treated urine sample
Wash 1	2 mL of 0.1 N Hydrochloric acid (HCl)	2 mL of Acetonitrile/Water (20:80)
Wash 2	2x 2 mL of Methanol/0.1 N HCl (30:70)	—
Dry	10 minutes under full vacuum	10 minutes under full vacuum
Elute	2 mL of Ethyl acetate/Isopropanol (85:15)	2 mL of Ethyl acetate/Isopropanol (85:15)

Methods are written for 100 mg/6 mL Strata-X-Drug N; however they can be scaled to accommodate smaller or larger sample sizes and sorbent masses.

## 2. Specialized QC Tests (see page 6)

## 3. Consistent, Reproducible Results for 13 Drugs of Abuse (see page 7)

# Strata™ -X-Drug B: Basic Drugs of Abuse

## Specialized QC Tests Designed for Basic Drugs of Abuse

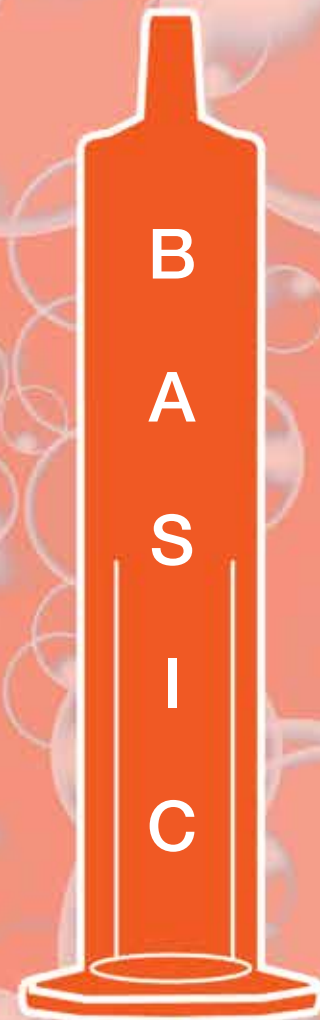
### Certificate of Analysis

**Strata™ -X-Drug B 33 µm, Cation Mixed-Mode Polymeric Sorbent**  
 Sorbent Lot Number: S326-XX

Recovery Tests			
Compound	1 Codeine 2 Morphine		
We test recovery by extracting codeine and morphine from urine to ensure that each batch provides you with the best results possible!			
Absence of Interconversion of Norcodeine and Normorphine to Parent Compounds			
Result	Pass		
Sorbent Test			
Ion Exchange Capacity meq/g	Specification: 0.9-1.2 Result: 1.0		
Particle Characterization			
Parameter	Specification	Result	
Surface Area (m <sup>2</sup> /g)	705-825	764	
Pore Size (Å)	75-91	89	
Pore Volume (ml/g)	1.57-1.87	1.70	
Mean Particle Size (µm)	28 - 34	29	
Fine Content (+10µm by Vol. %)	< 0.2 %	0.0	
Purity Tests			
Parameter	Specification	Result	
Sorbent Purity (GC-FID)	Proprietary	Pass	
Turbidity (NTU)	Proprietary	Pass	
Production Lot Tests			
Parameter	Result		
Sorbent Weight	Pass		
Flow Rate	Pass		
Sorbent Identity	Pass		

Material Approved: *K. Keith*  
 Quality Assurance  
 Date: November 1, 2010

Strong cation-exchange sorbents can sometimes promote conversion of norcodeine and normorphine to parent compounds. Strata-X-Drug B is guaranteed not to promote this interconversion.



# Strata™-X-Drug B: Basic Drugs of Abuse

## Reliable Results for 22 Basic Drugs of Abuse



\* Deuterated analogs were used alongside all probes except for those denoted with an asterisk. Probes denoted with an asterisk were run alongside the closest alternative deuterated standard available.

# Strata™ -X-Drug N: Neutral Drugs of Abuse

## Specialized QC Tests Designed for Neutral Drugs of Abuse

### Certificate of Analysis

**Certificate of Analysis**

**Strata™ -X-Drug N 100 µm, Polymer Reversed Phase**  
Sorbent Lot Number: S328-xxx

**Recovery Tests**

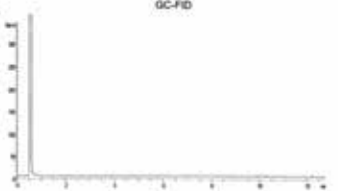
Compound
1 Lorazepam
2 Temazepam

We test recovery by extracting lorazepam and temazepam from urine to ensure that each batch provides you with the best results possible!

**Purity Tests**

Parameter	Specification	Result
Sorbent Purity (GC FID)	Proprietary	Pass
Turbidity (NTU)	Proprietary	Pass

GC-FID



**Production Lot Tests**

Parameter	Result
Sorbent Weight	Pass
Flow Rate	Pass
Sorbent Identity	Pass

Material Approved: *K. Keith*  
Quality Assurance

Date: August 1, 2011



# Strata™-X-Drug N: Neutral Drugs of Abuse

Consistent, Reproducible Results for the Following Drug Classes:

- Barbiturates
- Benzodiazepines



\* Deuterated analogs were used alongside all probes except for those denoted with an asterisk. Probes denoted with an asterisk were run alongside the closest alternative deuterated standard available.

# Confirm Your Recoveries and Cleanliness

Once your extractions are completed, achieve excellent separation of target analytes with Kinetex® Core-Shell HPLC/UHPLC columns or Zebron™ GC columns.

## Kinetex Core-Shell HPLC/UHPLC Columns

Leverage the power of Kinetex to achieve ultra-high performance on any LC system.

- **Increase** resolution, throughput, and sensitivity
- **Decrease** solvent consumption
- **Save** time and money
- **Transfer** methods anywhere

Visit [www.phenomenex.com/kinetex](http://www.phenomenex.com/kinetex) for more information

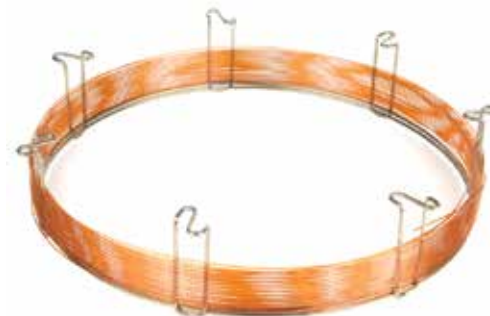


## Zebron High Performance ZB-Drug-1 GC Column

Achieve highly reproducible and effective separation of drugs of abuse while capitalizing on speed and efficiency.

- **Decrease** run times
- **Improve** resolution and sensitivity
- **Increase** lab productivity and profitability

Visit [www.phenomenex.com/zebron](http://www.phenomenex.com/zebron) for more information





# Our Experts are Here to Help You

We have various ways to assist, advance and develop your methods.

- A. **Technical Notes:** Phenomenex has developed several technical notes that provide complete solutions.

For specific applications, visit  
[www.phenomenex.com/clinical](http://www.phenomenex.com/clinical)



OR



our application library at

[www.phenomenex.com/application](http://www.phenomenex.com/application)

- B. **Method Development:** The online SPE Method Development Tool can create customized methods in under 1 minute.  
[www.phenomenex.com/info/MDTOOL](http://www.phenomenex.com/info/MDTOOL)



- C. **Put Our Team to Work:** PhenoLogix is an analytical support laboratory within Phenomenex that provides full service method support and training for your lab.  
[www.phenomenex.com/PhenoLogix](http://www.phenomenex.com/PhenoLogix)



Questions? Contact your Sample Preparation Specialist • [support@phenomenex.com](mailto:support@phenomenex.com)

# Strata™ -X-Drug SPE Ordering Information

## Strata-X-Drug B

Format	Sorbent Mass	Part Number	Unit	Price
<b>Tube</b>				
	10 mg	8B-S128-AAK	1 mL (100/box)	
	10 mg	8L-S128-AAK†	1 mL (100/box)	
	30 mg	8B-S128-TAK	1 mL (100/box)	
	30 mg	8L-S128-TAK†	1 mL (100/box)	
	30 mg	8B-S128-TBJ	3 mL (50/box)	
	60 mg	8B-S128-UBJ	3 mL (50/box)	
	60 mg	8B-S128-UCH	6 mL (30/box)	
	60 mg	8B-S128-UCL	6 mL (200/bag)	
<b>Giga™ Tube</b>				
	100 mg	8B-S128-EDG	12 mL (20/box)	
<b>96-Well Plate</b>				
	10 mg	8E-S128-AGB	2 Plates/box	
	30 mg	8E-S128-TGB	2 Plates/box	
	60 mg	8E-S128-UGB	2 Plates/box	

## Accessories for SPE Tubes

<b>Manifolds</b>				
Part No.		Unit	Price	
AHO-6023	SPE 12-Position Vacuum Manifold Set complete assembly	ea		
AHO-6024	SPE 24-Position Vacuum Manifold Set complete assembly	ea		
AHO-7502	SPE 10-Position Tall-Boy™ Vacuum Manifold, complete assembly	ea		
<b>Adapter Caps</b>				
Part No.		Unit	Price	
AHO-7191	Adapter Caps for 1, 3, and 6 mL SPE tubes, polyethylene, with Luer tip	15/pk		
AHO-7379	Adapter Caps for 12, 20, and 60 mL SPE tubes, polyethylene, with Luer tip	6/pk		

† Tab-less tube

## Strata-X-Drug N

Format	Sorbent Mass	Part Number	Unit	Price
<b>Tube</b>				
	10 mg	8B-S129-AAK	1 mL (100/box)	
	10 mg	8L-S129-AAK†	1 mL (100/box)	
	30 mg	8B-S129-TAK	1 mL (100/box)	
	30 mg	8L-S129-TAK†	1 mL (100/box)	
	30 mg	8B-S129-TBJ	3 mL (50/box)	
	60 mg	8B-S129-UBJ	3 mL (50/box)	
	60 mg	8B-S129-UCH	6 mL (30/box)	
	60 mg	8B-S129-UCL	6 mL (200/bag)	
	100 mg	8B-S129-ECH	6 mL (30/box)	
<b>Giga Tube</b>				
	100 mg	8B-S129-EDG	12 mL (20/box)	
<b>96-Well Plate</b>				
	10 mg	8E-S129-AGB	2 Plates/box	
	30 mg	8E-S129-TGB	2 Plates/box	
	60 mg	8E-S129-UGB	2 Plates/box	

## Accessories for 96-Well Plates

<b>Manifolds</b>				
Part No.		Unit	Price	
AHO-8950	Strata® 96-Well Plate Manifold, Universal with vacuum gauge	ea		
<b>Collection Plates (deep well, polypropylene)</b>				
Part No.		Unit	Price	
AHO-7192	Strata 96-Well Collection Plate, 350 µL/Conical	50/pk		
AHO-7193	Strata 96-Well Collection Plate, 1 mL/Conical	50/pk		
AHO-7279	Strata 96-Well Collection Plate, 1 mL Round, 7 mm	50/pk		
AHO-7194	Strata 96-Well Collection Plate, 2 mL/Conical	50/pk		
AHO-8635	Strata 96-Well Collection Plate, 2 mL Square/Round-Conical	50/pk		
AHO-8636	Strata 96-Well Collection Plate, 2 mL Round/Round, 8 mm	50/pk		
<b>Sealing Mats</b>				
Part No.		Unit	Price	
AHO-8597	Sealing Mats, Pierceable, 96-Square Well, Silicone	50/pk		
AHO-8598	Sealing Mats, Pre-Slit, 96-Square Well, Silicone	50/pk		
AHO-8631	Sealing Mats, Pierceable, 96-Round Well 7 mm, Silicone	50/pk		
AHO-8632	Sealing Mats, Pre-Slit, 96-Round Well 7 mm, Silicone	50/pk		
AHO-8633	Sealing Mats, Pierceable, 96-Round Well 8 mm, Silicone	50/pk		
AHO-8634	Sealing Mats, Pre-Slit, 96-Round Well 8 mm, Silicone	50/pk		
AHO-7362	Sealing Tape Pad	10/pk		

# Analytical Solutions Ordering Information

## Kinetex® 2.6 µm Analytical HPLC Columns (mm)

	30 x 4.6	50 x 4.6	75 x 4.6	100 x 4.6	150 x 4.6
<b>XB-C18</b>	—	00B-4496-E0	00C-4496-E0	00D-4496-E0	00F-4496-E0
<b>C18</b>	00A-4462-E0	00B-4462-E0	00C-4462-E0	00D-4462-E0	00F-4462-E0
<b>C8</b>	—	00B-4497-E0	00C-4497-E0	00D-4497-E0	00F-4497-E0
<b>PFP</b>	00A-4477-E0	00B-4477-E0	00C-4477-E0	00D-4477-E0	00F-4477-E0

## Kinetex 2.6 µm MidBore™ HPLC Columns (mm)

	30 x 3.0	50 x 3.0	75 x 3.0	100 x 3.0	150 x 3.0
<b>XB-C18</b>	00A-4496-Y0	00B-4496-Y0	00C-4496-Y0	00D-4496-Y0	00F-4496-Y0
<b>C18</b>	00A-4462-Y0	00B-4462-Y0	00C-4462-Y0	00D-4462-Y0	00F-4462-Y0
<b>C8</b>	00A-4497-Y0	00B-4497-Y0	00C-4497-Y0	00D-4497-Y0	00F-4497-Y0
<b>PFP</b>	00A-4477-Y0	00B-4477-Y0	00C-4477-Y0	00D-4477-Y0	00F-4477-Y0

## Kinetex 2.6 µm Minibore HPLC Columns (mm)

	30 x 2.1	50 x 2.1	100 x 2.1	150 x 2.1
<b>XB-C18</b>	00A-4496-AN	00B-4496-AN	00D-4496-AN	00F-4496-AN
<b>C18</b>	00A-4462-AN	00B-4462-AN	00D-4462-AN	00F-4462-AN
<b>C8</b>	00A-4497-AN	00B-4497-AN	00D-4497-AN	00F-4497-AN
<b>PFP</b>	00A-4477-AN	00B-4477-AN	00D-4477-AN	00F-4477-AN

## Kinetex 1.7 µm Minibore UHPLC Columns (mm)

	50 x 2.1	100 x 2.1	150 x 2.1
<b>XB-C18</b>	00B-4498-AN	00D-4498-AN	00F-4498-AN
<b>C18</b>	00B-4475-AN	00D-4475-AN	00F-4475-AN
<b>C8</b>	00B-4499-AN	00D-4499-AN	00F-4499-AN
<b>PFP</b>	00B-4476-AN	00D-4476-AN	00F-4476-AN

## Zebron™ ZB-Drug-1 GC Columns

ID (mm)	df (µm)	Temp. Limits °C	Part No.	Price
<b>10-Meter</b>				
0.18	0.18	40 to 320/340 °C	7CD-G023-08	
<b>15-Meter</b>				
0.25	0.25	40 to 320/340 °C	7EG-G023-11	
<b>30-Meter</b>				
0.25	0.25	40 to 320/340 °C	7HG-G023-11	



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

### Terms and Conditions

Subject to Phenomenex Standard Terms & Conditions, which may be viewed at [www.phenomenex.com/TermsAndConditions](http://www.phenomenex.com/TermsAndConditions).

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Strata-X is patented by Phenomenex. U.S. Patent No. 7,119,145

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**Australia**

t: 02-9428-6444  
f: 02-9428-6445  
auinfo@phenomenex.com

**Austria**

t: 01-319-1301  
f: 01-319-1300  
anfrage@phenomenex.com

**Belgium**

t: 02 503 4015 (French)  
t: 02 511 8666 (Dutch)  
f: +31 (0)30-2383749  
beinfo@phenomenex.com

**Canada**

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

**Denmark**

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

**Finland**

t: 09 4789 0063  
f: +45 4810 6265  
nordicinfo@phenomenex.com

**France**

t: 01 30 09 21 10  
f: 01 30 09 21 11  
franceinfo@phenomenex.com

**Germany**

t: 06021-58830-0  
f: 06021-58830-11  
anfrage@phenomenex.com

**India**

t: 040-3012 2400  
f: 040-3012 2411  
indiainfo@phenomenex.com

**Ireland**

t: 01 247 5405  
f: +44 1625-501796  
eirinfo@phenomenex.com

**Italy**

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

**Luxembourg**

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

**Mexico**

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

**The Netherlands**

t: 030-2418700  
f: 030-2383749  
nlinfo@phenomenex.com

**New Zealand**

t: 09-4780951  
f: 09-4780952  
nzinfo@phenomenex.com

**Norway**

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

**Puerto Rico**

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

**Sweden**

t: 08 611 6950  
f: +45 4810 6265  
nordicinfo@phenomenex.com

**United Kingdom**

t: 01625-501367  
f: 01625-501796  
ukinfo@phenomenex.com

**United States**

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

**All other countries:****Corporate Office USA**

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



[www.phenomenex.com](http://www.phenomenex.com)

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