

[ OASIS SOLID-PHASE EXTRACTION PRODUCTS ]

# Simplifying Solid-Phase Extraction

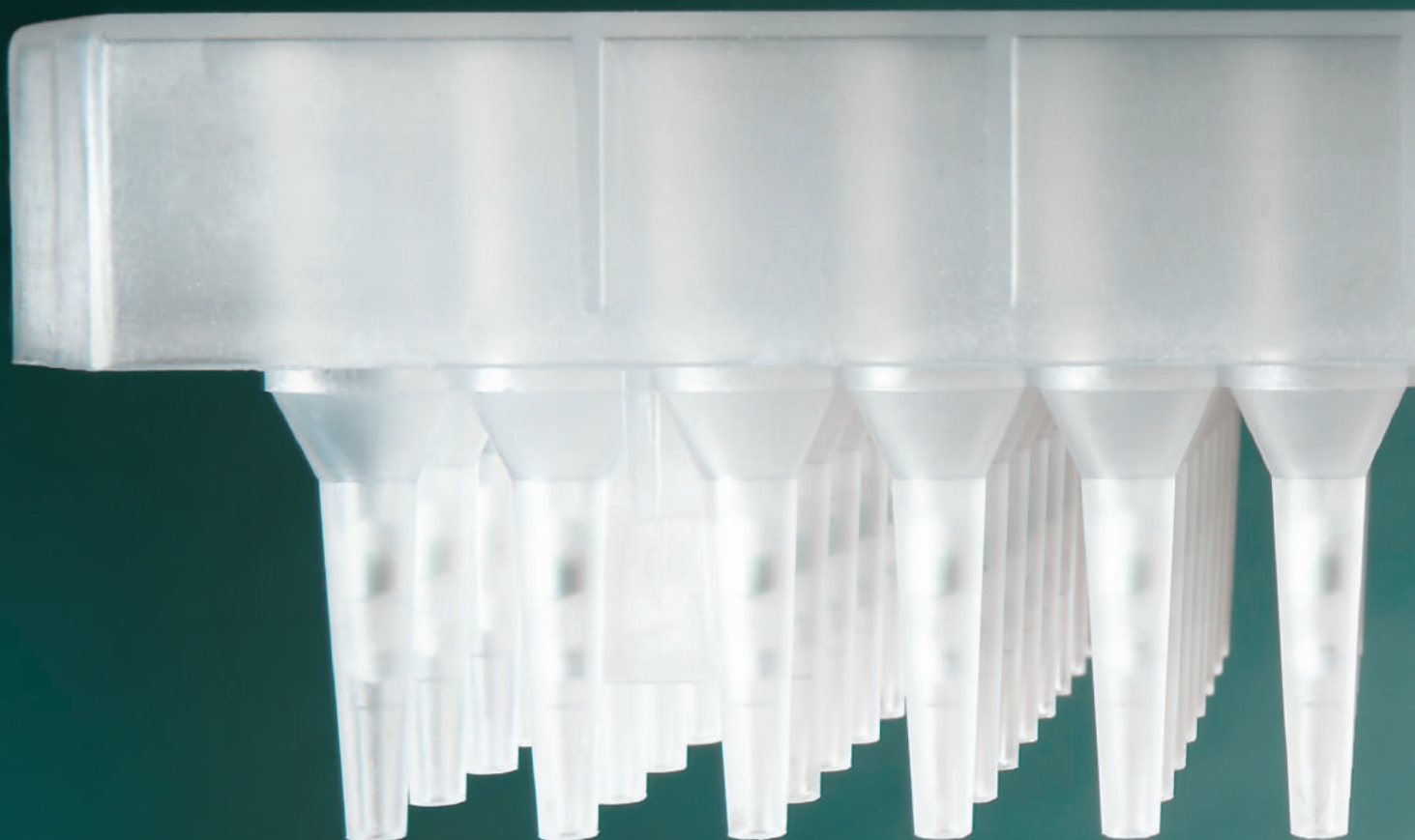


**OASIS**<sup>®</sup>  
SAMPLE EXTRACTION PRODUCTS

**Waters**  
THE SCIENCE OF WHAT'S POSSIBLE.®



Through the combination of innovative sorbent technology and hardware design, Oasis® Products have become the first choice in solid-phase extraction (SPE). Oasis Products are trusted by separation scientists across the globe to meet a wide variety of sample preparation needs, ranging from a simple and fast matrix cleanup to the need to solve the most difficult and highly selective sample preparation challenges. Researchers rely on the superior technical performance of Oasis Products to achieve unmatched purity, consistency, and quality in their sample preparation methods.



- Fastest and simplest methods leading to the cleanest samples
- Highest sensitivity for small molecules and therapeutic peptides
- Reduced matrix effects for LC-MS/MS analyses
- Unsurpassed selectivity
- Highest SPE recovery
- Exceptional product quality and reproducibility
- Wide selection of sorbents
- Broad array of formats

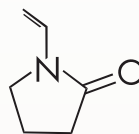


## Oasis HLB

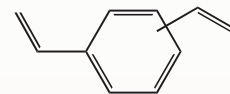
### Simplifying Solid-Phase Extraction

Waters introduced Oasis HLB in 1996, effectively changing the way scientists performed solid-phase extraction (SPE), as well as their expectations of this process. Constructed with a water-wettable copolymer that is stable from pH 0–14, Oasis HLB created a whole new range of solid-phase extraction method development possibilities. It is the gold standard in reversed-phase SPE, trusted by scientists across the world.

### Hydrophilic-Lipophilic Balanced Copolymer



Hydrophilic monomer  
Retention of polars



Lipophilic monomer  
Reversed-phase retention

Traditionally, solid-phase extraction methods have required condition and equilibration steps to prepare the sorbent for sample introduction. The condition step was required to wet the sorbent and allow liquid to enter the pores, enabling retention within the sorbent. Once wetted, the sorbent needed to be equilibrated with aqueous solution to prepare it for aqueous sample loading. Since Oasis HLB is a water-wettable sorbent, the analytes can interact with the sorbent and are retained when loaded directly onto the sorbent in an aqueous sample solution. This eliminates the condition and equilibration steps from the traditional solid-phase extraction protocol and reduces the number of processing steps from 5 to 3. The result is an average reduction in solvent consumption of up to 70% and a 40% savings in sample preparation time.

### Save Time and Solvent by Moving from a 5-Step Protocol to a 3-Step Protocol

#### Standard (5-Step)

200  $\mu$ L methanol (MeOH)

Condition

200  $\mu$ L H<sub>2</sub>O

Equilibrate

200  $\mu$ L spiked dilute plasma  
(100  $\mu$ L plasma + 100  $\mu$ L 4% H<sub>3</sub>PO<sub>4</sub>)

Load

200  $\mu$ L 5% MeOH in H<sub>2</sub>O

Wash

25  $\mu$ L \* 2 MeOH

Elute

#### Simplified (3-Step)

200  $\mu$ L spiked dilute plasma  
(100  $\mu$ L plasma + 100  $\mu$ L 4% H<sub>3</sub>PO<sub>4</sub>)

200  $\mu$ L 5% MeOH in H<sub>2</sub>O

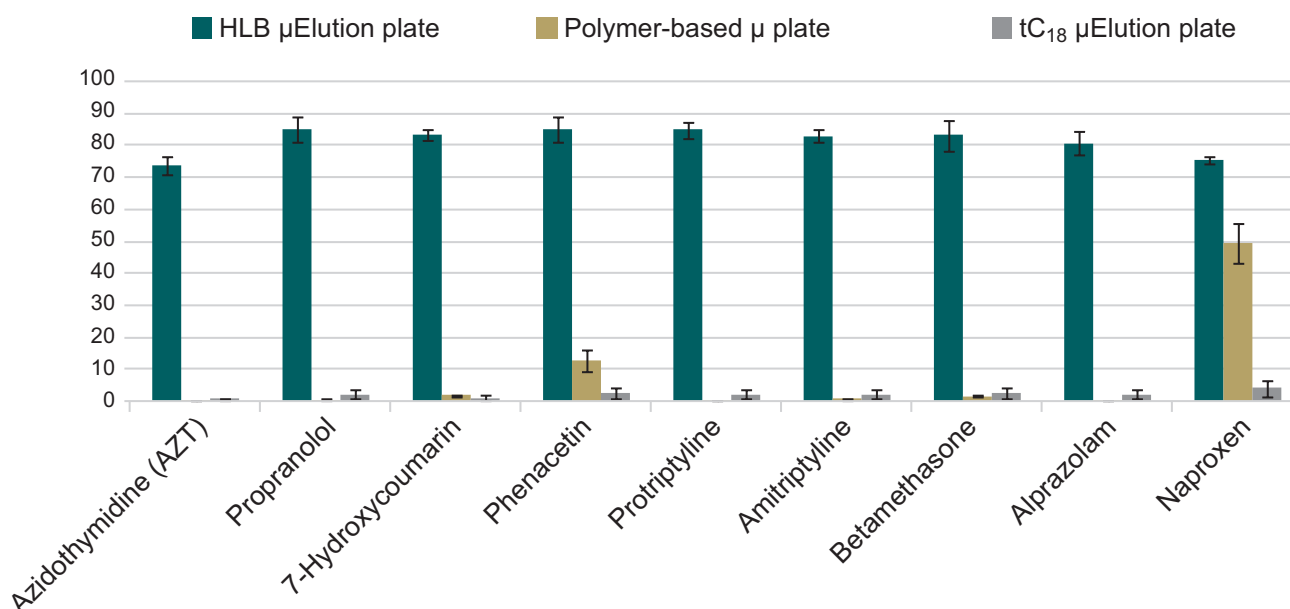
25  $\mu$ L \* 2 MeOH

*Traditional 5-step SPE protocol vs. the new 3-step SPE protocol with an Oasis HLB  $\mu$ Elution Plate. (Typical loading range between 10–375  $\mu$ L undiluted plasma.)*



The ability to simplify and shorten SPE protocols is due to the unique water-wettable, balanced nature of the hydrophilic/lipophilic Oasis Sorbent. Silica-based sorbents and other “Oasis-like” polymeric sorbents that are not as water-wettable as Oasis HLB sacrifice performance when eliminating these condition and equilibration steps. The chart below illustrates the difference that a thoroughly water-wettable sorbent such as Oasis HLB can make in the implementation of this simplified, 3-step protocol. Oasis HLB is able to effectively retain a wide range of compounds without the condition and equilibration steps. The competitors’ polymeric sorbent and a silica based sorbent do not work in the absence of these steps.

### Simplify Solid-Phase Extraction Without Sacrificing Recovery



The percent recoveries for a diverse set of compounds remain high with Oasis HLB when the condition and equilibration steps are eliminated from the solid-phase extraction protocol. Under these same conditions, the silica based sorbent produces recoveries of less than 10 percent for all analytes. The polymeric based sorbent produces recoveries of less than 10% for 7 compounds and less than 20% and 50% for the other two compounds.

Additional information can be found within these application notes:

Application note	Literature code
A Simplified, Mixed-Mode Sample Preparation Strategy for Urinary Forensic Toxicology Screening by UPLC-MS/MS	720005290EN
A Simplified, Solid-Phase Extraction (SPE) Protocol for Bioanalysis Using Oasis HLB	720005140EN

[Search by literature code at waters.com](#)



## Oasis PRiME HLB

Oasis PRiME HLB is the first-of-its-kind SPE sorbent that sets the new performance standard for routine analyses. The unique, patent-pending Oasis PRiME HLB Sorbent provides cleaner samples in less time and with less effort. These powerful and easy-to-use benefits are important since solid-phase extraction provides many benefits when performed prior to chromatographic analyses, especially when using mass detection. These benefits include a reduction in matrix effects and chromatographic complexity as well as the ability to increase sample concentration. However, scientists also desire sample preparation methods that are SIMPLE to follow while providing CLEANER sample eluates in the FASTEST time possible. Based on Oasis HLB Technology, Oasis PRiME HLB was developed to meet these needs with a focus on these advantages:

- Simpler
- Faster
- Even Cleaner



## Simpler

### Easy, efficient protocols

Oasis PRiME HLB was created to have the same powerful benefits made possible with Oasis HLB. The Oasis PRiME HLB Copolymer is extremely water-wettable, making it possible to eliminate the condition and equilibration steps that are required when using silica-based or other polymeric sorbents. Without these additional steps, sorbents that are not as water-wettable are unable to effectively retain analytes of interest during the sample load step, causing a loss of recovery. The ability to skip these steps saves valuable sample processing time and costly solvent purchase and disposal.

Oasis PRiME HLB allows you to choose the sample preparation method that meets your analytical needs. The simplicity of the sorbent design and protocols makes it easy to implement into your laboratory's workflow without requiring solid-phase extraction expertise.

### 3-step protocol (catch and release SPE)

Load pre-treated sample

Wash: 5% MeOH

Elute: 90/10 acetonitrile/MeOH

Use the 3-step solid-phase extraction protocol to remove the most matrix interferences, including salts, phospholipids, and proteins. This technique also allows for sample concentration/enrichment. It is the perfect solution for routine bioanalytical sample clean up or any other reversed-phase solid-phase extraction application.

### 2-step protocol (pass-through SPE)

Load pre-treated sample  
Analytes pass-through unretained

Rinse to collect hold up volume  
(optional)

Use the 2-step solid-phase extraction protocol to remove matrix interferences quickly if your sample solution contains a high concentration of organic solvent(s) and concentration and/or salt removal is not required. This protocol is perfectly suited for multiple residue screening of veterinary drugs, pesticides and mycotoxins in various food samples.



## Faster

### Faster, more even flows across cartridges and plates with less plugging

Oasis PRiME HLB has been designed to increase speed both within the SPE device itself and in your laboratory's sample processing workflow. Not only can you eliminate the condition and equilibration steps, viscous samples flow more easily through the cartridges and 96-well plates due to a new, optimized frit and sorbent design. Flow rates through the devices are much faster for common matrices such as plasma, urine, and milk. The optimal load, wash, and elution flow rates are achieved using less vacuum or positive pressure than with other SPE devices.

### Increased Sample Processing Speed with Oasis PRiME HLB

Matrix	Device Format	Oasis PRiME HLB Speed Increase
1:1 Diluted Plasma	μElution Plate	2–3x Faster
1:1 Diluted Plasma	1 cc/30 mg Cartridge	4x Faster
1:1 Diluted Urine	30 mg Plate	6x Faster
1:1 Diluted Urine	10 mg Plate	2x Faster
1:1 Diluted Milk	3 cc/60 mg Cartridge	1–2x Faster
1:1 Diluted Milk	6 cc/200 mg Cartridge	2–3x Faster

Flow comparison vs. another reversed-phase SPE sorbent. Loading performed with 4 inch Hg (n=4).

### Faster processing time compared to other sample preparation techniques

With the elimination of the condition and equilibration steps, Oasis PRiME HLB provides faster processing time compared to other sample preparation techniques such as solid-supported liquid extraction (SSLE). Scientists can achieve highly reproducible sample clean up with less process complexity and fewer steps.

### Reduce Sample Preparation Time and Steps with Oasis PRiME HLB Compared to SSLE

#### SSLE

1. Add sample (3 min)
2. Wait (5–10 min)
3. Add extraction solvent (2 min)
4. Wait (5–10 min)
5. Extract (1 min)
6. Evaporate (5 min)
7. Reconstitute (2 min)

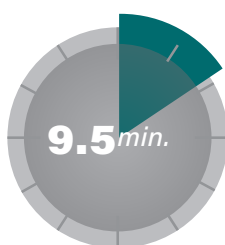
TOTAL  
PROCESS-  
ING TIME:



#### Oasis PRiME HLB

1. Load pre-treated sample (4 min)
2. Wash: 5% MeOH (3.5 min)
3. Elute: 90/10 acetonitrile/MeOH (2 min)

TOTAL  
PROCESS-  
ING TIME:



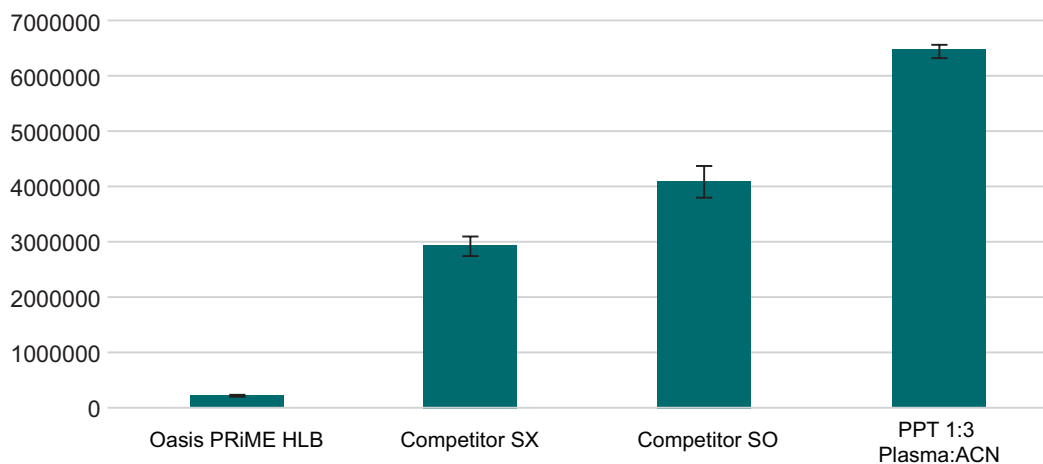
Oasis PRiME HLB reduces sample preparation time and complexity by providing efficient sample preparation. Compared to SSLE, samples can be processed in fewer steps and less time.



## Even Cleaner

Oasis PRiME HLB removes more than 95% of common matrix interferences such as proteins, salts, and phospholipids, using the generic protocol without any additional optimization. Cleaner samples means less variability in your analytical results from sample to sample, increasing the robustness of your analyses.

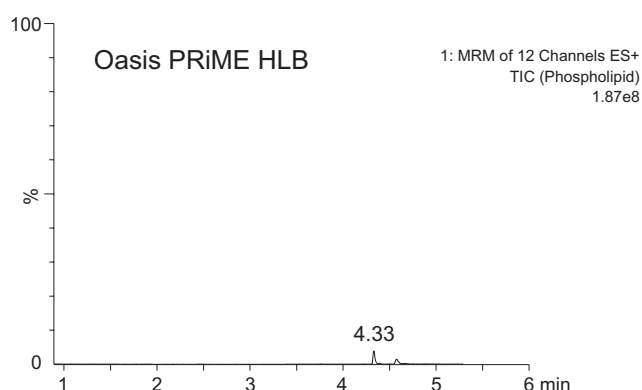
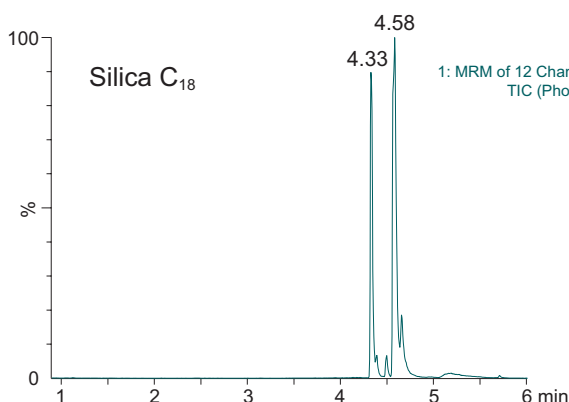
**Phospholipids Remaining in Final Eluate**



Fewer phospholipids remain in the final sample eluate with the Oasis PRiME HLB Sorbent and 3-step protocol, compared to the final eluates using traditional 5-step protocol on the competitors' sorbents. This removal is also more reproducible with Oasis PRiME HLB as indicated by the error bars ( $n=5$ ).

Food analysis can provide an exceptional challenge in sample preparation. Meat and milk samples are typically extracted with an acetonitrile based solvent for LC-MS determination of veterinary drug residues. Among the most significant co-extractable substances are fats and polar lipids, particularly phospholipids. For example, 1 mL of whole milk contains about 35 mg of fat and about 0.3 mg of phospholipids. A gram of pork muscle typically contains about 100 mg of fat and about 5 mg of phospholipids. Reversed-phase sorbents such as  $C_{18}$  are effective for removal of fat from the acetonitrile based extraction solvent, but are ineffective for removal of phospholipids. Excessive amounts of phospholipids can shorten LC column life and contribute to ion-suppression and contamination in the mass spectrometer. Oasis PRiME HLB is highly effective for removal of both phospholipids and fats from meat and milk extracts.

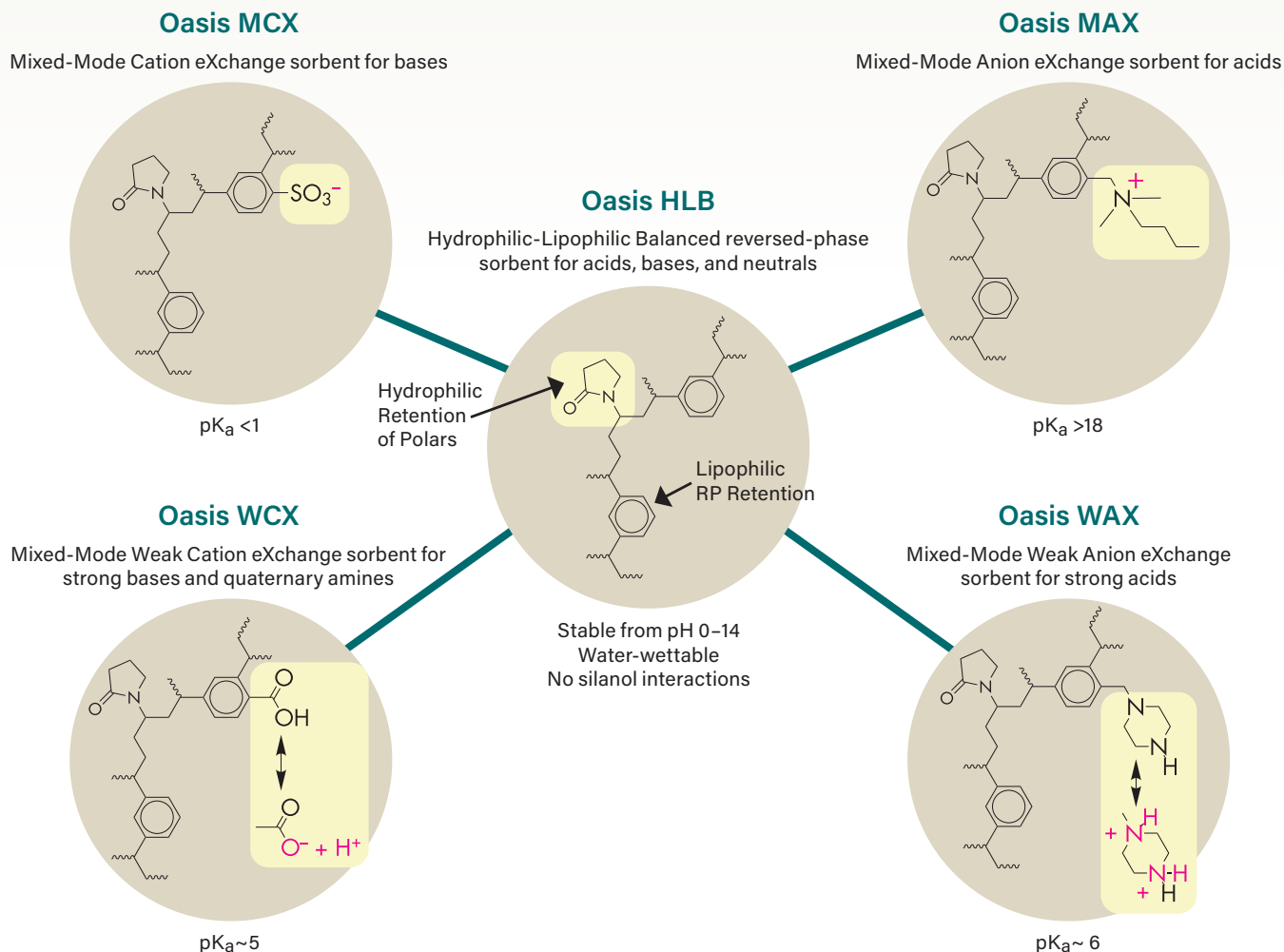
**Phospholipids Remaining After Pass-through Sample Clean Up**



Lipid removal from acetonitrile-based meat extract results: Oasis PRiME HLB removes more than 90% of hexane-extractable total lipids (determined gravimetrically). Oasis PRiME HLB successfully removes both phospholipids and fats in pass-through method. The silica  $C_{18}$  sorbent removes only fats, NOT phospholipids. Removal of both of these components results in fewer matrix effects and less column and/or instrument contamination.

## Sorbents

The Mixed-Mode Ion Exchange/Reversed-Phase Sorbents are all based on the Oasis HLB Copolymer to provide a range of options for method development.



## Reduced Matrix Effects

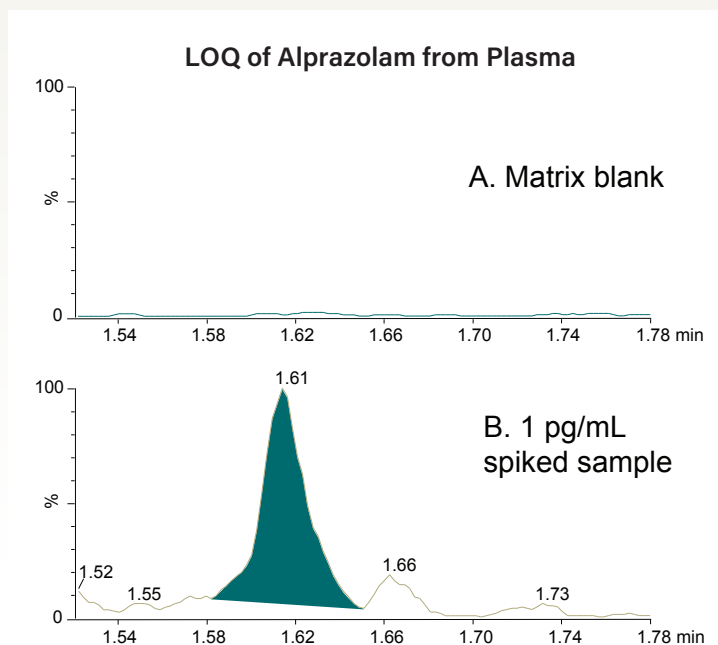
The presence of matrix interferences in a sample limits the maximum sensitivity that can be achieved. In addition, the removal of matrix interferences increases the robustness and reproducibility of your analytical results.

Analyte	% RSD of Matrix Factors
Amitriptyline	6.03
Nortriptyline	5.53
Imipramine	8.36
Desipramine	7.15
Doxepin	5.96

Following extraction with an Oasis Mixed-Mode Sorbent, the matrix effects were evaluated for a panel of 5 antidepressant drugs in multiple lots of urine. The RSD of the matrix factors was determined to be between 5.5 and 8.4%, which is well within the 15% limit required by regulatory agencies.

## Sensitivity

The Oasis Mixed-Mode Sorbents, which are all built upon the unique water-wettable Oasis HLB Copolymer, provide both reversed-phase and ion exchange modes of retention, enabling greater cleanup selectivity and sensitivity for both acidic and/or basic compounds. An example of this outstanding capability can be seen with the Oasis  $\mu$ Elution Plate. This product employs a patented design to concentrate a sample up to 15x without requiring evaporation or reconstitution.



LC-MS/MS chromatogram of 1 pg/mL of alprazolam from rat plasma.

## Oasis 2 X 4 Method Development Protocol



## Selectivity

Having a variety of tools for method development allows separation scientists to optimize their protocols to achieve maximum selectivity and sensitivity. Small molecules and therapeutic peptides require different approaches to sample preparation due to their solubilities and stabilities. Oasis SPE Products are available in a variety of sorbents and can be used in conjunction with a simple, logical approach to quickly develop new separation methods.

\* When using the  $\mu$ Elution plate, perform the second elution using 5% NH<sub>4</sub>OH in 60:40 CH<sub>3</sub>CN:CH<sub>3</sub>OH (for protocol 1) and 2% HCOOH in 60:40 CH<sub>3</sub>CN:CH<sub>3</sub>OH (for protocol 2).

## Peptides

The increasing number of peptide based therapeutics brings new challenges to the typical bioanalytical laboratory. Sensitive, selective, and robust bioanalytical methods, which would ideally meet current regulatory criteria, must be developed for these types of compounds, which differ significantly from small molecule drugs.

Because of their size and charge state distribution, sensitivity by mass spectrometry may be lower for biomolecules than typical small molecules, necessitating sample concentration and other means of increasing overall method sensitivity. We provide basic starting protocols for sample preparation and show how the use of mixed-mode ion-exchange solid-phase extraction in  $\mu$ Elution format can simplify the process of method development for peptide therapeutics and biomarkers.

Oasis  $\mu$ Elution Plate technology for peptides enables:

- Up to 15x concentration without evaporation
  - Concentration is often necessary to reach the limit of detection (LOD) with peptides
- Helps minimize analyte loss
  - Eliminates problems re-solubilizing peptides after dry-down steps
  - Beneficial for thermally unstable peptides

Oasis WCX  
 $\mu$ Elution

Oasis MAX  
 $\mu$ Elution

### PROTOCOL

Dilute plasma with  
4%  $\text{H}_3\text{PO}_4$

Condition MeOH/  
Equilibrate  $\text{H}_2\text{O}$

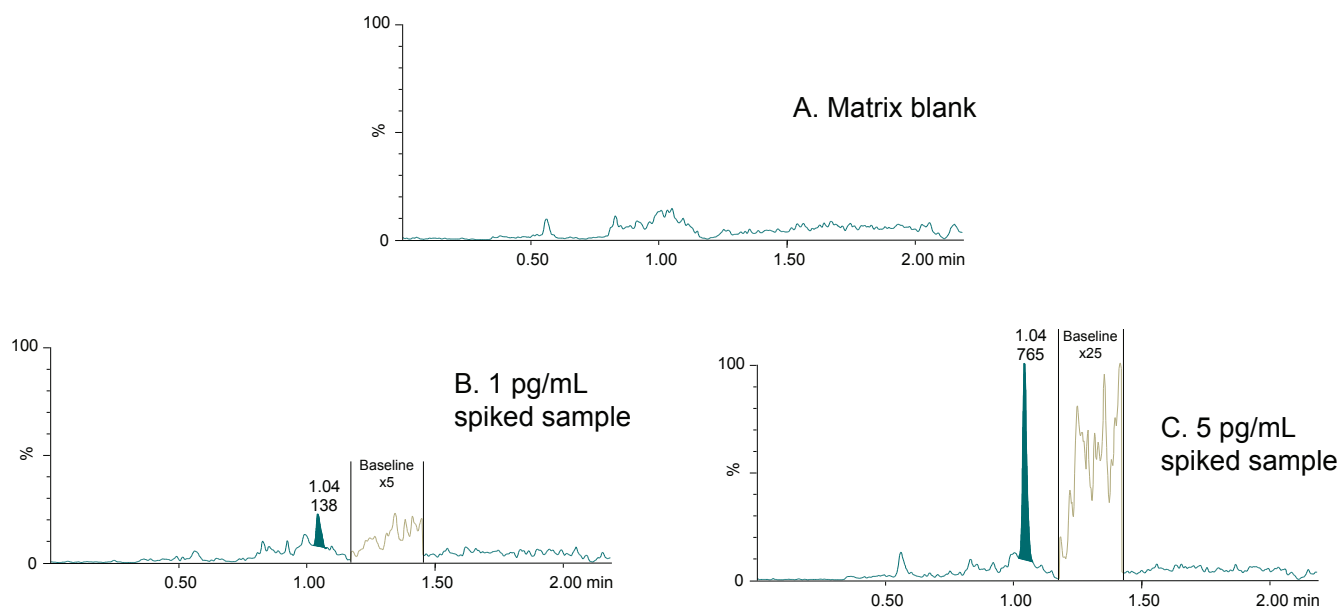
Wash 1: 5%  $\text{NH}_4\text{OH}$

Wash 2: 20% ACN

Elute: 1% TFA in  
75/25 ACN/ $\text{H}_2\text{O}$

Dilute:  $\text{H}_2\text{O}$

### LOD and LOQ of Desmopressin from Plasma

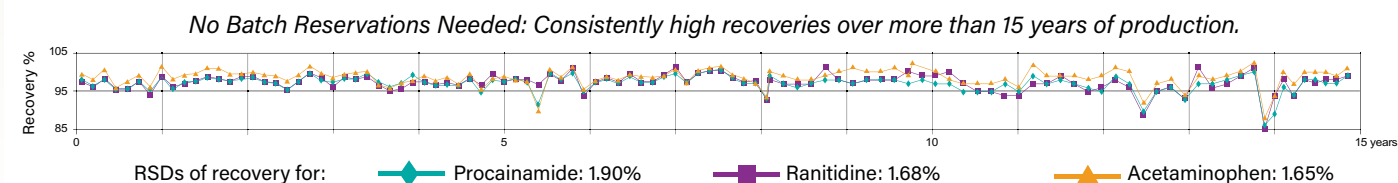


LC-MS/MS chromatogram of 1 pg/mL and 5 pg/mL of desmopressin from human plasma.



## Quality

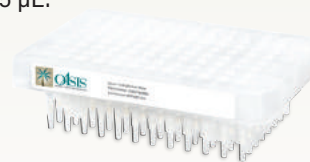
Waters expert manufacturing capabilities and stringent quality controls have established the highest standard in batch-to-batch and lot-to-lot reproducibility for SPE sorbents, enabling scientists to develop robust, accurate, and precise analytical methods. Scientists can be confident that the methods can be seamlessly transferred to laboratories across the globe.



## Formats

### μElution Plates

- Patented μElution plate design.
- Ideal for SPE cleanup and analyte enrichment of sample volumes ranging from 10 μL to 375 μL.
- No evaporation and reconstitution necessary due to elution volumes as low as 25 μL.
- Up to a 15x increase in concentration.
- Compatible with most liquid-handling robotic systems for automated, reliable high throughput SPE (HT-SPE).



### 96-well Extraction Plates

- Innovative, award-winning two-stage well design.
- High throughput and high recovery.
- Available with 5 mg, 10 mg, 30 mg, and 60 mg of sorbent per well.
- Compatible with most liquid-handling robotic systems for automated, reliable high throughput SPE (HT-SPE).



### Syringe-Barrel Cartridges

- Ultra-clean syringe barrel and frits.
- Available with cartridges ranging from 1 cc to 60 cc.
- Flangeless syringe-barrel cartridges available in 1 cc, 3 cc, and 6 cc configurations.
- Plus-style cartridges with Luer inlet hub and outlet tip with 225 mg of sorbent.



### Glass Cartridges

- Ultra-clean glass syringe with Teflon® frit.
- For trace level detection and analysis at part-per-trillion levels.
- Available in 5 cc with 200 mg of sorbent configuration.



### On-Line Columns and Cartridges

- For rugged, reproducible, and ultra-fast on-line analysis.
- Wide choice of configurations, particle sizes, and sorbent chemistries.
- Available with six patented Oasis Sorbents—HLB, PRiME HLB, MCX, MAX, WCX, and WAX.
- High recovery and reproducible results for a wide range of compounds.
- Cartridge format for use with Spark Holland Prospekt-2™/Symbiosis™ systems also available.



Oasis PriME HLB Solid-Phase Extraction Products			
Description	Format	Qty.	Part No.
Oasis PriME HLB $\mu$ Elution Plate	3 mg	1/pk	186008052
Oasis PriME HLB 96-well Plate	10 mg	1/pk	186008053
Oasis PriME HLB 96-well Plate	30 mg	1/pk	186008054
Oasis PriME HLB Cartridge	1 cc/30 mg	100/box	186008055
Oasis PriME HLB Cartridge	3 cc/60 mg	100/box	186008056
Oasis PriME HLB Cartridge	3 cc/150 mg	100/box	186008717
Oasis PriME HLB Cartridge	6 cc/200 mg	30/box	186008057
Oasis PriME HLB Cartridge	6 cc/500 mg	30/box	186008718
Oasis PriME HLB Plus Light Cartridge	Plus Light/100 mg	50/box	186008886
Oasis PriME HLB Plus Short Cartridge	Plus Light/335 mg	50/box	186008887

Oasis HLB Solid-Phase Extraction Products				
Description	Format	Particle Size	Qty.	Part No.
Oasis HLB Cartridge	1 cc/10 mg	30 $\mu$ m	100/box	186000383
Oasis HLB Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	WAT094225
Oasis HLB Cartridge	1 cc/30 mg	30 $\mu$ m	1,000/box	186003908
Oasis HLB Flangeless Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186001879
Oasis HLB Cartridge with Gilson ASPEC adapter	1 cc/10 mg	30 $\mu$ m	500/box	186000988
Oasis HLB Cartridge with Gilson ASPEC adapter	1 cc/30 mg	30 $\mu$ m	500/box	WAT058882
Oasis HLB Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	WAT094226
Oasis HLB Cartridge	3 cc/60 mg	30 $\mu$ m	1,000/box	186007646
Oasis HLB Flangeless Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186001880
Oasis HLB Cartridge with Gilson ASPEC adapter	3 cc/60 mg	30 $\mu$ m	500/box	WAT058883
Oasis HLB Cartridge	6 cc/200 mg	30 $\mu$ m	30/box	WAT106202
Oasis HLB Cartridge	3 cc/400 mg	60 $\mu$ m	100/box	186003849
Oasis HLB Cartridge	3 cc/540 mg	60 $\mu$ m	100/box	186004134
Oasis HLB Flangeless Cartridge	3 cc/540 mg	60 $\mu$ m	100/box	186003852
Oasis HLB Cartridge	6 cc/150 mg	30 $\mu$ m	30/box	186003365
Oasis HLB Cartridge	6 cc/150 mg	60 $\mu$ m	30/box	186003379
Oasis HLB Cartridge	6 cc/500 mg	60 $\mu$ m	30/box	186000115
Oasis HLB Cartridge	12 cc/500 mg	60 $\mu$ m	20/box	186000116
Oasis HLB Cartridge	20 cc/1 g	60 $\mu$ m	20/box	186000117
Oasis HLB Cartridge	35 cc/6 g	60 $\mu$ m	10/box	186000118
Oasis HLB Plus Short Cartridge	225 mg	60 $\mu$ m	50/box	186000132
Oasis HLB Plus Light Cartridge	30 mg	30 $\mu$ m	50/box	186005125
Oasis HLB Vac RC Cartridge	20 cc/30 mg	30 $\mu$ m	50/box	186000382
Oasis HLB Vac RC Cartridge	20 cc/60 mg	30 $\mu$ m	50/box	186000381
Oasis HLB Glass Cartridge	5 cc/200 mg	60 $\mu$ m	30/box	186000683
Oasis HLB $\mu$ Elution Plate	2 mg/96-well	30 $\mu$ m	1/pk	186001828BA
Oasis HLB Plate	5 mg/96-well	30 $\mu$ m	1/pk	186000309
Oasis HLB Plate	10 mg/96-well	30 $\mu$ m	1/pk	186000128
Oasis HLB Plate	30 mg/96-well	30 $\mu$ m	1/pk	WAT058951
Oasis HLB Plate	60 mg/96-well	60 $\mu$ m	1/pk	186000679

Oasis MAX Solid-Phase Extraction Products (Anion Exchange)				
Description	Format	Particle Size	Qty.	Part No.
Oasis MAX Cartridge	1 cc/10 mg	30 $\mu$ m	100/box	186004649
Oasis MAX Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186000366
Oasis MAX Flangeless Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186001883
Oasis MAX Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186000367
Oasis MAX Cartridge	3 cc/60 mg	60 $\mu$ m	100/box	186000368
Oasis MAX Flangeless Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186001884
Oasis MAX Cartridge	6 cc/150 mg	30 $\mu$ m	30/box	186000369
Oasis MAX Cartridge	6 cc/150 mg	60 $\mu$ m	30/box	186000370
Oasis MAX Cartridge	6 cc/500 mg	60 $\mu$ m	30/box	186000865
Oasis MAX Plus Short Cartridge	225 mg	60 $\mu$ m	50/box	186003517
Oasis MAX Vac RC Cartridge	20 cc/30 mg	30 $\mu$ m	50/box	186000372
Oasis MAX Vac RC Cartridge	20 cc/60 mg	30 $\mu$ m	50/box	186000371
Oasis MAX Vac RC Cartridge	20 cc/60 mg	60 $\mu$ m	50/box	186000378

Oasis MAX Solid-Phase Extraction Products (Anion Exchange) Continued				
Description	Format	Particle Size	Qty.	Part No.
Oasis MAX $\mu$ Elution Plate	2 mg/96-well	30 $\mu$ m	1/pk	186001829
Oasis MAX Plate	10 mg/96-well	30 $\mu$ m	1/pk	186000375
Oasis MAX Plate	30 mg/96-well	30 $\mu$ m	1/pk	186000373
Oasis MAX Plate	60 mg/96-well	30 $\mu$ m	1/pk	186001256
Oasis MAX Plate	60 mg/96-well	60 $\mu$ m	1/pk	186001205

Oasis MCX Solid-Phase Extraction Products (Cation Exchange)				
Description	Format	Particle Size	Qty.	Part No.
Oasis MCX Cartridge	1 cc/10 mg	30 $\mu$ m	100/box	186004648
Oasis MCX Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186000252
Oasis MCX Flangeless Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186001881
Oasis MCX Cartridge	1 cc/30 mg	60 $\mu$ m	100/box	186000782
Oasis MCX Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186000254
Oasis MCX Flangeless Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186001882
Oasis MCX Cartridge	3 cc/60 mg	60 $\mu$ m	100/box	186000253
Oasis MCX Cartridge	6 cc/150 mg	30 $\mu$ m	30/box	186000256
Oasis MCX Cartridge	6 cc/150 mg	60 $\mu$ m	30/box	186000255
Oasis MCX Cartridge	6 cc/500 mg	60 $\mu$ m	30/box	186000776
Oasis MCX Cartridge	20 cc/1 g	60 $\mu$ m	20/box	186000777
Oasis MCX Cartridge	35 cc/6 g	60 $\mu$ m	10/box	186000778
Oasis MCX Plus Short Cartridge	225 mg	60 $\mu$ m	50/box	186003516
Oasis MCX Vac RC Cartridge	20 cc/60 mg	30 $\mu$ m	50/box	186000261
Oasis MCX Vac RC Cartridge	20 cc/60 mg	60 $\mu$ m	50/box	186000380
Oasis MCX $\mu$ Elution Plate	2 mg/96-well	30 $\mu$ m	1/pk	186001830BA
Oasis MCX Plate	10 mg/96-well	30 $\mu$ m	1/pk	186000259
Oasis MCX Plate	30 mg/96-well	30 $\mu$ m	1/pk	186000248
Oasis MCX Plate	30 mg/96-well	60 $\mu$ m	1/pk	186000250
Oasis MCX Plate	60 mg/96-well	60 $\mu$ m	1/pk	186000678

Oasis WCX Solid-Phase Extraction Products (Weak Cation Exchange)				
Description	Format	Particle Size	Qty.	Part No.
Oasis WCX Cartridge	1 cc/10 mg	30 $\mu$ m	100/box	186004650
Oasis WCX Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186002494
Oasis WCX Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186002495
Oasis WCX Cartridge	6 cc/150 mg	30 $\mu$ m	30/box	186002498
Oasis WCX Cartridge	1 cc/30 mg	60 $\mu$ m	100/box	186002496
Oasis WCX Cartridge	3 cc/60 mg	60 $\mu$ m	100/box	186002497
Oasis WCX Cartridge	6 cc/500 mg	60 $\mu$ m	30/box	186004646
Oasis WCX Plus Short Cartridge	225 mg	60 $\mu$ m	50/box	186003518
Oasis WCX $\mu$ Elution Plate	2 mg/96-well	30 $\mu$ m	1/pk	186002499
Oasis WCX 96-well Plate	10 mg/96-well	30 $\mu$ m	1/pk	186002501
Oasis WCX 96-well Plate	30 mg/96-well	30 $\mu$ m	1/pk	186002503

Oasis WAX Solid-Phase Extraction Products (Weak Anion Exchange)				
Description	Format	Particle Size	Qty.	Part No.
Oasis WAX Cartridge	1 cc/10 mg	30 $\mu$ m	100/box	186004651
Oasis WAX Cartridge	1 cc/30 mg	30 $\mu$ m	100/box	186002489
Oasis WAX Cartridge	3 cc/60 mg	30 $\mu$ m	100/box	186002490
Oasis WAX Cartridge	6 cc/150 mg	30 $\mu$ m	30/box	186002493
Oasis WAX Cartridge	1 cc/30 mg	60 $\mu$ m	100/box	186002491
Oasis WAX Cartridge	3 cc/60 mg	60 $\mu$ m	100/box	186002492
Oasis WAX Cartridge	6 cc/500 mg	60 $\mu$ m	30/box	186004647
Oasis WAX Plus Short Cartridge	225 mg	60 $\mu$ m	50/box	186003519
Oasis WAX $\mu$ Elution Plate	2 mg/96-well	30 $\mu$ m	1/pk	186002500
Oasis WAX 96-well Plate	10 mg/96-well	30 $\mu$ m	1/pk	186002502
Oasis WAX 96-well Plate	30 mg/96-well	30 $\mu$ m	1/pk	186002504
Oasis WAX 96-well Plate	60 mg	30 $\mu$ m	1/pk	186003915

**Oasis Method Development Kits**

Description	Format	Particle Size	Part No.
Oasis Sorbent Selection Plate, 3 rows each: MCX, MAX, WCX, and WAX	10 mg/96-well	30 µm	186003249
Oasis µElution Sorbent Selection Plate, 3 rows each: MCX, MAX, WCX, and WAX	2 mg/96-well	30 µm	186004475
Oasis Sorbent Selection Cartridge Kit, 10 each: MCX, MAX, WCX, and WAX	1 cc/30 mg	30 µm	186003463
Oasis Sorbent Selection Flangeless Cartridge Kit, 10 each: MCX, MAX, WCX, and WAX	1 cc/10 mg	30 µm	186006344
Oasis Sorbent Selection Flangeless Cartridge Kit, 10 each: MCX, MAX, WCX, and WAX	1 cc/30 mg	30 µm	186006345

**Therapeutic Peptide Method Development Kits**

Description	Part No.
<b>UPLC® Therapeutic Peptide Method Development Kit Includes:</b>	
1 Oasis Peptide Method Development 96-well µElution Plate, (part no.: 186004713)	176001835
1 ACQUITY UPLC® Peptide BEH C <sub>18</sub> , 300Å, 1.7 µm, 2.1 x 50 mm Column, (part no.: 186003685)	
3 96-well 1 mL Collection Plate and Cap Mat, (part no.: 600001043)	
<b>HPLC Therapeutic Peptide Method Development Kit Includes:</b>	
1 Oasis Peptide Method Development 96-well µElution Plate, (part no.: 186004713)	176001836
1 XBridge® Peptide BEH C <sub>18</sub> , 300Å, 3.5 µm, 2.1 x 50 mm Column, (part no.: 186003607)	
3 96-well 1 mL Collection Plate and Cap Mat, (part no.: 600001043)	

**Oasis µElution 96-well Plates**

Description	Particle Size	Qty.	Part No.
Oasis PRiME HLB	—	1/pk	186008052
Oasis HLB	30 µm	1/pk	186001828BA
Oasis MCX	30 µm	1/pk	186001830BA
Oasis MAX	30 µm	1/pk	186001829
Oasis WCX	30 µm	1/pk	186002499
Oasis WAX	30 µm	1/pk	186002500

**Oasis 96-well Plates**

	Particle Size	5 mg/ 96-well	10 mg/ 96-well	30 mg/ 96-well	60 mg/ 96-well
Description	1/pk	1/pk	1/pk	1/pk	1/pk
Oasis PRiME HLB	—	—	186008053	186008054	—
Oasis HLB	30 µm	186000309	186000128	WAT058951	—
Oasis HLB	60 µm	—	—	—	186000679
Oasis MCX	30 µm	—	186000259	186000248	—
Oasis MCX	60 µm	—	—	186000250	186000678
Oasis MAX	30 µm	—	186000375	186000373	186001256
Oasis MAX	60 µm	—	—	—	186001205
Oasis WCX	30 µm	—	186002501	186002503	—
Oasis WAX	30 µm	—	186002502	186002504	186003915

**On-Line SPE Columns and Cartridge Columns**

Description	Format	Particle Size	Qty.	Part No.
Oasis HLB Column	2.1 x 20 mm	5 µm	1/pk	186002034
Oasis HLB Column	3.0 x 20 mm	5 µm	1/pk	186002037
Oasis HLB Column	3.9 x 20 mm	5 µm	1/pk	186002040
Oasis HLB Cartridge Column	3.9 x 20 mm	5 µm	1/pk	186001413
Oasis HLB Column	4.6 x 20 mm	5 µm	1/pk	186002043
Oasis HLB Column	2.1 x 20 mm	15 µm	1/pk	186002035
Oasis HLB Column	3.0 x 20 mm	15 µm	1/pk	186002038
Oasis HLB Column	3.9 x 20 mm	15 µm	1/pk	186002041

**On-Line SPE Columns and Cartridge Columns Continued**

Description	Format	Particle Size	Qty.	Part No.
Oasis HLB Cartridge Column	3.9 x 20 mm	15 µm	1/pk	186001414
Oasis HLB Column	4.6 x 20 mm	15 µm	1/pk	186002044
Oasis HLB Column	2.1 x 20 mm	25 µm	1/pk	186002036
Oasis HLB Cartridge Column	2.1 x 20 mm	25 µm	1/pk	186000706
Oasis HLB Column	3.0 x 20 mm	25 µm	1/pk	186002039
Oasis HLB Column	3.9 x 20 mm	25 µm	1/pk	186002042
Oasis HLB Column	4.6 x 20 mm	25 µm	1/pk	186002045
Oasis HLB Direct Connect Column	2.0 x 15 mm	25 µm	1/pk	186001792
Oasis MCX Column	2.1 x 20 mm	30 µm	1/pk	186002046
Oasis MCX Cartridge Column	2.1 x 20 mm	30 µm	1/pk	186002051
Oasis MCX Column	3.0 x 20 mm	30 µm	1/pk	186002047
Oasis MCX Column	3.9 x 20 mm	30 µm	1/pk	186002048
Oasis MCX Column	4.6 x 20 mm	30 µm	1/pk	186002049
Oasis MAX Column	2.1 x 20 mm	30 µm	1/pk	186002052
Oasis MAX Cartridge Column	2.1 x 20 mm	30 µm	1/pk	186002057
Oasis MAX Column	3.0 x 20 mm	30 µm	1/pk	186002053
Oasis MAX Column	3.9 x 20 mm	30 µm	1/pk	186002054
Oasis MAX Column	4.6 x 20 mm	30 µm	1/pk	186002055
Oasis WCX Column	2.1 x 20 mm	30 µm	1/pk	186002505
Oasis WCX Column	3.9 x 20 mm	30 µm	1/pk	186002507
Oasis WAX Column	2.1 x 20 mm	30 µm	1/pk	186002508
Oasis WAX Column	3.9 x 20 mm	30 µm	1/pk	186002509

**Oasis Symbiosis/Prospekt-2 Cartridges**

Description	Format	Particle Size	Qty.	Part No.
Oasis HLB Symbiosis/Prospekt-2 Cartridge	1 x 10 mm	30 µm	96/box	186005781
Oasis HLB Symbiosis/Prospekt-2 Cartridge	1 x 20 mm	30 µm	96/box	186005786
Oasis MCX Symbiosis/Prospekt-2 Cartridge	1 x 10 mm	30 µm	96/box	186005782
Oasis MCX Symbiosis/Prospekt-2 Cartridge	1 x 20 mm	30 µm	96/box	186004653
Oasis MAX Symbiosis/Prospekt-2 Cartridge	1 x 10 mm	30 µm	96/box	186005783
Oasis MAX Symbiosis/Prospekt-2 Cartridge	1 x 20 mm	30 µm	96/box	186004654
Oasis WCX Symbiosis/Prospekt-2 Cartridge	1 x 10 mm	30 µm	96/box	186005784
Oasis WCX Symbiosis/Prospekt-2 Cartridge	1 x 20 mm	30 µm	96/box	186004655
Oasis WAX Symbiosis/Prospekt-2 Cartridge	1 x 10 mm	30 µm	96/box	186005785
Oasis WAX Symbiosis/Prospekt-2 Cartridge	1 x 20 mm	30 µm	96/box	186004656

**SPE Columns for Waters UPLC with On-Line SPE Technology**

Description	Format	Particle Size	Qty.	Part No.
Oasis HLB Direct Connect HP Column	2.1 x 30 mm	20 µm	1/pk	186005231
XBridge C <sub>18</sub> Direct Connect HP Column	2.1 x 30 mm	10 µm	1/pk	186005232
XBridge C <sub>8</sub> Direct Connect HP Column	2.1 x 30 mm	10 µm	1/pk	186005233

**Oasis Bulk Material and Glass Cartridge**

Description	Particle Size	Qty.	Part No.
Oasis HLB	30 µm/100 gm	—	186007549
Oasis HLB	30 µm/250 gm	—	186007550
Oasis MAX	30 µm/100 gm	—	186007551
Oasis MAX	30 µm/250 gm	—	186007552
Oasis MCX	30 µm/100 gm	—	186007553
Oasis MCX	30 µm/250 gm	—	186007554
Oasis HLB Glass Cartridge	60 µm	30/box	186000683

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