

Supel™-Select HLB SPE

Sample Prep Performance
at the Price you Desire



- Extract and Recover a Broad Range of Analytes
- Reduce Ion-suppression
- Generic Methodology
- Resistant to Overdrying
- Low UV & MS Extractables
- Stringent Production and QC
- Greater Capacity for Smaller Elution Volumes

Supel-Select HLB SPE

Supelco Supel-Select HLB SPE is a hydrophilic modified styrene-based polymer developed for the solid phase extraction of a highly broad range of compounds from aqueous samples. The retention mechanism is predominately based on reversed-phase interaction. However, because the phase is hydrophilic modified, the phase is also selective for more polar compounds (HLB: Hydrophilic Lipophilic Balance). Examples of more polar compounds that are retained and recovered on Supel-Select HLB include (but not limited to): pyridoxine (logPo/w -0.56), riboflavin (logPo/w -2.02), biotin (logPo/w 0.11).

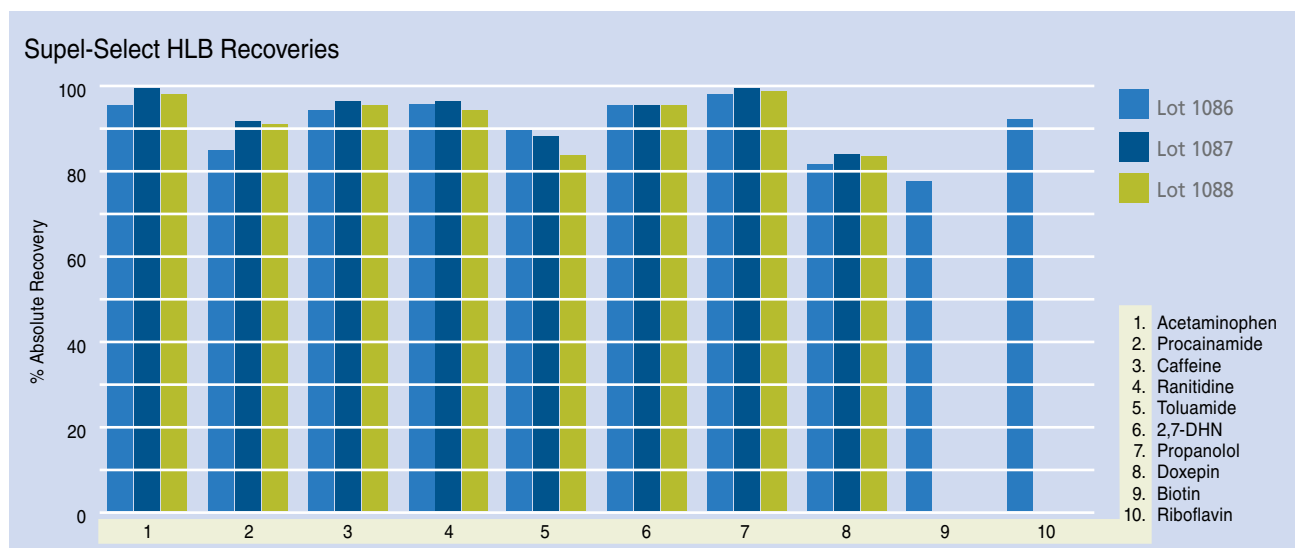
Phase Chemistry:	Hydrophilic modified styrene polymer
pH Compatibility:	0-14
Particle Size:	55-60 μm
MS Suitable:	Yes
Surface Area:	400-410 m^2/g
Pore Volume:	0.88 mL/g
Pore Size:	87 \AA

Feature	Benefit
Hydrophilic modified styrene resin	Extract and recover a broad range of analytes (polar to non-polar, acidic to basic) using a single sorbent
Generic methodology	Save time, money, and headache during method development
Greater capacity	Allows for smaller bed weights = smaller elution volumes = time savings in sample processing
Resistant to overdrying	More robust methodology
Low UV and MS extractables	Lower background for greater sensitivity
Stringent production & QC	Greater lot-to-lot, tube-to-tube, and well-to-well consistency for improved accuracy and precision

High & Reproducible Recoveries

Supel-Select HLB SPE allows users to extract a broad range of compounds using a single sorbent and generic methodology. Analyte recovery was high across all the

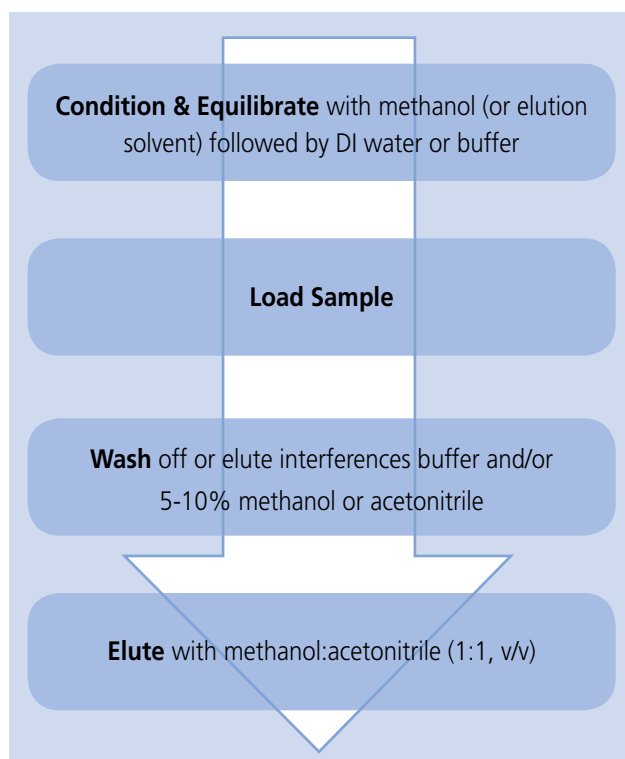
compounds tested, and results were highly reproducible across three production lots.



Amenable to Generic Methodology

For most applications, Supel-Select HLB SPE is amenable to generic methodology with minimal effort required to optimize recovery, selectivity, and reproducibility. This ultimately saves you valuable time, money, and headache during method development and routine analysis.

A detailed instruction sheet / troubleshooting guide is included with the product. To request a copy, please contact Supelco technical support at 800-359-3041; or email techservice@sial.com



Imparts Minimal Extractables

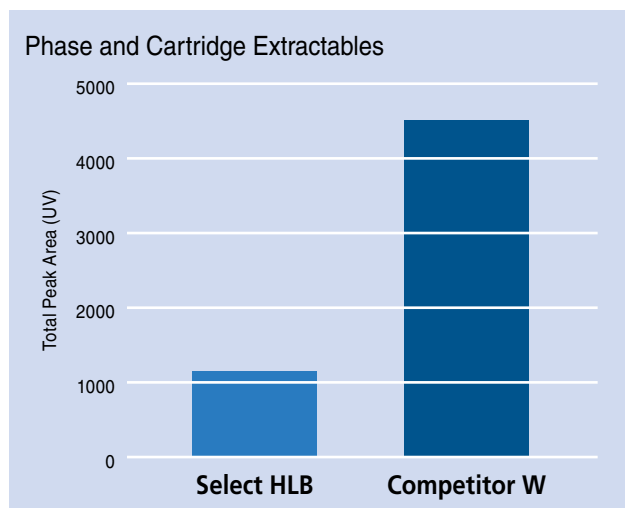
Supel-Select HLB SPE phases are quality controlled for both LC-UV and LC-MS/MS extractables. As assays require greater sensitivity, analytical “cleanliness” of both SPE phases and associated hardware becomes more critical. In this simple test, acetonitrile was passed through both Supel-Select HLB SPE tubes and the leading competitor’s tubes followed by LC-UV analysis.

Supel-Select HLB SPE imparted less than 25% of UV extractables than the leading competitor.

Our stringent quality control ensures that your purchase will offer you optimal and equivalent performance regardless of year and lot.

We test each lot for :

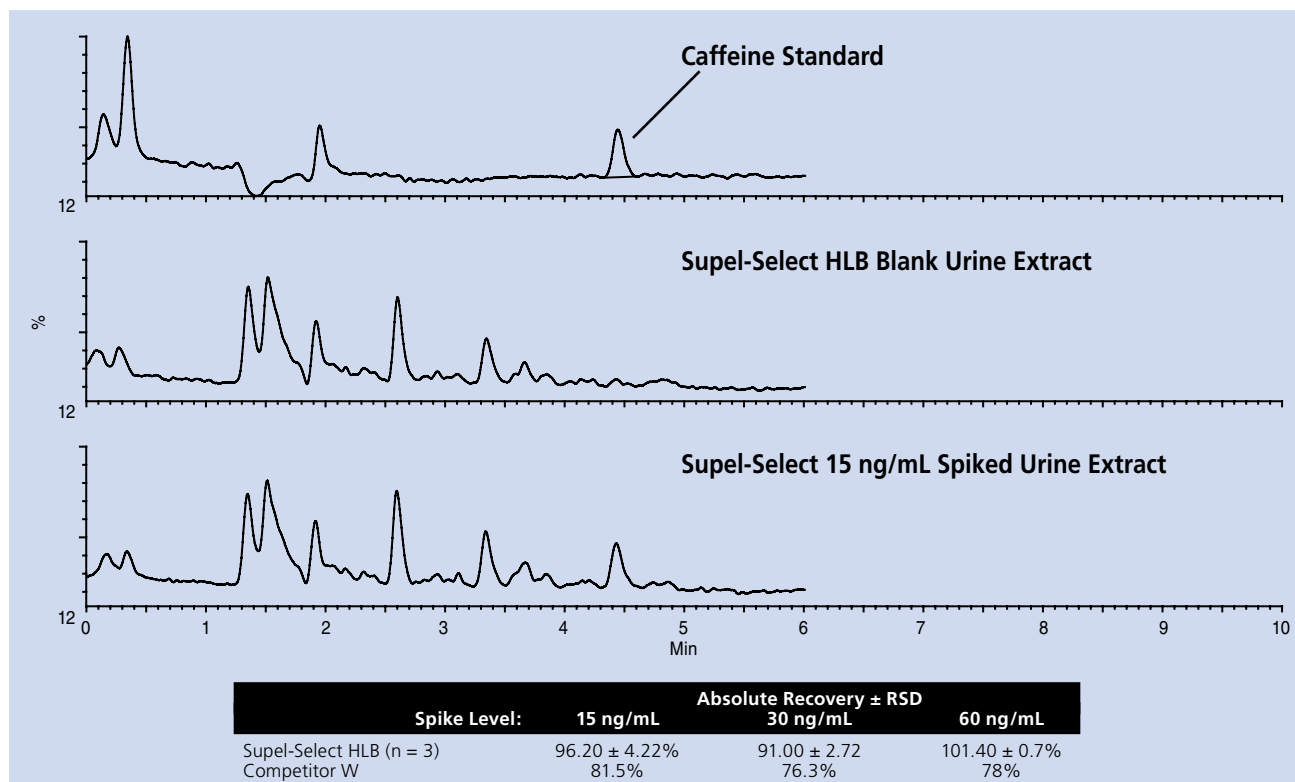
- Recovery
- LC-MS & LC-UV cleanliness (low extractables)
- Particle size
- Density
- Pore size
- Pore volume



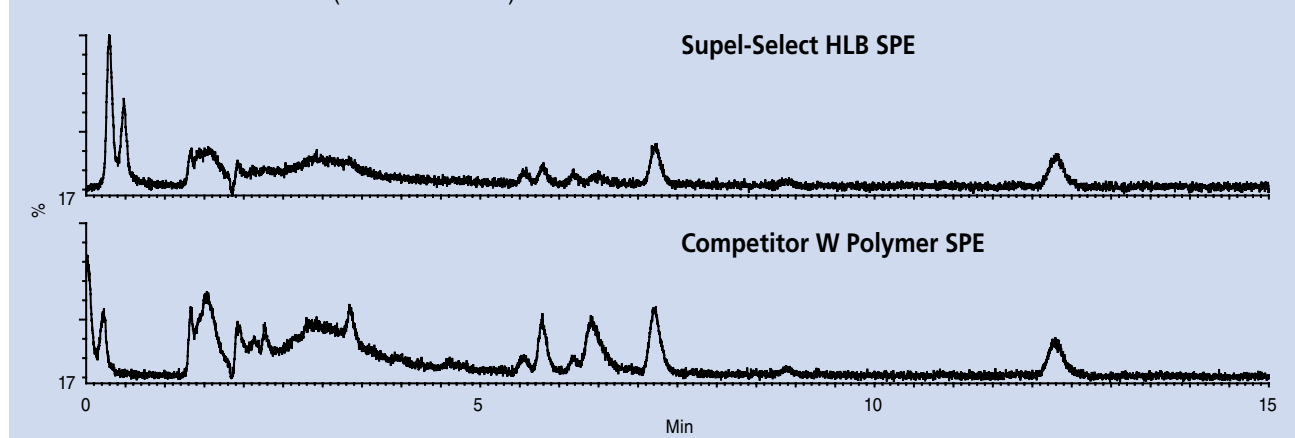
Extraction of Caffeine from Urine

Caffeine was extracted from urine using both Supel-Select HLB SPE and the leading competitor's polymer SPE phase. From the results, we see that recovery was greater than 90% using Supel-Select HLB and RSDs were less than 5% at the three spike levels tested.

In addition, when comparing TICs of Supel-Select HLB SPE and Competitor W blank urine extracts (full-scan mode), Supel-Select HLB blank extracts provide lower background.



TICs of Blank Urine Extracts (Full-Scan Mode)



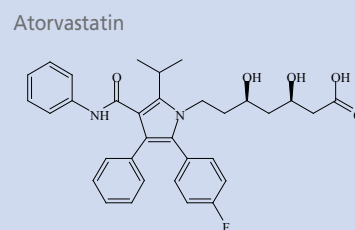
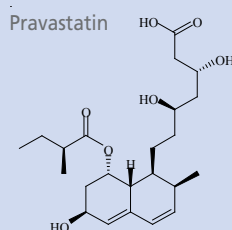
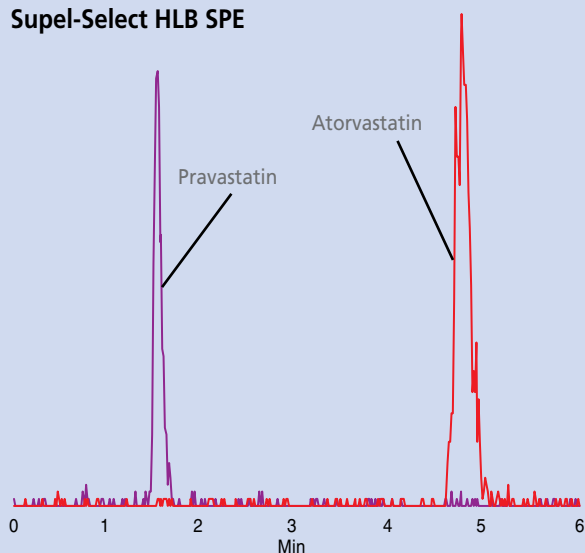
Extraction of Statins from Rat Plasma

Pravastatin and atorvastatin were spiked in rat plasma at the levels of 100 and 5 ng/mL. The spiked rat plasma samples were extracted using Supel-Select HLB and two leading competitor polymer SPE phases followed by LC-MS.

Supel-Select HLB SPE offered similar recovery levels to the leading competitor phases.

Total Ion Chromatogram (MRM, 4 pairs: 557.3/397.2) Rat Plasma spiked with 5 ng/mL Statins Extracted by Supel-Select HLB SPE

Supel-Select HLB SPE



	Absolute Recovery \pm RSD (n=3)			
	5 ng/mL spike		100 ng/mL spike	
	Pravastatin	Atorvastatin	Pravastatin	Atorvastatin
Supel-Select HLB	84 \pm 8%	92 \pm 5%	103 \pm 4.2%	89 \pm 3.9%
Competitor W	83 \pm 17%	92 \pm 2%	104 \pm 2.2%	87 \pm 1.1%
Competitor P	77 \pm 5%	93 \pm 2%	102 \pm 3.0%	91 \pm 1.3%

Ordering Information:

Description	Qty/Pk.	Cat. No.
Supel-Select HLB SPE		
30 mg/1 mL	100	54181-U
60 mg/3 mL	50	54182-U
200 mg/6 mL	30	54183-U
500 mg/12 mL	20	54184-U
1 g/20 mL	20	54186-U
Supel-Select HLB 96-well SPE		
10 mg/ well	1	Inquire
30 mg/ well	1	575661-U
60 mg/ well	1	575662-U

Supel-Select is a trademark of Sigma-Aldrich Biotechnology LP

To learn more about Supelco SPE Products visit sigma-aldrich.com/spe

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