

STRATA-X- Drug B



Simplify Your Solid Phase Extraction

- QC Tested for Drugs of Abuse
- No Equilibration or Conditioning Required

NEW!
Drug B Plus
for In-Well Hydrolysis

Strata[®]-X-Drug B

One sorbent for all basic drugs of abuse extractions

Drug B Sorbent

A polymeric strong cation-exchange SPE sorbent designed and quality controlled with Substance Abuse and Mental Health Services Administration (SAMHSA) regulations in mind.



- Extract over 11 drugs using the same sorbent
- Consolidate methods; 3 methods is all you'll need to extract 6 different drug classes
- Time and solvent savings; no conditioning required
- Consistent, sensitive, and high recoveries of SAMHSA regulated drugs

NEW! Strata-X-Drug B Plus for In-Well Urine Hydrosis

Perform your enzyme hydrolysis in a 96-well SPE plate!

After incubation is completed, simply apply 5 Hg to pull hydrolysis solution through the well and continue SPE protocol.

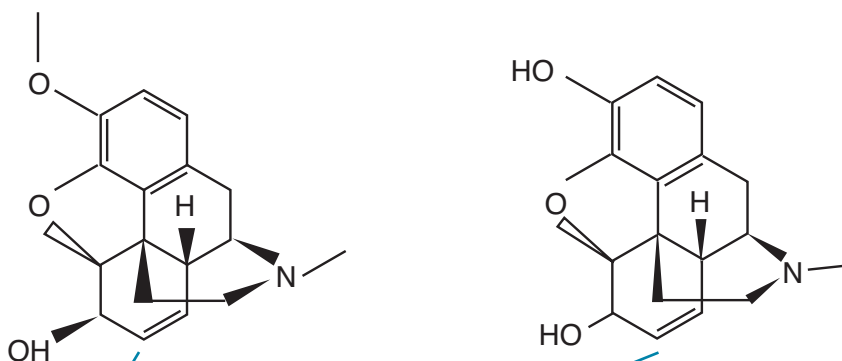
- Save time and eliminate transfer steps
- Save money by decreasing consumables cost

Solvent Shielding Technology™
to hold aqueous for 6 hours or more!



QC Tested for Your Analysis

Trust your SPE sorbent! We test recovery by extracting codeine and morphine from urine to ensure reliability.



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

Recovery Tests				
Compound	Specification	Avg. % Recovery (n=4)	Specification	%CV (n=4)
1 Codeine	≥ 85%	102	≤ 5.0%	1.0
2 Morphine	≥ 85%	96	≤ 5.0%	1.3

Absence of Interconversion of Norcodeine and Normorphine to Parent Compounds

Result: Pass

Sorbent Test		
Ion Exchange Capacity (meq/g)	Specification	Result
	0.9-1.2	1.0

Particle Characterization		
Parameter	Specification	Result
Surface Area (m ² /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 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

Recovery for codeine and morphine using LC-MS

Batch-to-batch consistency and reproducibility

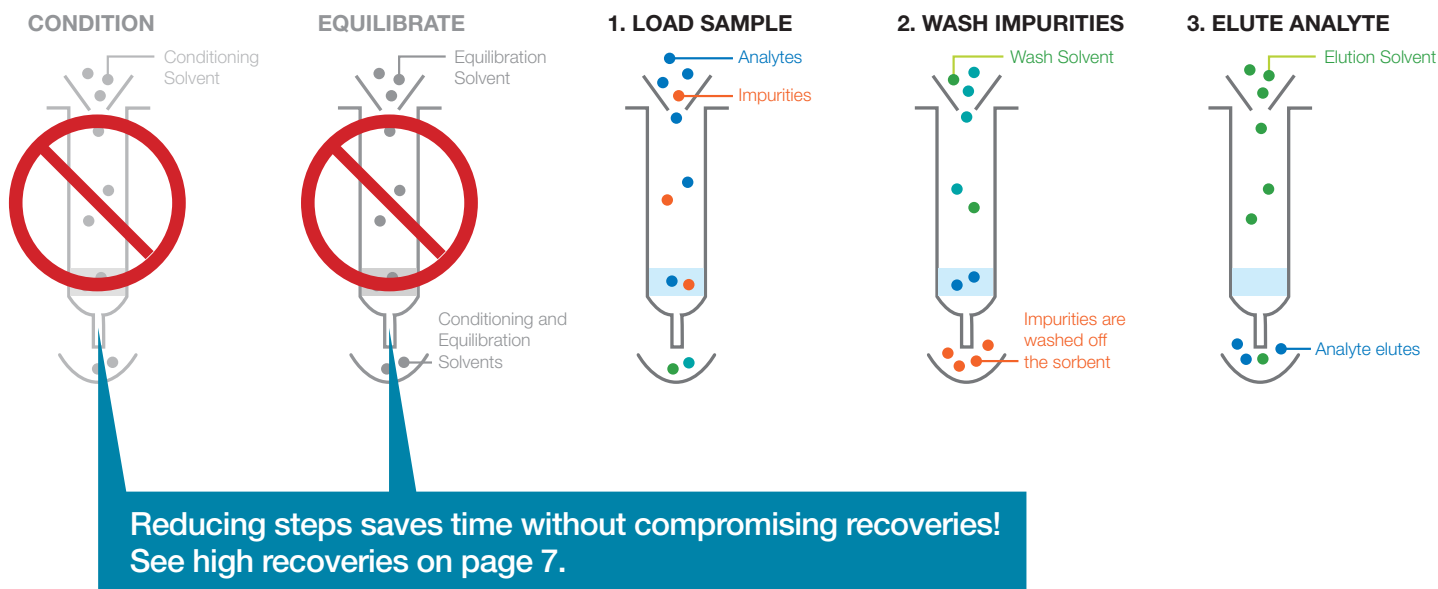
Consistent flow rates provide low variation between wells

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

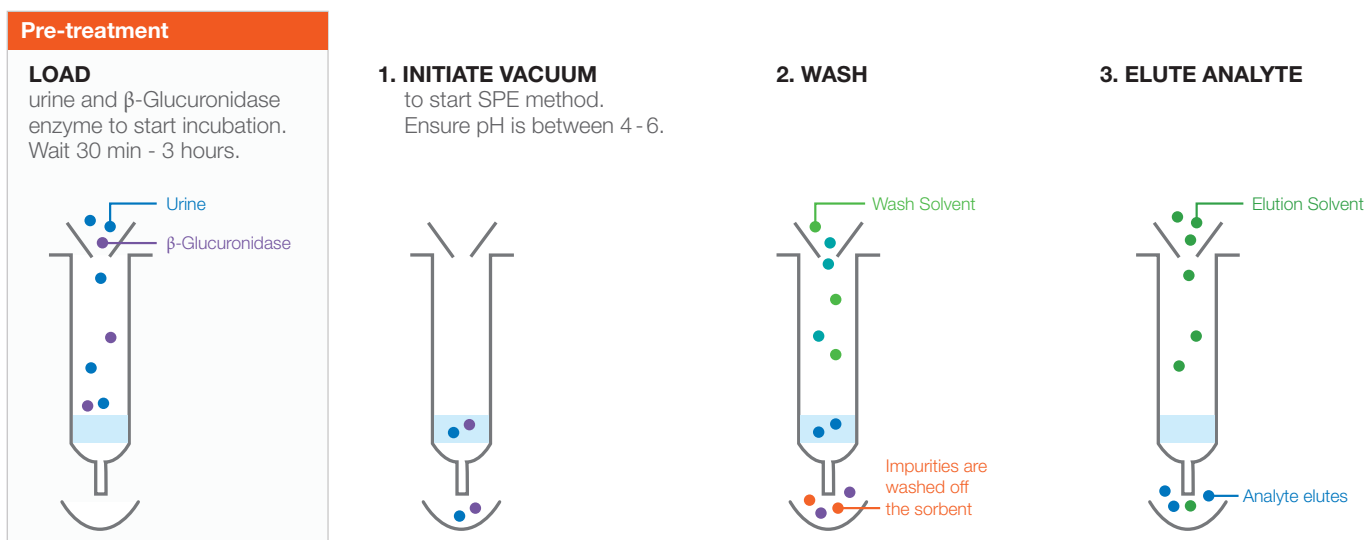
Simplify Your Protocol

SPE is commonly considered difficult and hard to perform. With a shorter protocol, this extraction is easy to implement in your lab.

Strata®-X-Drug B Protocol



Strata-X-Drug B Plus Protocol



Strata-X-Drug B Plus

- **Save Time** - Eliminate transfer steps
- **Save Money** - Decrease consumables cost
- **Simplify Your Method** - Reduce extra SPE stress

Advantages of In-Well Hydrolysis

Skip the extra steps! Perform an in-well β -Glucuronidase enzyme hydrolysis to save on time, extra lab costs, and unnecessary transfer steps.

Traditional Hydrolysis + SPE

Strata[®]-X-Drug B Plus In-Well Hydrolysis + SPE

ADD
 β -GLUCURONIDASE
ENZYME TO URINE
SAMPLE



WAIT
30 MIN - 3 HOURS

SOLVENT SHIELDING TECHNOLOGY[™]
to hold aqueous for 6 hours or more

TRANSFER
HYDROLYZED
URINE



SKIP THE TRANSFER STEP

SPE
PROTOCOL

1. Condition
2. Equilibrate
3. Load
4. Wash
5. Elute

- ~~Condition~~
~~Equilibrate~~
1. Initiate Vacuum to Load
 2. Wash
 3. Elute

Strata-X-Drug B Plus

Drug B Plus SPE sorbent eliminates β -Glucuronidase from the sample for longer column lifetimes and reduced instrument maintenance.

Easy Ways to Start Your Method

Don't let method development defeat you. Strata[®]-X-Drug B is easy to implement in your lab due to the recommended methods below. Select your analytes and get testing.

General Urine Pre-treatment Recommendation

1. Combine urine sample with appropriate buffer.
2. Add β -Glucuronidase enzyme according to manufacturer's recommendation (If using Strata-X-Drug B Plus, these steps can be performed in-well).
3. Incubate for specified amount of time (If using Strata-X-Drug B Plus, pulse vacuum to load solution onto sorbent).
4. Follow appropriate SPE protocol based on analytes of interest.

Choose Your Analytes

	Opiates, 6-MAM, PCP, Amphetamines, Propoxyphene, Healthcare Opiates, and Methadone*	Marijuana Metabolites	Cocaine Metabolites
Condition	Not Required		
Load	Pre-treated sample	Pre-treated sample	Pre-treated sample
Wash 1	600 μ L of 100 mM Sodium acetate buffer (pH 5.0)	600 μ L of 100 mM Sodium acetate buffer (pH 5.0)	600 μ L of 0.1 N Hydrochloric acid
Wash 2	600 μ L Methanol	600 μ L of Acetonitrile/100 mM Sodium acetate buffer (pH 5.0) (30:70)	600 μ L Methanol
Dry	10 minutes under full vacuum	15 minutes under full vacuum	10 minutes under full vacuum
Elute	2x 300 μ L of Ethyl acetate/Isopropanol/Ammonium hydroxide (70:20:10)	2x 300 μ L of Ethyl acetate/Isopropanol (85:15)	2x 300 μ L 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 30 mg/well Strata-X-Drug B 96-well plate; however they can be scaled to accommodate smaller or larger sample sizes and sorbent masses.

Adjust methods depending on sorbent size

Questions?

Talk to an expert to get answers.
www.phenomenex.com/LiveChat



High Recoveries, Low % CVs

There is no need to compromise for good recoveries and high consistency, Strata[®]-X-Drug B works to achieve both.

Reliable Results for 22 Basic Drugs of Abuse

All recoveries are above 96%!



* 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.

All % CVs ≤ 3.0

Don't Forget About Plasma Extractions

Extracting methylphenidate (Ritalin[®]) from plasma doesn't have to be difficult!
Another way Strata[®]-X-Drug B proves its consistency and versatility.

Recovery Comparison Data

Pre-treatment

Dilute 180 μ L plasma and 20 μ L spiking solution with 200 μ L 0.1% Formic acid in Water.

SPE Protocol

Cartridge:	Strata-X-Drug B Tube (30 mg, 1 mL)
Part No.:	8B-S128-TAK
Load:	Pre-treated sample
Wash 1:	600 μ L 0.1% Formic acid in Water
Wash 2:	600 μ L Acetonitrile/IPA (1:1)
Dry:	5 minutes under vacuum
Elute:	2x 300 μ L Acetonitrile/Methanol (1:1) with 5% NH ₄ OH
Dry Down:	Under Nitrogen at 30 °C
Reconstitute:	100 μ L 0.1% Formic acid/Methanol (1:4)

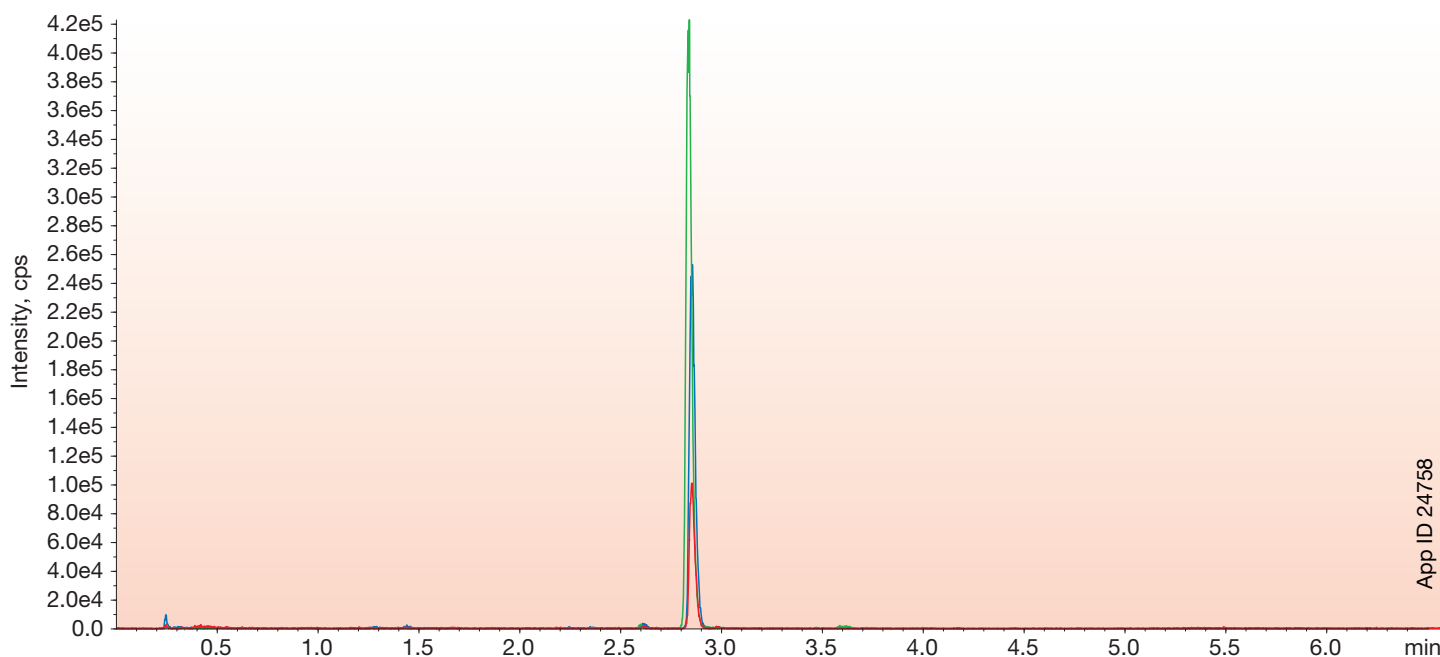
Recovery	% Recovery	% CV
QC Low 300 pg (n=7)	99	6
QC Mid 1.5 ng (n=5)	82	7
QC High 9 ng (n=6)	98	7

LC Conditions

Column: Kinetex[®] 2.6 μ m Biphenyl
Dimensions: 50 x 2.1 mm
Part No.: 00B-4622-AN
Mobile Phase: A: 0.1% Formic acid in Water
B: 0.1% Formic acid in Methanol
Gradient:

Time (min)	% B
0	5
3	95
4	95
4.01	5
6.5	5

Flow Rate: 0.45 mL/min
Injection Volume: 5 μ L
Detection: MS/MS (SCIEX API 4000[™])



To view more Drug B applications, go to www.phenomenex.com/StrataXDrug

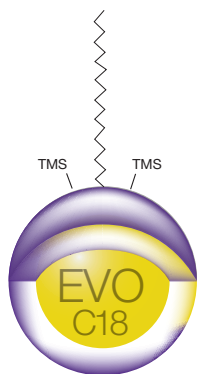
LC Workflow Solutions

Gain incredible performance for your drugs of abuse testing with Kinetex® and Luna® Omega LC Columns.



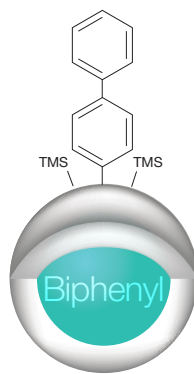
Kinetex UHPLC/HPLC Core-Shell

Increased resolution, efficiency, and greater sensitivity.



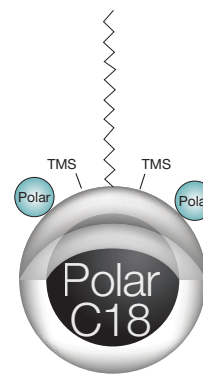
Kinetex EVO C18

pH 1-12 stable C18 that delivers robust methods and improved peak shape for basic analytes.



Kinetex Biphenyl

100 % aqueous stable reversed phase chemistry with hydrophobic and aromatic enhanced polar selectivity.



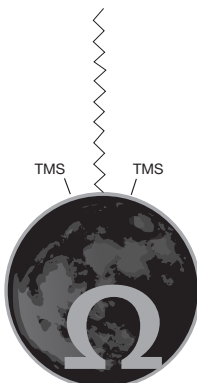
Kinetex Polar C18

Combined C18 and polar modified surface that provide polar and non-polar retention alongside 100 % aqueous stability.

To view more phases and column dimensions, go to www.phenomenex.com/Kinetex

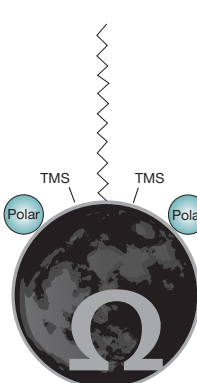
Luna Omega UHPLC/HPLC Fully Porous Thermally Modified

Greater separation muscle. Better peak shape through an inert foundation. Extreme ruggedness and dependability.



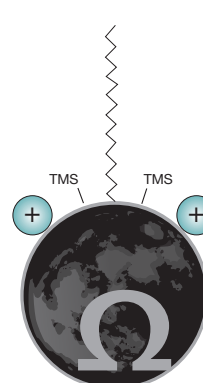
Luna Omega C18

Rugged C18 with focus on strong hydrophobic retentions of non-polar and polar compounds.



Luna Omega Polar C18

100 % aqueous stability and enhanced selectivity/retention for polar analytes without diminishing useful non-polar retention.



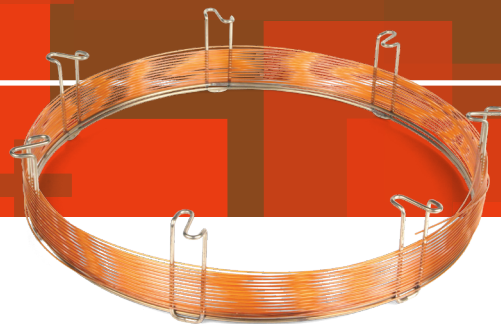
Luna Omega PS C18

Unique mixed-mode selectivity with enhanced retention for polar acids, better peak shape for bases, and 100 % aqueous stable.

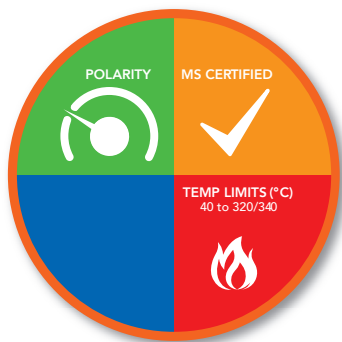
To order and to view applications, go to www.phenomenex.com/LunaOmega

GC Workflow Solutions

Upgrade to the Zebron™ portfolio for drugs of abuse testing for improved separation and resolution.



Zebron ZB-Drug 1

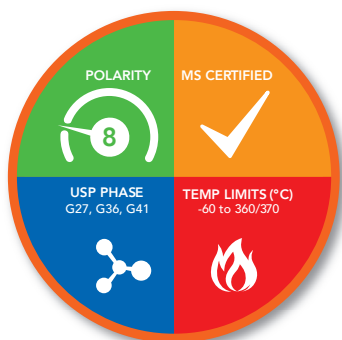


- Optimized separation for drugs of abuse
- Provides fast analysis with better peak shape
- Specifically deactivated to improve quantitation for drug compounds

Phase Chemistry: Proprietary

Recommended Application: Drug Screening, 6-MAM, Amphetamines, Barbiturates, Benzodiazepines, PCP, THC

Zebron ZB-5PLUS™



- Highly inert for improved peak shape of drugs of abuse
- MS certified low bleed levels provide maximum sensitivity
- Traditional bonding chemistry provides the same selectivity as other 5% phenyl columns

Phase Chemistry: 5% Phenyl, 95% Dimethylpolysiloxane

Recommended Application: Drugs of Abuse

Zebron Gas Management

Easy to install. Easy to replace.

Oxygen



Moisture



Hydrocarbon



Universal



Replace.
Reorder.
Relax.

To find a Zebron product that works for your analysis, go to www.phenomenex.com/Zebron

Ordering Information

Strata®-X-Drug B Plus SPE

Sorbent Mass	Part No.	Unit
96-Well Plate		
10 mg	8E-S128-AGB-P	2 Plates/Box
30 mg	8E-S128-TGB-P	2 Plates/Box

Strata-X-Drug B SPE

Sorbent Mass	Part No.	Unit
Tube		
10 mg	8B-S128-AAK	1 mL (100/box)
30 mg	8B-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)
Giga™ Tube		
100 mg	8B-S128-EDG	12 mL (20/box)
96-Well Plate		
10 mg	8E-S128-AGB	2 Plates/Box
30 mg	8E-S128-TGB	2 Plates/Box
60 mg	8E-S128-UGB	2 Plates/Box

Presston™ 100 Positive Pressure Manifold

Part No.	Description
AH0-9334	Presston 100 Positive Pressure Manifold, 96-Well Plate
AH0-9342	Presston 100 Positive Pressure Manifold, 1 mL Tube Complete Assembly
AH0-9347	Presston 100 Positive Pressure Manifold, 3 mL Tube Complete Assembly
AH0-9343	Presston 100 Positive Pressure Manifold, 6 mL Tube Complete Assembly

The Presston 100 96-Well Positive Pressure Manifold can also process 1, 3, and 6 mL tubes using the following adapter kits

Presston 100 Tube Adapter Kits (for AH0-9334)

Part No.	Description
AH0-9344	1 mL Tube Adapter Kit
AH0-9345	3 mL Tube Adapter Kit
AH0-9346	6 mL Tube Adapter Kit



WARRANTY Phenomenex warrants that for a period of 12 months following delivery, the Presston 100 Positive Pressure Manifold you have purchased will perform in accordance with the published specifications and will be free from defects in materials or workmanship. In the event that the Presston 100 Positive Pressure Manifold does not meet this warranty, Phenomenex will repair or replace defective parts. Please visit www.phenomenex.com/Presston for complete warranty information.



If Phenomenex products in this guide 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.

Interested in neutral drugs of abuse testing?

Try Strata-X-Drug N

www.phenomenex.com/StrataXDrug

Don't forget your accessories!

Round Well Collection Plates (polypropylene)

Part No.	Well Bottom	Well Volume	Unit	Sealing Mats
AH0-7279	Round	1 mL	50/pk	AH0-8631 AH0-8632
AH0-8636	Round	2 mL	50/pk	AH0-8633 AH0-8634

Square Well Collection Plates (polypropylene)

Part No.	Well Bottom	Well Volume	Unit	Sealing Mats
AH0-7192	Conical	350 µL	50/pk	AH0-8597 AH0-8598 AH0-8199 AH0-7195
AH0-7193	Conical	1 mL	50/pk	AH0-8597 AH0-8598 AH0-8199 AH0-7195
AH0-7194	Conical	2 mL	50/pk	AH0-8597 AH0-8598 AH0-8199 AH0-7195
AH0-8635	Round-Conical	2 mL	50/pk	AH0-8597 AH0-8598 AH0-8199 AH0-7195

Round Well Sealing Mats

Part No.	Description	Material	Unit
AH0-8631	Pierceable, 7 mm diameter	Silicone	50/pk
AH0-8632	Pre-Slit, 7 mm diameter	Silicone	50/pk
AH0-8633	Pierceable, 8 mm diameter	Silicone	50/pk
AH0-8634	Pre-Slit, 8 mm diameter	Silicone	50/pk
AH0-7362	Sealing Tap Pad	—	10/pk

Square Well Sealing Mats

Part No.	Description	Material	Unit
AH0-8597	Pierceable	Silicone	50/pk
AH0-8598	Pre-Slit	Silicone	50/pk
AH0-8199	Pierceable	Santoprene™	100/pk
AH0-7195	Pierceable	Ethylene Vinyl Acetate (EVA)	50/pk
AH0-7362	Sealing Tap Pad	—	10/pk

STRATA-X- Drug B



Simplify Your
Solid Phase Extraction

NEW!
Drug B Plus
for In-Well Hydrolysis

Australia

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

Portugal

t: +351 221 450 488
f: +34 91-413-2290
ptinfo@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

Switzerland

t: +41 61 692 20 20
f: +41 61 692 20 22
swissinfo@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



www.phenomenex.com

Phenomenex products are available worldwide. For the distributor in your country, contact Phenomenex USA, International Department at international@phenomenex.com

Terms and Conditions

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

Trademarks

Kinetex, Luna, and Strata are registered trademarks, Giga, 5PLUS, Presston, Solvent Shielding Technology, and Zebtron are trademarks of Phenomenex. Ritalin is a trademark of Novartis Corporation. Santoprene is a trademark of Exxon Mobil Corporation. API 4000 is a trademark of AB SCIEX Pte. Ltd. AB SCIEX is being used under license.

Disclaimer

Phenomenex is not affiliated with Novartis Corporation or Exxon Mobil Corporation.

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

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

FOR RESEARCH USE ONLY. Not for use in clinical diagnostic procedures.

© 2018 Phenomenex, Inc. All rights reserved.