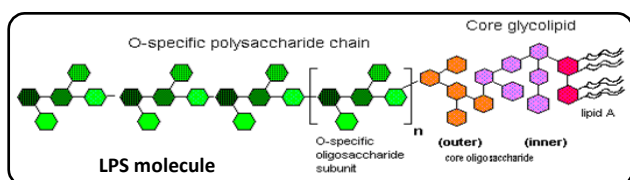


Proteus NoEndo™ μ (Micro) Spin Column Kits: The Gold Standard

Residual endotoxin contamination in advanced biopharmaceutical products is an expensive and often difficult contaminant to control.

Many commercially-available protocols are unable to remove endotoxins effectively and are based on non-affinity chromatography methods e.g. Ion exchange chromatography, phase separation using Triton X-114 or require time consuming and expensive affinity steps. These costly resins are often supplied as loose resin or packed in slow gravity columns.

The Proteus NoEndo™ spin column kits offer a standardised method for high grade clearance of endotoxin from recombinant proteins, antibodies and viral vectors.

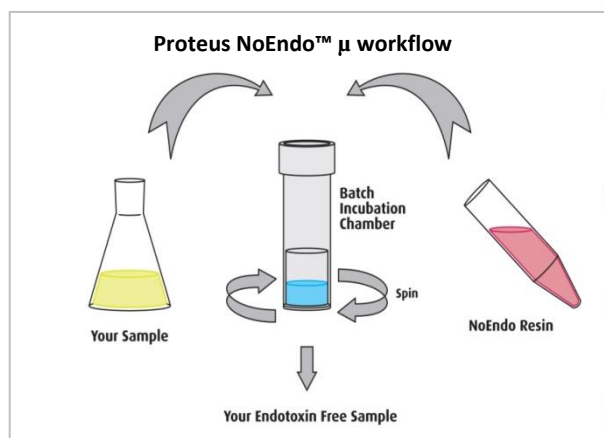


The SelfSeal™ Advantage: Endotoxin-free preparation

The yields of a gravity flow with the speed of a spin column

The SelfSeal™ Advantage

NoEndo™ μ spin columns incorporate our proprietary and NASA-inspired SelfSeal™ membrane technology. The membrane is specially formulated to prevent any sample from leaking into the collection tube on an orbital mixer. In a centrifuge, the membrane pores dilate and the eluate, free of endotoxin, passes into the collection tube. The contact time is maximized to ensure maximum endotoxin depletion without losses of the target protein, antibody or domain antibody. Uniquely, there is also no dilution of the sample.



Specification Table:

Spin Columns	NoEndo μ	NoEndo M	NoEndo S	NoEndo HC
Typical in situ binding capacity per column	300-500 EU	3,000 EU	30,000 EU	500,000-1,000,000 EU
Typical endotoxin binding capacity per ml	500-800 EU/ml	300 EU/ml	1,500 EU/ml	30,000 EU/ml
Minimum endotoxin levels tested post-column	<0.03 EU/ml	<0.03 EU/ml	<0.05 EU/ml	<0.05 EU/ml
Typical endotoxin clearance after 1 pass	-	-	3 log reduction	3 log reduction
Typical endotoxin clearance after 2 passes	-	-	4 log reduction	4 log reduction
Typical endotoxin clearance after 1 hour incubation	3 log reduction	2 log reduction	-	-
Typical endotoxin clearance after 3 hour incubation	4 log reduction	3 log reduction	-	-
Maximum sample load volume	0.6 ml	20 ml	20 ml	20 ml
Bed volume	0.01-0.1 ml loose	0.25 ml loose	1 ml pre-packed	1.7 ml pre-packed
Resin	NoEndo™ resin	NoEndo™ resin	NoEndo™ resin	NoEndo™ resin
Bead size range	100 μ m	100 μ m	100 μ m	100 μ m
Proteus matrix	Cross-linked 6 % agarose	Cross-linked 6 % agarose	Cross-linked 6 % agarose	Cross-linked 6 % agarose
Recommended working pH	4-8	4-8	4-8	4-8
Colour coded end-caps	Supplied in vials	Supplied in vials	Light green	Dark green

Product Performance:

Working with 50 µl or 100 µl NoEndo Resin Bed Volumes

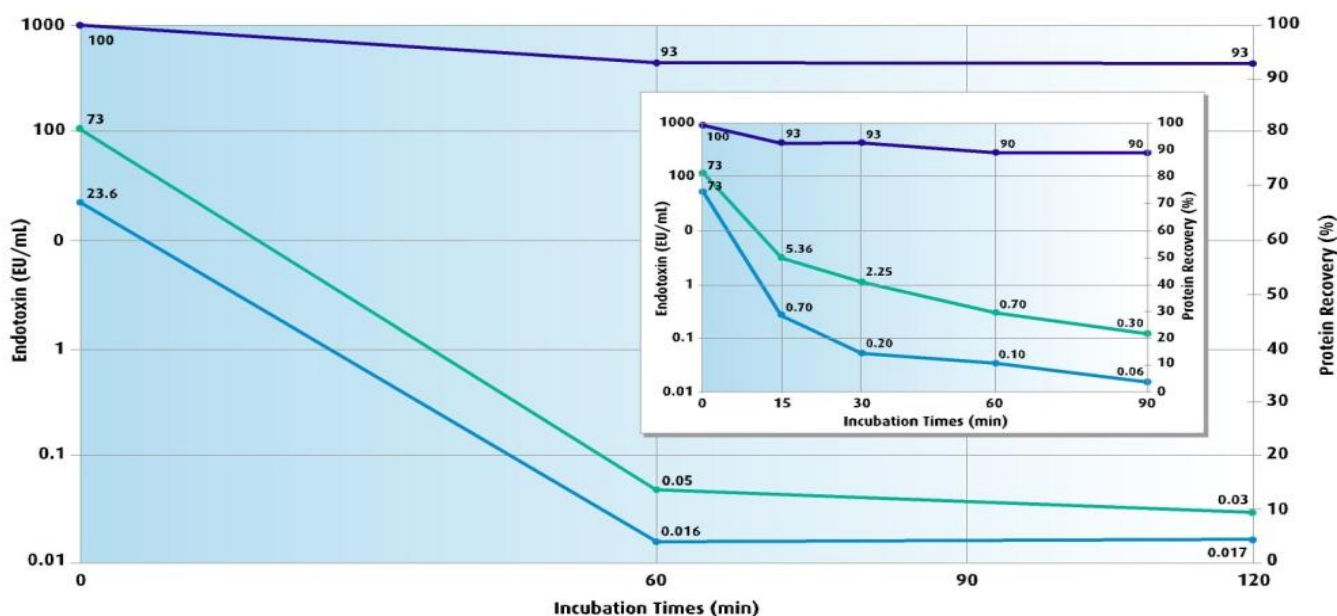


Figure 1: The Proteus NoEndo™ µ spin columns were challenged with rabbit IgG (1mg/ml) spiked with *E.coli* lysate. The Proteus NoEndo™ µ spin columns were loaded with 50 µl (green line) and 100 µl (light blue line) NoEndo™ resin. Endotoxin data was generated using the Charles River Endosafe-PTS assay. Protein recoveries in excess of 90% and 4 log reductions in endotoxin were observed.

Adjusting the Sample Volume/Resin Bed Volume Ratio

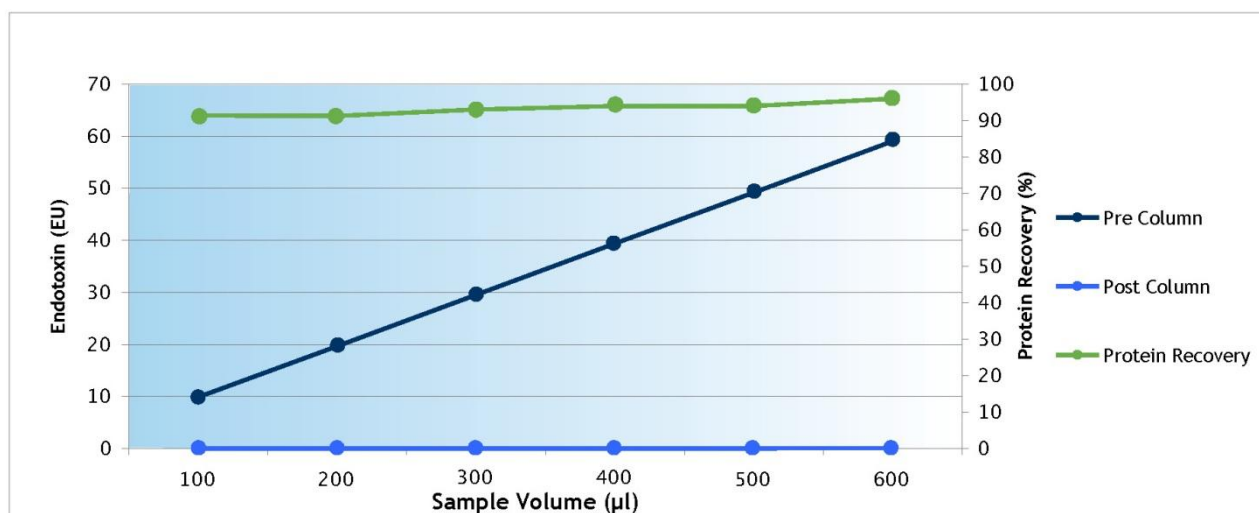


Figure 2: Proteus NoEndo™ µ spin columns containing 100 µl resin were challenged with 100-600 µl rabbit IgG (1mg/ml) spiked with *E.coli* lysate. Endotoxin data was generated using the Charles River Endosafe-PTS assay. 4 log reductions in endotoxin were observed.

Ordering Information

Kits	Quantity	Product Code
Proteus NoEndo™ µ 2 column kit (1 x 0.2 ml resin vial)	2 µ spin columns	GEN-NoE2Micro
Proteus NoEndo™ µ 24 column kit (1 x 2.4 ml resin vial)	24 µ spin columns	GEN-NoE24Micro
Proteus NoEndo™ µ 100 column kit (1 x 10 ml resin vial)	100 µ spin columns	GEN-NoE100Micro

Protein Ark Limited

Telephone +44 (0) 33 33 44 20 25

FAX: +44 (0) 33 33 44 20 25

Email: info@proteinark.com