

# FACT:

\* Phenomenex®  
**Strata-X™**

# Outperforms

† Waters®  
**Oasis HLB**

In 3 critically evaluated areas



- 1 Recovery
- 2 Loadability
- 3 Reproducibility

\* Strata-X is patented by Phenomenex, Inc.

† Oasis is a registered trademark of Waters Corporation.

Phenomenex is not affiliated with Waters Corporation.

Comparative separations may not be representative of all applications.

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



## Fact:

**\*Strata™ -X outperforms †Oasis® HLB**

In three critically evaluated areas...

### 1 Recovery

Don't lose critical compounds

### 2 Loadability

Avoid loading volume limitations

### 3 Reproducibility

Can you afford to re-run samples?

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# Table of Contents

Higher Recovery.....	4
Greater Loadability.....	5
Better Reproducibility.....	6
Maximum Versatility, Balance Recovery and Cleanup.....	7
Improve Your Results Even More.....	8
Dedicated to Your Success .....	9
Ordering Information.....	10
Quality Products Guaranteed.....	11

## Strata™-X Promise

Phenomenex is dedicated to your complete satisfaction!

We are committed to making Strata™-X your first choice for solid phase extraction (SPE) by dedicating a technical account manager to your company, continuously developing innovative technologies, creating pertinent technical resources, and providing service globally.



guarantee

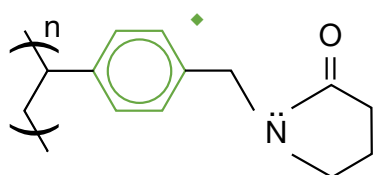
If Strata™-X SPE products do not perform as well or better than your current SPE product of similar phase, mass and size, send in your comparative data within 45 days and keep the Strata-X SPE product for **FREE!**

# 1 Higher Recovery

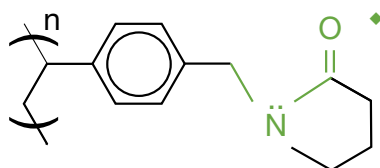
## FACT:

Strata™-X is a functionalized polymeric sorbent that contains N-Vinylpyrrolidone, which offers multiple modes of retention for stronger analyte-sorbent interaction.

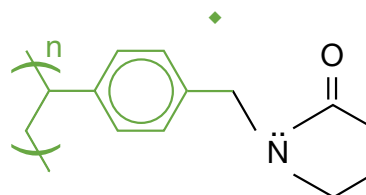
### Pi-Pi Bonding



### Hydrogen Bonding, Dipole-Dipole Interactions



### Hydrophobic Interactions

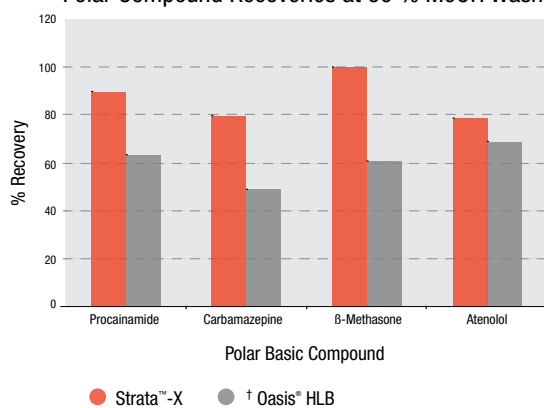


◆ Analyte-sorbent interaction site highlighted in green.

## ADVANTAGE:

- Stronger wash! Use up to 60 % organic without sacrificing recovery!

Polar Compound Recoveries at 60 % MeOH Wash



**Condition:** 800  $\mu$ L methanol followed by 800  $\mu$ L water

**Load:** 500  $\mu$ L plasma diluted with 1 mL water  
(spiked conc. ULOQ = 500 ng/mL; LLOQ=5 ng/mL)

**Wash 1:** 800  $\mu$ L water

**Wash 2:** 800  $\mu$ L 60 % MeOH/water

**Dry:** 1-2 mins at 10" of Hg

**Elute:** 2 x 200  $\mu$ L 100 % MeOH

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\* Contact Phenomenex for method details.

## ② Greater Loadability

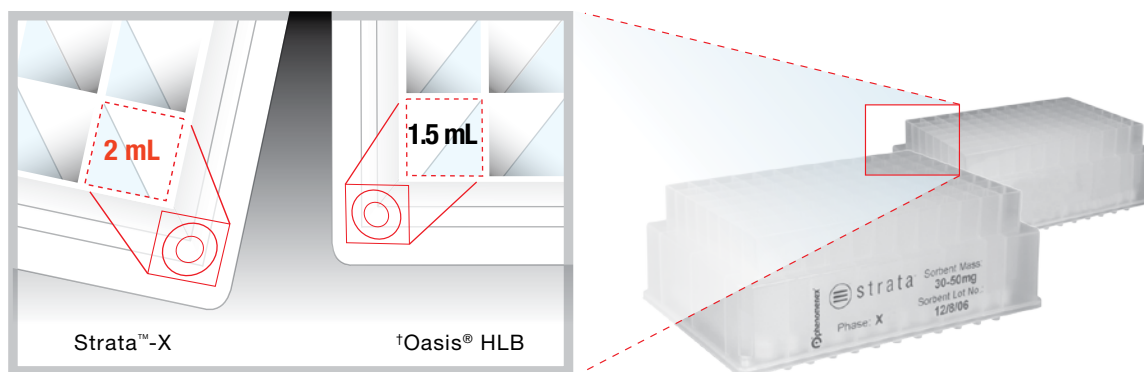
### FACT:

Strata™-X plates have been engineered to allow higher loading volumes than Oasis® HLB plates, which helps to avoid limits on loading volumes that can lead to problems with lower limit of quantification (LLOQ) and lower limit of detection (LLOD) of low concentration analytes.

### ADVANTAGE:

- Increase sample mass on sorbent
- Increase signal-to-noise ratio

#### Greater Well Volume in Strata™-X 96-Well Plates



### HELPFUL TIP:

Strata™-X sorbents allow you to load 250  $\mu$ L of plasma or 500  $\mu$ L of urine on a 30 mg sorbent bed.

“Enthalpy has maintained an excellent relationship with Phenomenex because of the quality, selection, and consistency of Phenomenex’s HPLC columns and SPE sorbents. This, coupled with personal, customer focused service, ensures that Enthalpy will work closely with Phenomenex for many years to come.”

— Brian Nofsinger, Ph.D., Enthalpy Analytical, Inc.,  
Durham, NC

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## 3 Better Reproducibility

### FACT:

Phenomenex completes over 20 QA and QC tests on Strata™-X products to ensure batch-to-batch reproducibility.

- Surface Area
- Pore Size
- Pore Volume
- Surface pH
- Particle Diameter
- Particle Size Distribution
- % Water
- % SiO<sub>2</sub>

- % Fe<sub>2</sub>O<sub>3</sub>
- Purity
- Carbon Loading
- Hydrogen Loading
- Surface Coverage
- Residue
- Turbidity

- Sorbent Weight
- Flow Rate
- Tube Purity
- Frit Purity
- Dye Tests
- Chromatogram
- 11 Probes Used

### ADVANTAGE:

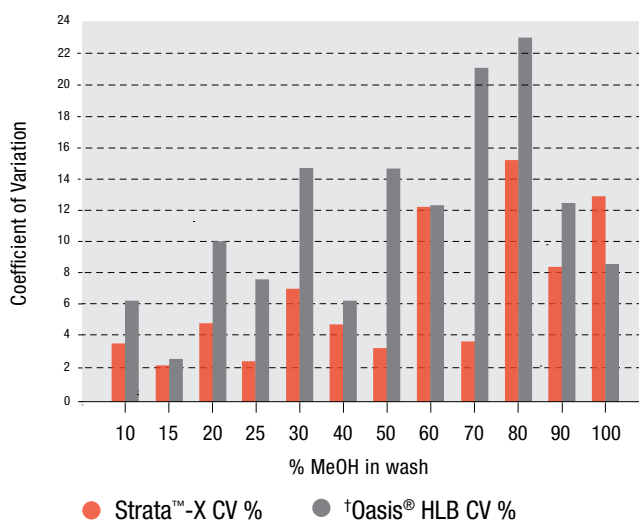
- Greater consistency in your results
- More robust methods

“Strata-X SPE cartridges were perfect for method development in a recent LC/MS/MS application.

They handled complex dairy samples with consistent results and I found the flow rate easier to control than that of a competitor's cartridge.”

— Andrew Patterson, Vista Analytical Laboratory, El Dorado Hills, CA

Coefficient of Variation Experienced on Strata™-X and †Oasis® HLB



Percent Concentration of MeOH in Wash

	Strata™-X CV %	HLB CV %
10	3.7	6.2
15	2.2	2.3
20	4.8	10.0
25	2.3	7.7
30	7.1	14.8
40	4.6	11.3
50	3.3	14.8
60	12.2	12.3
70	3.7	21.5
80	15.6	23.2
90	8.8	12.4
100	12.8	8.5

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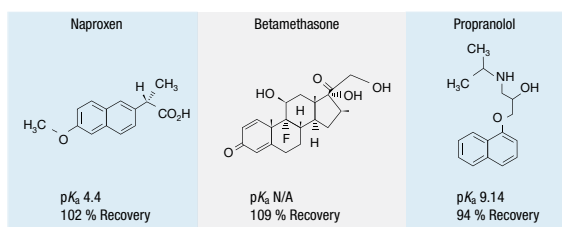
## Maximum Versatility

### FACT:

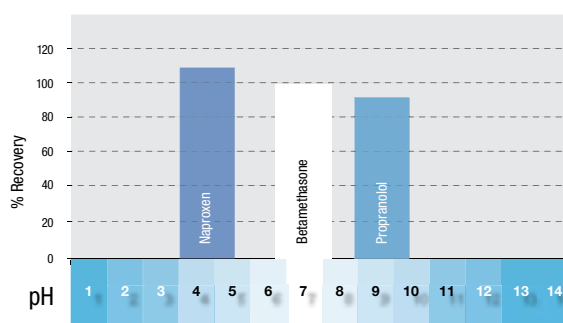
The chemistry behind Strata™-X allows you to increase the ability to retain a wider variety of compounds.

### ADVANTAGE:

- Simplified method development
- Selectivity for acidic, basic, and neutral compounds



Acidic, Neutral, and Basic Compound Recoveries at 50 % Methanol Wash



## Balance Recovery and Cleanup

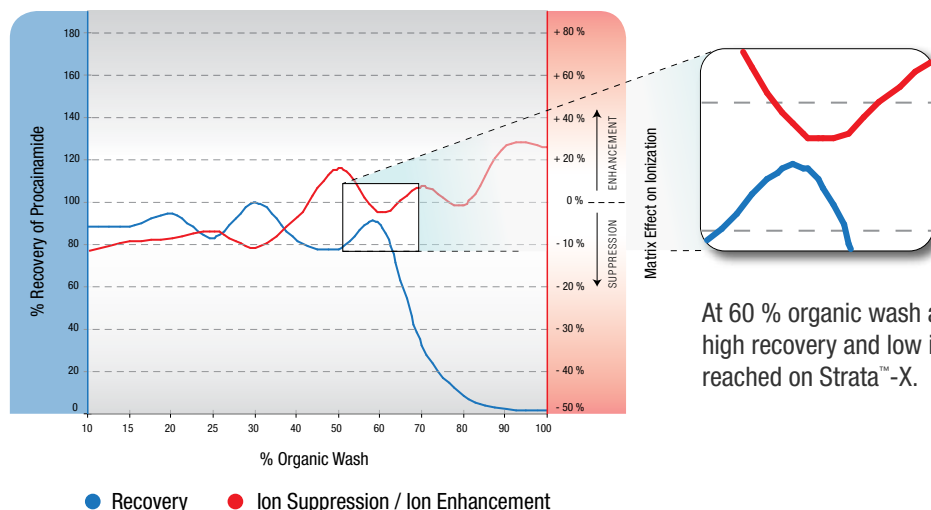
### FACT:

There exists an inverse relationship between the strength of your wash solvent(s) and the amount of contaminants that are left behind in your sample. Achieve greater sensitivity by increasing the strength of your wash.

### ADVANTAGE:

- Increase signal-to-noise ratio
- Decrease ionization suppression

Relationship Between Recovery and Matrix Effect with Increases in Organic Wash



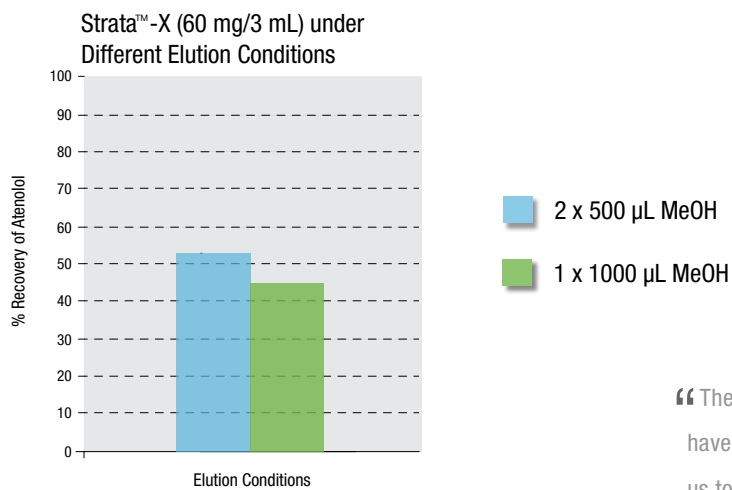
At 60 % organic wash a balance between high recovery and low ion suppression is reached on Strata™-X.

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# Improve Your Results Further

## HELPFUL TIP:

Splitting your elution solvent volume into 2 aliquots can increase your recovery when compared to eluting in only 1 aliquot.

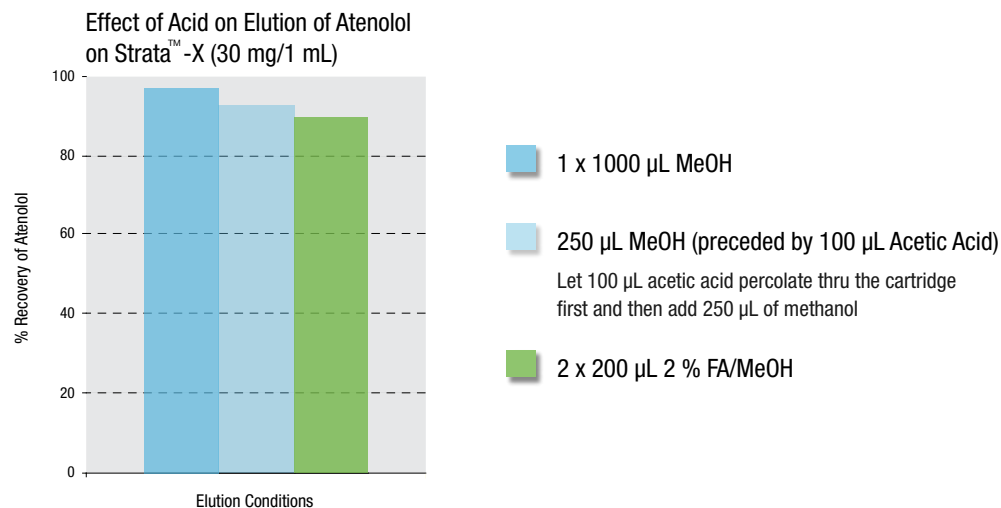


“The Phenomenex [sample] preparation specialists have been enormously helpful – they have helped us to choose the right columns and have helped us to develop our protocols. Thank you Phenomenex!”

— New England Aquarium, Boston, MA

## HELPFUL TIP:

When working with basic compounds, adding Formic Acid to your eluent can significantly increase your eluent strength, resulting in a higher recovery and making it possible to decrease your elution volume.





## Dedicated to Your Success

### Strata™ -X Method Development Software

Strata™-X method development software allows you to quickly take advantage of the sample cleanup benefits SPE offers by:

- Developing a complete SPE method around your target compound
- Walking you through method troubleshooting
- Offering method optimization steps for the highest yields

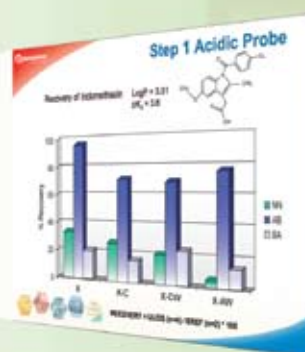


Access your FREE\* copy of the SPE method development software via the web at:

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

### Free On-site Seminar

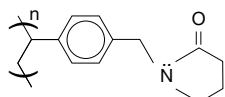
Contact us and schedule a **FREE\*** on-site seminar on SPE Method Development.



\* Subject to terms and conditions of the Software License Agreement. All offers subject to change or withdrawal without notice.

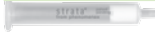


# Act Now! Try Strata™-X Today!

## Strata™-X



### Material Characteristics

Particle Size (µm)	33
Pore Size (Å)	85
Surface Area (m <sup>2</sup> /g)	800
pH Stability	1-14

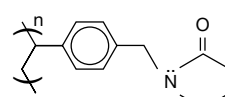
Format	Sorbent Mass	Part Number	Unit	Price
<b>Tube</b>				
	30 mg	8B-S100-TAK	1 mL (100/box)	
	30 mg	8B-S100-TBJ	3 mL (50/box)	
	60 mg	8B-S100-UBJ	3 mL (50/box)	
	100 mg	8B-S100-EBJ	3 mL (50/box)	
	100 mg	8B-S100-ECH	6 mL (30/box)	
	200 mg	8B-S100-FBJ	3 mL (50/box)	
	200 mg	8B-S100-FCH	6 mL (30/box)	
	500 mg	8B-S100-HBJ	3 mL (50/box)	
	500 mg	8B-S100-HCH	6 mL (30/box)	
<b>Giga™ Tube</b>				
	500 mg	8B-S100-HDG	12 mL (20/box)	
	1 g	8B-S100-JDG	12 mL (20/box)	
	1 g	8B-S100-JEG	20 mL (20/box)	
	2 g	8B-S100-KEG	20 mL (20/box)	
	5 g	8B-S100-LFF	60 mL (16/box)	
<b>Teflon Tube</b>				
	200 mg	8B-S100-FDG-T	12 mL (20/box)	
<b>96-Well Plate</b>				
	10 mg	8E-S100-AGB	2 Plates/Box	
	30 mg	8E-S100-TGB	2 Plates/Box	
	60 mg	8E-S100-UGB	2 Plates/Box	

### On-line Extraction Cartridge

Description	Part Number	Unit/Box	Price
Strata-X On-line extraction cartridge, 20 x 2.0 mm	00M-S033-B0-CB	ea	
Cartridge holder, 20 mm	CH0-5845	ea	

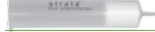




## Strata™-XL



### Material Characteristics

Particle Size (µm)	100
Pore Size (Å)	300
Surface Area (m <sup>2</sup> /g)	520
pH Stability	1-14

Format	Sorbent Mass	Part Number	Unit	Price
<b>Tube</b>				
	30 mg	8B-S043-TAK	1 mL (100/box)	
	60 mg	8B-S043-UBJ	3 mL (50/box)	
	100 mg	8B-S043-EBJ	3 mL (50/box)	
	200 mg	8B-S043-FBJ	3 mL (50/box)	
	200 mg	8B-S043-FCH	6 mL (30/box)	
	500 mg	8B-S043-HCH	6 mL (30/box)	
<b>Giga™ Tube</b>				
	2 g	8B-S043-KDG	12 mL (20/box)	
	2 g	8B-S043-KEG	20 mL (20/box)	
	5 g	8B-S043-LEG	20 mL (20/box)	
	5 g	8B-S043-LFF	60 mL (16/box)	
	10 g	8B-S043-MFF	60 mL (16/box)	
<b>96-Well Plate</b>				
	30 mg	8E-S043-TGB	2 Plates/Box	
	200 mg	8E-S043-FGB	2 Plates/Box	
	400 mg	8E-S043-5GB	2 Plates/Box	

### Terms and Conditions

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

### Trademarks

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### Disclaimers

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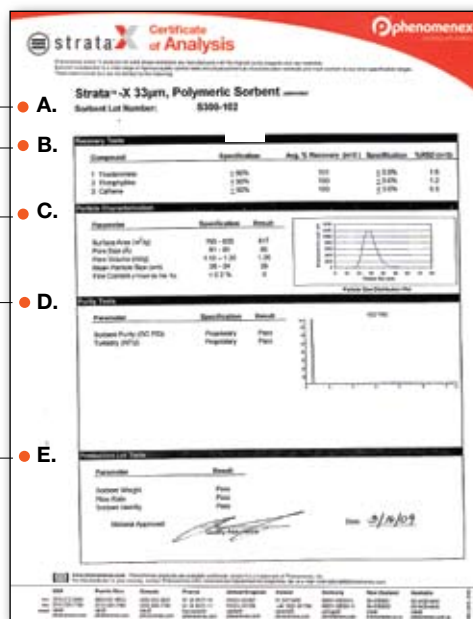
Strata-X is patented by Phenomenex, Inc.

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## Quality Products Guaranteed

Rigorous Quality Control (QC) and Quality Assurance (QA) measures are incorporated into the manufacturing process of all Strata™-X products to ensure they meet the level of performance demanded in any lab setting.

- A. Allows for complete traceability**
- B. Recovery Tests-** Reproducible recoveries for reliable method development.
- C. Particle Characterization-** Tight particle size distribution gives consistent and optimal flow from tube-to-tube resulting in consistent sample processing on a vacuum manifold.
- D. Purity Tests-** High purity sorbent, tubes, and frits are used to give leachate-free extracts, eliminating potential contaminants that may interfere with analysis.
- E. Production Lot Tests-** Strata™-X sorbents have been optimized to batch-to-batch and tube-to-tube reproducibility.



“ This is the best service I have got after working in a chemistry lab for over 10 years. ”

— Honghui Zhu, Agricultural Agri-Food



If Strata™-X SPE products do not perform as well or better than your current SPE product of similar phase, mass and size, send in your comparative data within 45 days and keep the Strata-X SPE product for **FREE!**

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