

ISOLUTE® PLD+

Protein and Phospholipid Removal Products – Effortlessly Improve Analyte Sensitivity



ISOLUTE® PLD+ Protein and Phospholipid Removal plates and columns provide a very effective but extremely simple sample clean-up for LC-MS/MS analysis. Requiring next to no method development, ISOLUTE PLD+ can be integrated quickly and easily into routine workflow, increasing productivity and reducing instrument downtime. ISOLUTE PLD+ plates and columns remove >99 % of plasma proteins and phospholipids, the main causes of ion suppression, leading to cleaner extracts and increased sensitivity (signal-to-noise (S/N)) for a broad range of analytes.

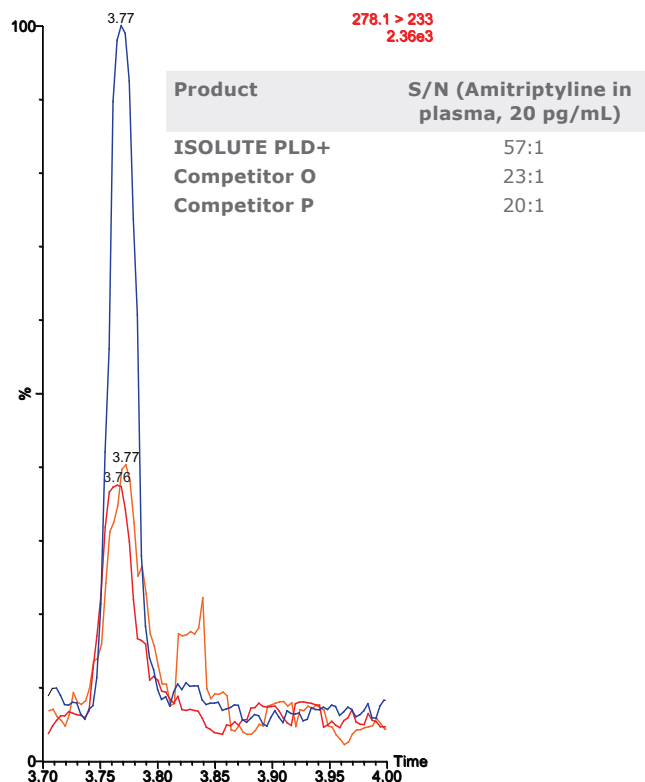


Figure 1. Relative peak intensity, 20 pg/mL amitriptyline in plasma (Blue = ISOLUTE® PLD+, Orange = Competitor O, Red= Competitor P).

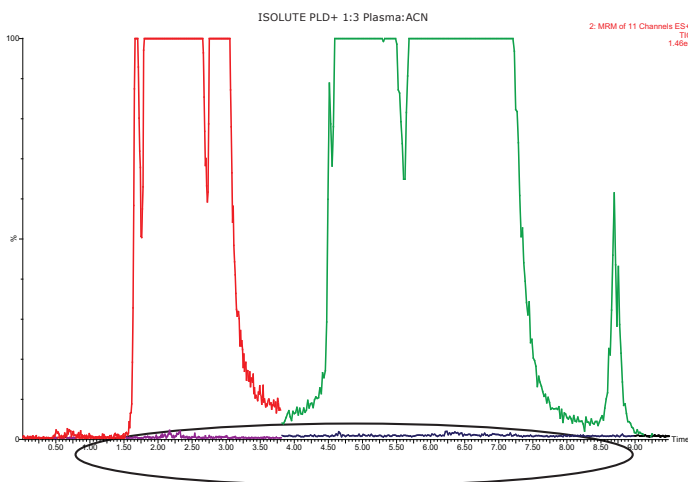


Figure 2. Levels of phospholipids present in plasma purified using protein precipitation (red and green), and ISOLUTE® PLD+ Protein and Phospholipid Removal Plates (purple and black). More than 99% of phospholipids are removed.

Remove More Phospholipids - Get Better Sensitivity

ISOLUTE® PLD+ plates and columns deliver cleaner extracts than other phospholipid removal products, meaning lower detection limits can be achieved. In the example above, signal-to-noise using ISOLUTE PLD+ was more than double when compared with competitor products (figure 1), leading to an immediate enhancement in sensitivity. More than 99 % of phospholipids are removed as the sample passes through the multifunctional sorbent bed, leaving clean, purified extracts for analysis (figure 2).

Removing phospholipids also improves analytical column lifetime, preventing the build-up of phospholipids over multiple injections, and maintaining analyte sensitivity over extended analytical runs.

Effective Sample Clean-up in 3 Simple Steps

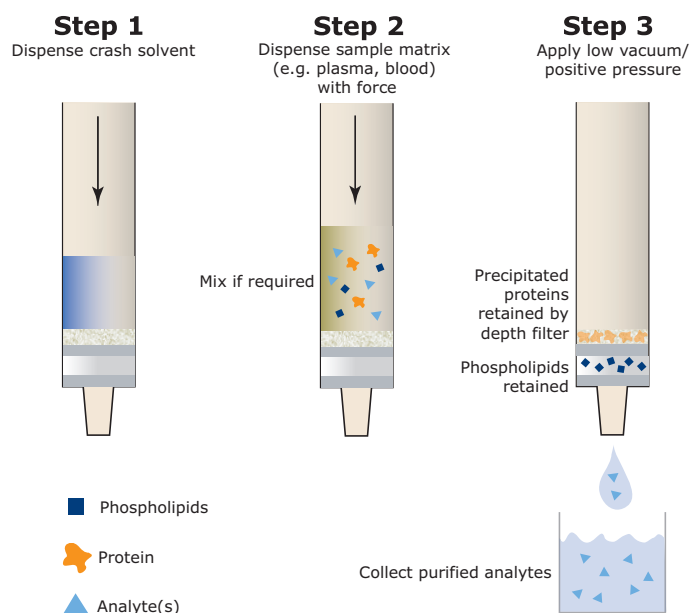


Figure 3. Typical ISOLUTE® PLD+ procedure.

Using a simple solvent crash/filtration based procedure, proteins and phospholipids are simultaneously removed from plasma and other blood based samples while high, reproducible analyte recoveries are maintained.

The optimized frit arrangement acts as a depth filter, efficiently trapping precipitated proteins, without blocking or plugging.

Trouble Free Processing

ISOLUTE® PLD+ products have excellent flow characteristics, and do not plug or block during use. They can be processed easily using either positive pressure or vacuum based systems, and are compatible with most automated liquid handlers. Up to 96 x 1 mL volume tabless format columns can be processed on Biotage® Pressure+ 96, Extrahera™ and VacMaster™-96 systems using specially designed racks. This cost effective option is ideal for applications with variable sample numbers or for method development.

Ordering Information

Part Number	Description	Quantity
918-0050-P01	ISOLUTE® PLD+ Protein and Phospholipid Removal Plate	1
918-0005-AG	ISOLUTE® PLD+ Protein and Phospholipid Removal Columns, 50 mg/1 mL (tabless)	100
Accessories		
121-5202	Collection plate, 1 mL, square	50
121-5203	Collection plate, 2 mL, square	50
121-5213	Collection plate, 2 mL, round	50
121-5204	Piercable sealing cap	50
Vacuum processing		
121-9600	Biotage® VacMaster™-96 sample Processing manifold	1
121-9601	VacMaster VCU-1 Vacuum Control Unit	1
121-9602	VacMaster VCU-2 Vacuum Control and Generation Unit	1
Positive pressure processing		
PPM-96	Biotage® PRESSURE+ Positive Pressure Manifold, 96 position	1

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To locate a distributor, please visit our website at www.biotage.com

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