

Successful Bioanalytical Sample Preparation
Without the Dry Down

NEW Microelution 96-Well SPE Plates

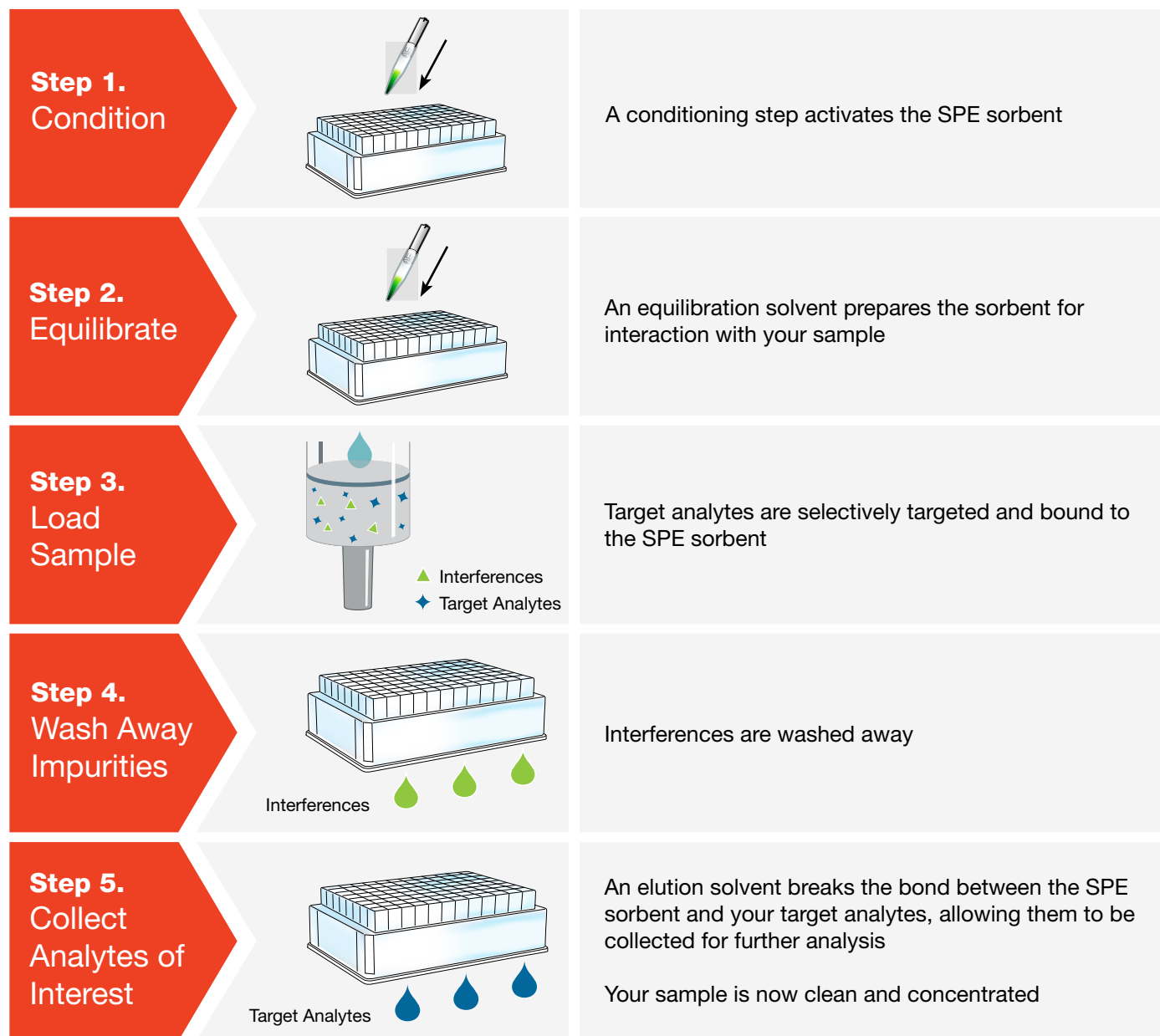
- Increase sensitivity
- Process small or limited sample volumes
- Save time and reduce costs
- Reduce loss of challenging analytes



5 Simple Steps for Clean Samples

Solid Phase Extraction (SPE) is an effective technique for cleaning up and concentrating samples prior to UHPLC/ HPLC or GC analysis. Available in several chemistries, the SPE sorbent selectively targets your analytes of interest, allowing interferences and impurities to be washed away by following 5 easy steps.

Solid Phase Extraction (SPE) Basics



SPE Is Easy!

Turn to page 4 to learn how **Strata-X Microelution 96-Well SPE Plates** can further improve your work.

Microelution SPE is Faster and More Sensitive than Traditional SPE pp. 4-5

Skip the Dry Down Step

- ▶ Increase Throughput p. 6
- ▶ Reduce the Risk of Analyte Loss p. 7

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Microelution SPE is Faster and More Sensitive

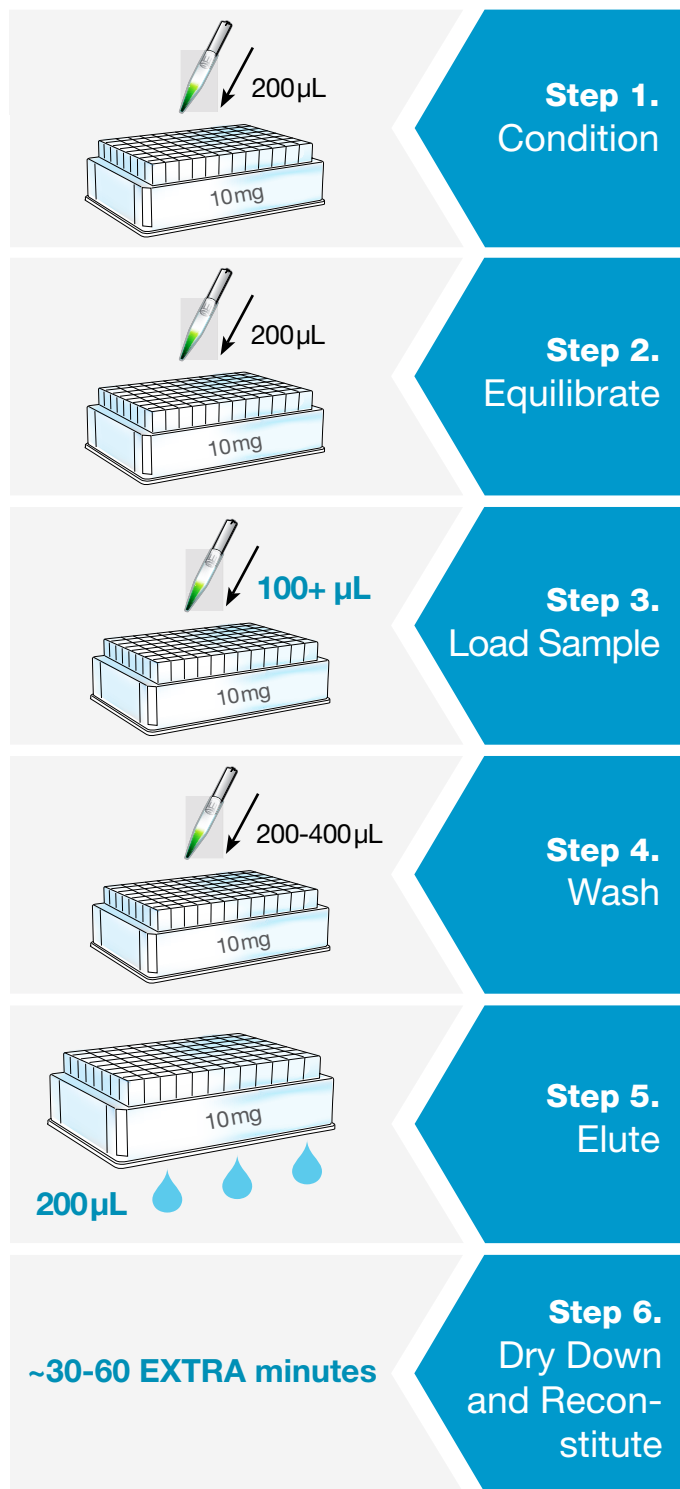
Traditional 10mg SPE

Not amenable to small or limited sample volumes

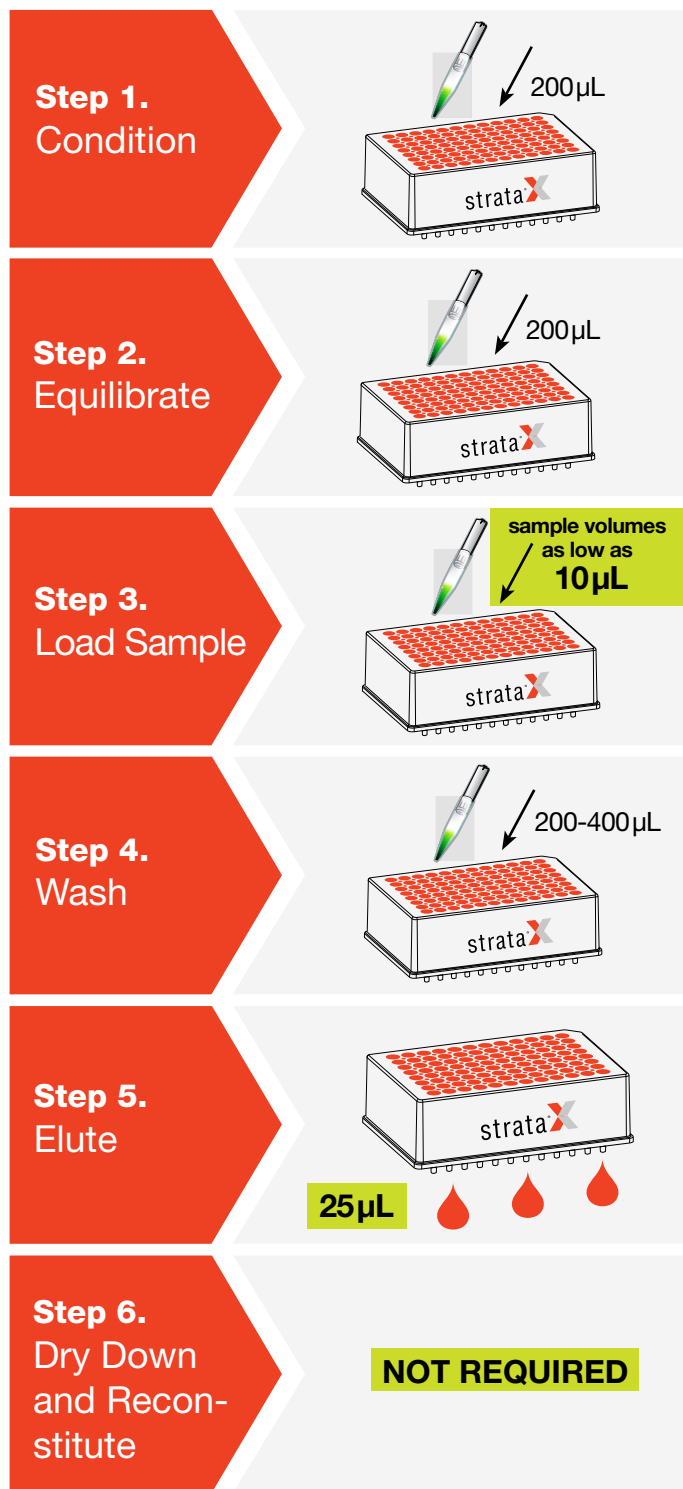
Concentration of target analytes is diluted

Dry down is required to increase sensitivity, adding time and cost

Thermolabile or unstable analytes can be lost during this step



Strata-X Microelution SPE



Process small or limited sample volumes without constraints

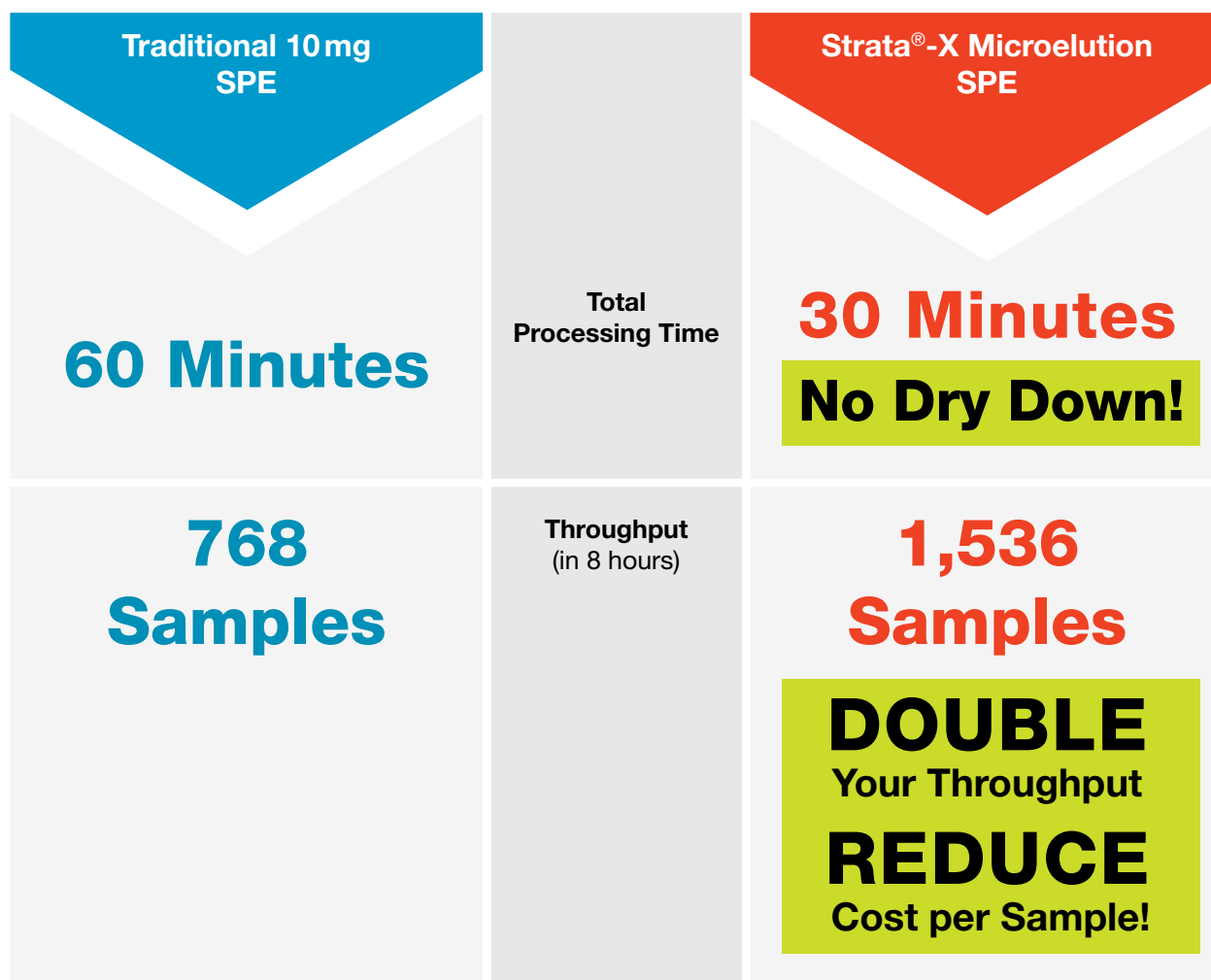
At least 8x more sensitive than traditional 10 mg SPE!

Save 30 or more minutes per 96-well plate!

Save on labor costs, do more in less time

Increase Throughput

Save 30 or more minutes per 96-well plate by eliminating timely dry down and reconstitution steps.

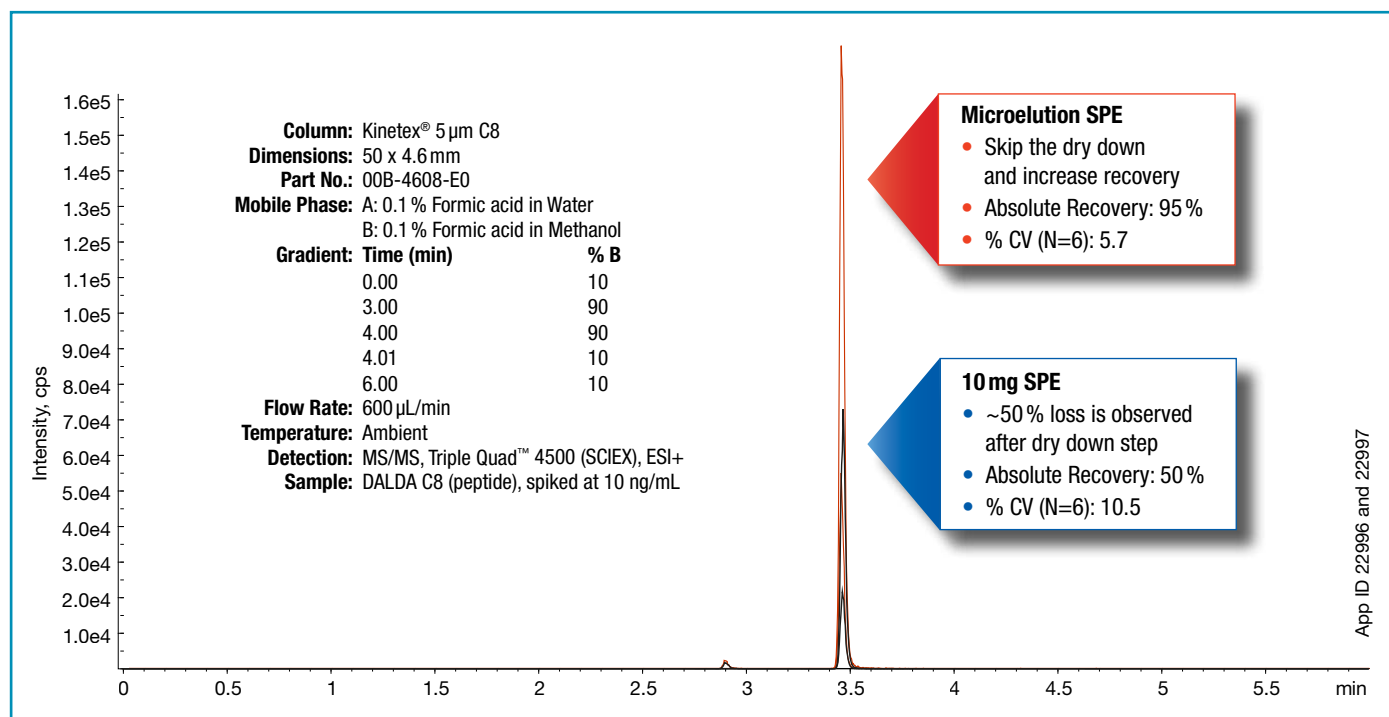


View the Case Study!

www.phenomenex.com/Microelution

Many target analytes such as peptides and thermolabile compounds can be lost during dry down steps. Stop risking analyte loss and skip the dry down step without losing sensitivity.

	Strata-X 96-Well SPE Plate, 10 mg/well	Strata-X Microelution 96-Well SPE Plate, 2 mg/well
Condition	400 μ L Methanol	200 μ L Methanol
Equilibrate	400 μ L Water	200 μ L Water
Load	400 μ L diluted serum (200 μ L serum diluted 1:1 with 4 % Phosphoric acid in water)	400 μ L diluted serum (200 μ L serum diluted 1:1 with 4 % Phosphoric acid in water)
Wash 1	400 μ L 2 % Formic acid in water	200 μ L 2 % Formic acid in water
Wash 2	400 μ L 20 % Acetonitrile in water	200 μ L 20 % Acetonitrile in water
Elute	2x 175 μ L Trifluoroacetic acid/Acetonitrile/Water (1:74:25)	2x 25 μ L Trifluoroacetic acid/Acetonitrile/Water (1:74:25)
Dry Down	Dry down under a gentle stream of Nitrogen and reconstitute in 50 μ L Trifluoroacetic acid/Acetonitrile/Water (1:74:25)	NOT REQUIRED
Inject	10 μ L	10 μ L



1. CNS Delivery and Pharmacokinetic Evaluations of DALDA Analgesics Peptide Analog Administered in Nano-Sized Oil-in-Water Emulsion Formation. Shah L., Gattacceca F. and Amiji MM. Pharm Res (2014) 31:1315-1324.
2. Analgesic Efficacy and Safety of DALDA Peptide Analog Delivery to the Brain using Oil-in-Water Nanoemulsion Formation. Shah L., Kulkarni P., Ferris C., and Amiji MM. Pharm Res. (2014) 31:2724-2734.

Easily Process Samples

Strata®-X Microelution 96-well SPE plates are compatible with standard vacuum manifolds, positive pressure manifolds, and liquid handling systems, making it even easier to process your samples.

Cost Effective Benchtop Processing

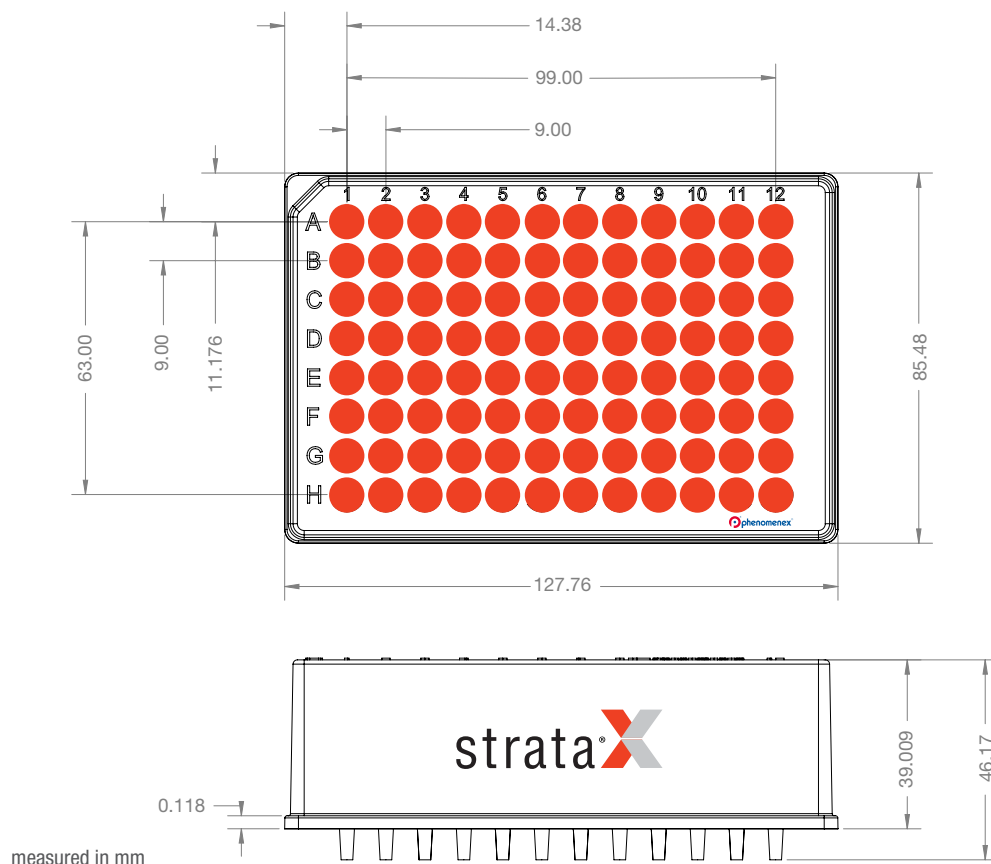
96-Well Plate Vacuum Manifold
Part No. AH0-8950

Presston™ 100
Positive Pressure Manifold
Part No. AH0-9334



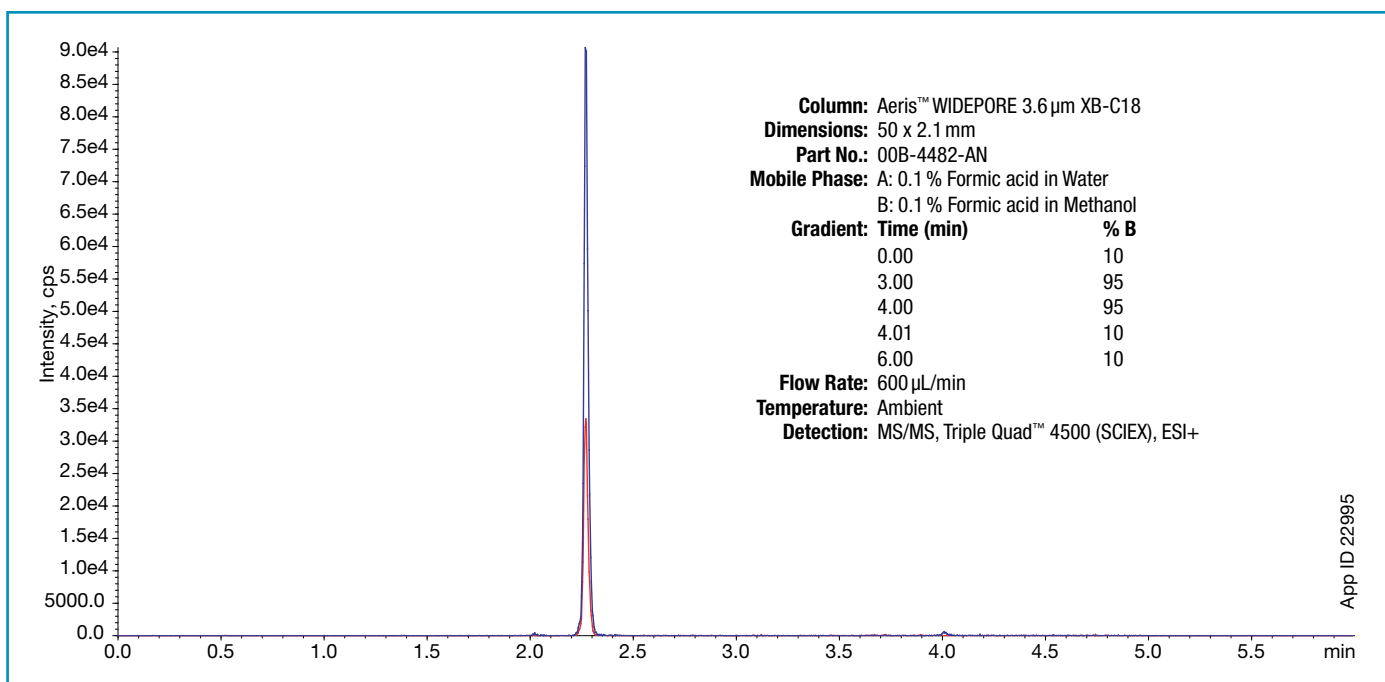
High-Throughput, Hands-Free Liquid Handling Systems

Use the dimensions outlined below to program your liquid handling system.



Reliable Peptide Analysis

Strata-X-CW Microelution 96-Well SPE Plate, 2 mg/well Part No. 8M-S035-4GA	
Condition	200 µL Methanol
Equilibrate	200 µL Water
Load	400 µL diluted serum (200 µL serum diluted 1:1 with 4 % Phosphoric acid in water)
Wash 1	200 µL 5 % Ammonium hydroxide in water
Wash 2	200 µL 20 % Acetonitrile in water
Elute	2x 25 µL Trifluoroacetic Acid/Acetonitrile/Water (1:74:25)
Inject	2 µL

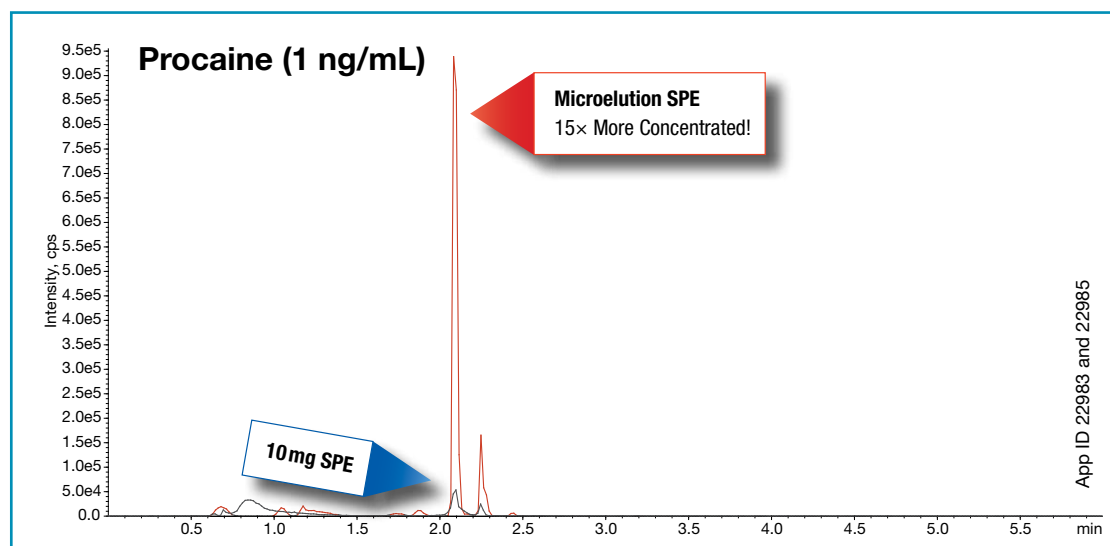
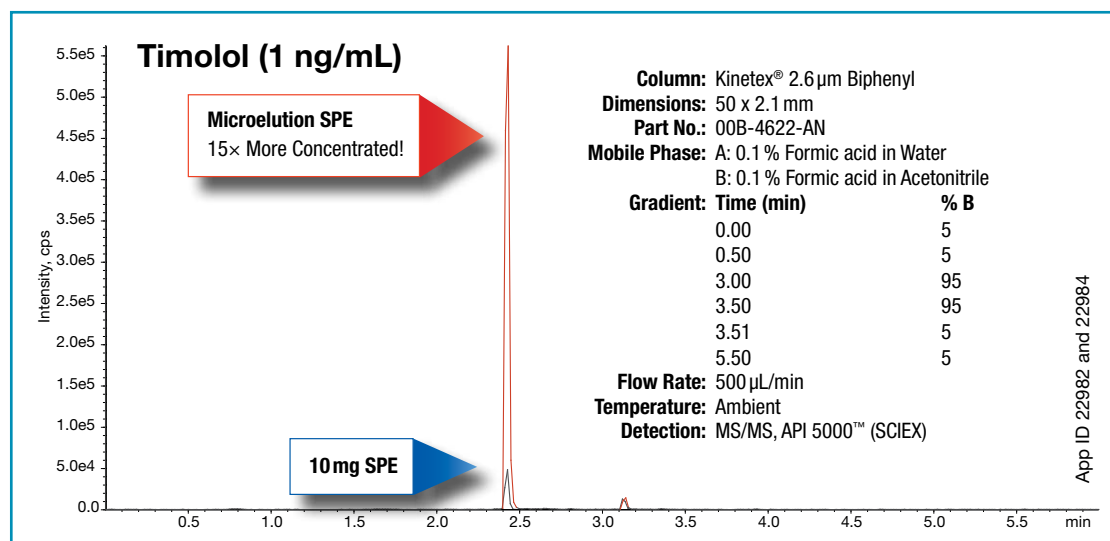


Absolute Recovery of Goserelin at 5 ng/mL

Peptide	RT (min)	% Absolute Recovery	% CV (N=10)
Goserelin	2.27	98	5.8

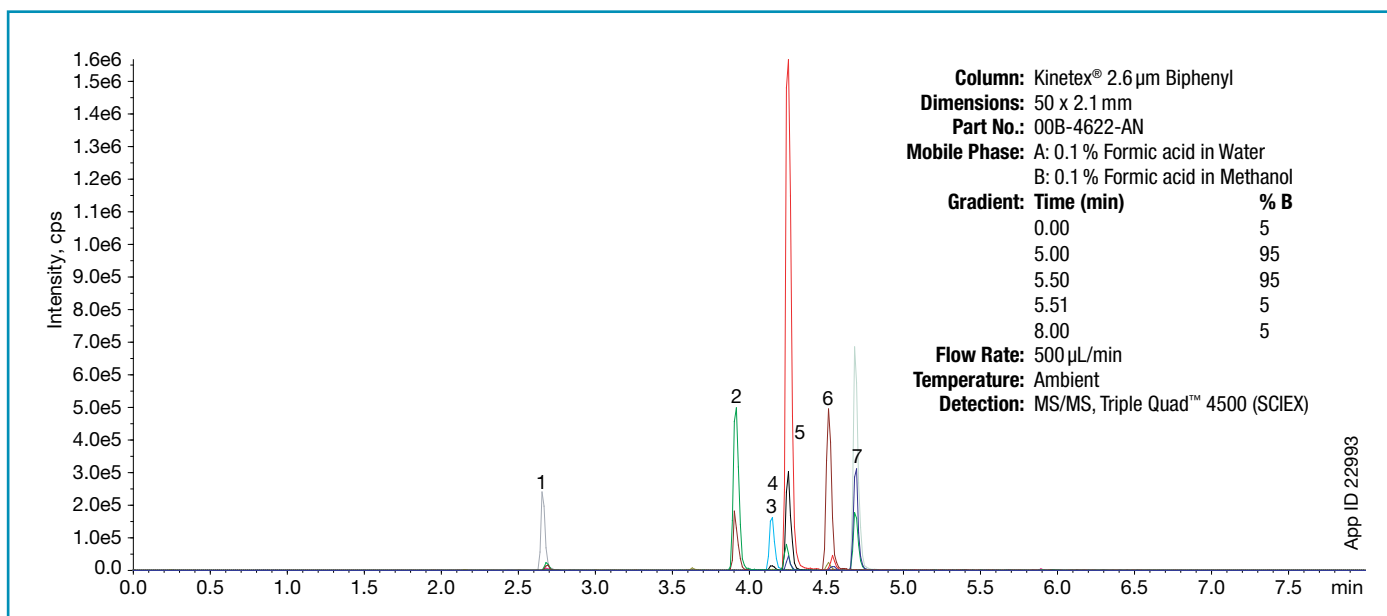
Ultra Sensitive Pharmaceutical Analysis

	Strata®-X-C 96-Well SPE Plate, 10 mg/well	Strata-X-C Microelution 96-Well SPE Plate, 2 mg/well
Condition	500 µL Methanol	200 µL Methanol
Equilibrate	500 µL Water	200 µL Water
Load	750 µL diluted serum (375 µL serum diluted 1:1 with 4 % Phosphoric acid in water)	750 µL diluted serum (375 µL serum diluted 1:1 with 4 % Phosphoric acid in water)
Wash 1	500 µL 2 % Formic acid in water	200 µL 2 % Formic acid in water
Wash 2	500 µL Methanol	200 µL Methanol
Elute	375 µL (3x 125 µL) 5 % Ammonium hydroxide in Acetonitrile/Methanol (60:40)	25 µL 5 % Ammonium hydroxide in Acetonitrile/ Methanol (60:40)
Inject	1 µL	1 µL



Reproducible Clinical Research Analysis

Strata-X-C Microelution 96-Well SPE Plate, 2mg/well Part No. 8M-S029-4GA	
Condition	200 μ L Methanol
Equilibrate	200 μ L Water
Load	400 μ L diluted plasma (200 μ L plasma diluted 1:1 with 4 % Phosphoric acid in water)
Wash 1	200 μ L 2 % Formic acid in water
Wash 2	200 μ L Methanol
Elute	2x 25 μ L 5 % Ammonium hydroxide in Acetonitrile/ Methanol (60:40)
Inject	2 μ L

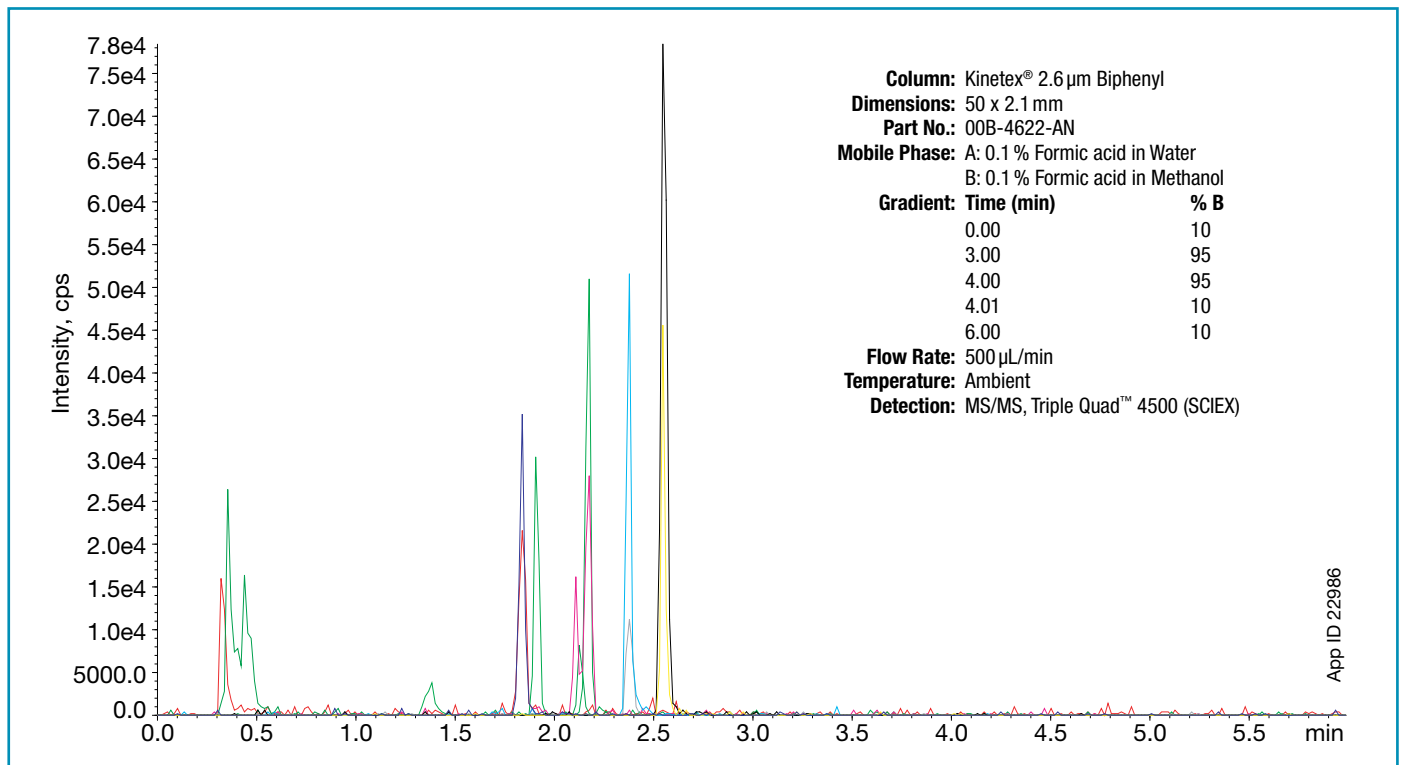


Absolute Recovery of 7 Antipsychotics at 25 ng/mL

Antipsychotics	RT (min)	% Absolute Recovery	Recovery	% CV (N=4)
Olazepine	2.7	99		6.9
Norclozapine	3.9	91		7
Clozapine	4.16	94		4
9-OH Risperidone	4.28	88		6.6
Risperidone	4.55	99		6
Norquetiapine	4.57	70		5.5
Quetiapine	4.73	90		2.7

Rapid Analysis of Drugs of Abuse

Strata®-X-C Microelution 96-Well SPE Plate, 2 mg/well Part No. 8M-S029-4GA	
Condition	200 µL Methanol
Equilibrate	200 µL Water
Load	400 µL diluted urine (200 µL urine diluted 1:1 with water)
Wash 1	200 µL 2 % Formic acid in water
Wash 2	200 µL Methanol
Elute	2x 25 µL 5 % Ammonium hydroxide in Acetonitrile/Methanol (60:40)
Inject	2 µL



Absolute Recovery of 5 Amphetamines

Amphetamines	Concentration (ng/mL) (25 % below SAMHSA cut off)	RT (min)	% Absolute Recovery	% CV (N=4)
Amphetamine	125	1.83	82	13.1
Methamphetamine	125	2.12	107	15.1
MDA	62.25	2.15	106	4.2
MDMA	62.25	2.36	99	15.7
MDEA	62.25	2.53	108	10.5

Our Scientists Work for You

Our customers asked us for more SPE support, we responded with PhenoLogixsm, a full-service analytical support laboratory. Let our PhenoLogix SPE gurus save your lab time and money.



Take Advantage of PhenoLogix

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- ▶ On-site, hands-on training

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Complimentary Seminars and Webinars

Does your lab need to become SPE experts? Schedule a complimentary, customized on-site seminar. Let us know what your challenges are and we can put together a presentation to help you solve them. If you don't have time for us to visit, we can hold online trainings, or view our On-Demand Webinars.



Schedule a Seminar Now: Support@phenomenex.com

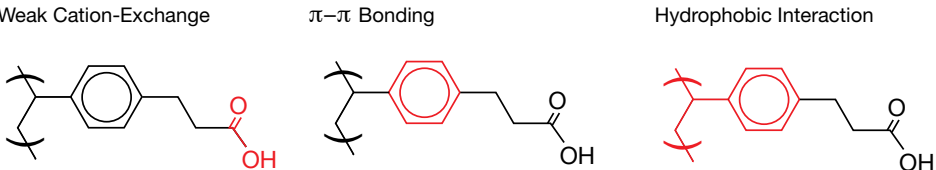
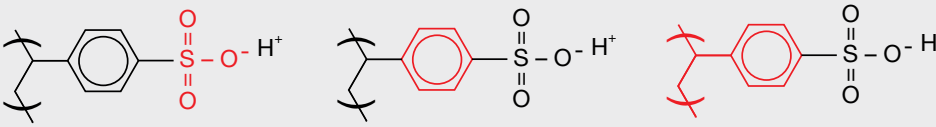
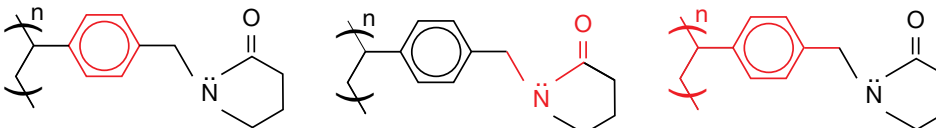
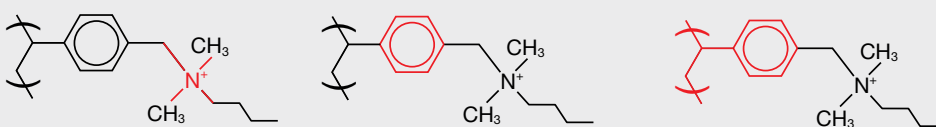
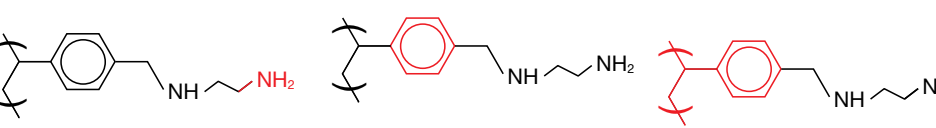
Watch an On-Demand Webinar

- ▶ Method development
- ▶ Sorbent selection
- ▶ Troubleshooting



www.phenomenex.com/webinars

Ordering Information

My Target Analytes Are:	Your Strata-X Microelution Product and Sorbent Chemistry			Part No.	Price (ea)
Strong Bases ($pK_a > 10$)	Strata-X-CW 33μm Polymeric Weak Cation-Exchange Microelution 96-Well Plate, 2mg/well Weak Cation-Exchange π - π Bonding Hydrophobic Interaction 			8M-S035-4GA	
Weak Bases (pK_a 8-10)	Strata-X-C 33μm Polymeric Strong Cation-Exchange Microelution 96-Well Plate, 2mg/well Strong Cation-Exchange π - π Bonding Hydrophobic Interaction 			8M-S029-4GA	
Neutral	Strata-X 33μm Polymeric Reversed Phase Microelution 96-Well Plate, 2mg/well π - π Bonding Hydrogen Bonding Dipole-Dipole Interactions Hydrophobic Interaction 			8M-S100-4GA	
Weak Acids (pK_a 2-4)	Strata-X-A 33μm Polymeric Strong Anion-Exchange Microelution 96-Well Plate, 2mg/well Strong Anion-Exchange π - π Bonding Hydrophobic Interaction 			8M-S123-4GA	
Strong Acids ($pK_a < 2$)	Strata-X-AW 33μm Polymeric Weak Anion-Exchange Microelution 96-Well Plate, 2mg/well Weak Anion-Exchange π - π Bonding Hydrophobic Interaction 			8M-S038-4GA	



Learn more about Strata-X Polymeric SPE sorbents and search our application database at www.phenomenex.com/StrataX

guarantee

If Strata-X Microelution 96-Well SPE Plates do not perform as well or better than your current Microelution 96-Well Plate SPE, return the product with comparative data within 45 days for a FULL REFUND.

Cost Effective Benchtop Processing

96-Well Plate Vacuum Manifold
Part No. AH0-8950

Presston™ 100
Positive Pressure Manifold
Part No. AH0-9334



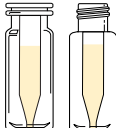
Collection Plates (deep well, polypropylene)

Part Number	Description	Unit	Price
AH0-7192	350 µL/well, Square	50/pk	
AH0-7193	1 mL/well, Square	50/pk	
AH0-7279	1 mL/well, Round/Round Bottom, 7 mm	50/pk	
AH0-7194	2 mL/well, Square	50/pk	
AH0-8635	2 mL/well, Square/Round-Conical Bottom	50/pk	
AH0-8636	2 mL/well, Round/Round Bottom, 8 mm	50/pk	

Sealing Mats (silicone)

Part Number	Description	Unit	Price
AH0-8633	Pierceable, 96-Round Well 8 mm	50/pk	

Verex™ Vials

Type	Finish	Material	Total Volume	Residual Volume	Available as
 Insert Vial µVial i3 (Qsert)	11 mm Snap or 9-425 Screw Thread	Glass	475 µL	< 2 µL	Convenience Kits (certified and regular)

Description	100/pk	Price	1000/pk	Price
Vial Kit, Snap, µVial i3 (Qsert), Clear w/ Patch + PTFE/Silicone	AR0-9671-12		AR0-9671-13	
Vial Kit, Snap, µVial i3 (Qsert), Clear w/ Patch + PTFE/Silicone, preSlit	AR0-9672-12		AR0-9672-13	
Vial Kit, 9 mm, µVial i3 (Qsert) Clear w/ Patch + PTFE/Silicone	AR0-9973-12		AR0-9973-13	
Vial Kit, 9 mm, µVial i3 (Qsert) Clear w/ Patch + PTFE/Silicone, preSlit	AR0-9974-12		AR0-9974-13	
Cert+ Vial Kit, 9 mm, µVial i3 (Qsert) Clear w/ Patch + PTFE/Silicone, preSlit cap*	AR0-9974-12-C		AR0-9974-13-C	

* Bonded-In Septa

Successful Bioanalytical Sample Preparation
Without the Dry Down

Microelution 96-Well SPE Plates

- Increase sensitivity
- Process small or limited sample volumes
- Save time and reduce costs
- Reduce loss of challenging analytes



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