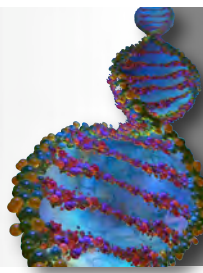


# MiniSpin™ Columns



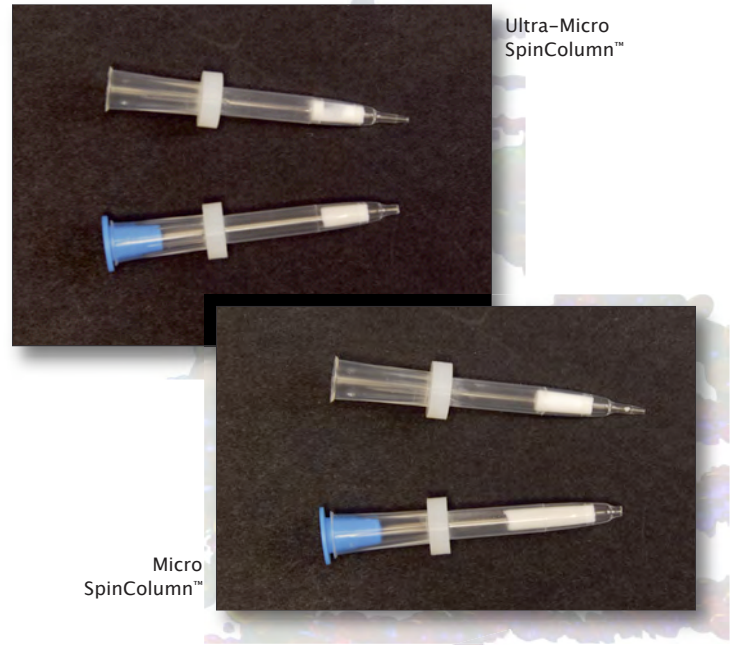
Ideal for quick desalting or removal of unbound reactants for the purification of Peptides, Proteins, Sugars or DNA!

This new generation of SpinColumns™ is designed for the purification of small samples (10µl to 150µl), in either single column or high-throughput, 96-well, formats. The MiniSpin™ and our storable BioPureSPN™ columns use centrifugal force to drive the separation process, so they are more efficient than Tips. Results are not as sample composition dependent as can happen when using Tips.

The Nest Group offers pre-filled MiniSpin™ Columns with a wide selection of chromatographic medias including gel-filtration, ion-exchange, silica-based reversed phase (C4 & C18) and HILIC materials contained by frits and/or caps. Specific materials are available for special applications such as desalting of sugars (charcoal & cellulose) or phospho-peptide isolation (PolyWAX LP). Empty columns can be customer-filled with unique resins, used as filters to remove gel particles, or supplied with caps to use as microchemical reaction & filtration devices.

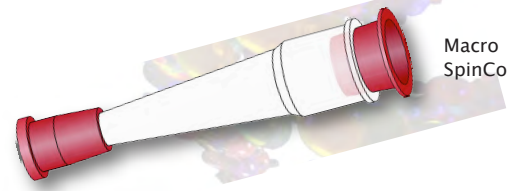
To use, place the columns, with our supplied tubes, into a benchtop centrifuge, or use a plate centrifuge. Spin for two minutes. The column material binds and purifies the sample according to size, shape, chemical composition, charge or other physiochemical properties.

- Ultra-Micro SpinColumns™ Sample volumes 10 to 25µl
- Micro SpinColumns™ Sample volumes 25 to 75µl
- Macro SpinColumns™ Sample volumes 75 to 150µl
- 96-Well Micro SpinColumns™ Sample volumes 25 to 75µl
- 96-Well Macro SpinColumns™ Sample volumes 75 to 150µl



Ultra-Micro SpinColumn™

Micro SpinColumn™



Macro SpinColumn™



96-Well SpinColumn™

## PACKING MATERIALS AVAILABLE

- Gel Filtration
- G-10, G-25, G-50, G-100, P-2, P-6
- Hydrophobic (non-polar)
- PROTO™ 300 C4 & C18, & Fast Equilibrating TARGA® C18
- Hydrophilic (polar)
- Silica, Cyano (CN), Amino (NH<sub>2</sub>), Hydrophilic
- Ion Exchange
- Strong Anion, Weak Anion, Strong Cation, Weak Cation
- Specialized
- Activated Charcoal, Cellulose, Detergent Removal, Empty

**New Capacities!**  
**Storable SPE Formats**

HMM S04V  
HEM S04V

HMM S18V  
HEM S18V

HMM S18R  
HEM S18R

HMM HIL  
HEM HIL

HILIC      PROTO™ C4/C18      TARGA®

**Color Coded BioPureSPN™**  
**Equilibrate & Store, or Run & Save**

BioPureSPN™



# MiniSpin™ Column Kits

Simple Solutions for Small Samples!

## MiniSpin Column Kits

MiniSpin Columns are made in RPC solvent resistant polypropylene housings for SPE purification and desalting of small samples (5-200µL).

### Applications:

- ◆ Affinity Chromatography
- ◆ Buffer Exchange
- ◆ Carbohydrate
- ◆ DNA
- ◆ Detergent Removal
- ◆ Nick Translation
- ◆ Peptide
- ◆ Primer Removal
- ◆ Protein
- ◆ Radiolabel Removal
- ◆ Removal of Salt
- ◆ Removal of Small Molecules
- ◆ Particle Removal

Product	Sample Capacity	Empty Volume	Void Vol.
Ultra MicroSpin™ Column	3-30µg	50µL	15µL
MicroSpin™ Column	5-60µg	200µL	30µL
MacroSpin™ Column	30-300µg	500µL	95µL
BioPureSPN™ Mini	3-35µg	150µL	10µL
BioPureSPN™ Midi	17-170µg	300µL	50µL
BioPureSPN™ Macro	35-350µg	300µL	100µL
96-Well Spin Plate	10-100µg	300µL	30µL
96-Well MACRO-Spin Plate	30-300µg	450µL	95µL
Histidine Removal Column	0.2 – 0.5mg	-	-
Empty µ-Reactors™ w/ caps	2-200µL	0.1µL	-
Page*Eraser™ µFilter Tips	2-200µL	0.1µL	-

### UltraMicroSpin and UltraMicroTIP Columns:

UltraMicroSpin and UltraMicroTIP columns offer a wide variety of packing materials including ion-exchange, silica based reverse and normal phase materials, as well as custom materials like IMAC and activated charcoal. UltraMicroSpin columns have industry standard fittings which allow use with a syringe adapter or in a centrifuge (Figure 1).

### MicroSpin Columns:

MicroSpin columns have a packing volume of 50µL, which allows SEC sample volumes of 5-25µL. When used in combination with columns of different gel materials, specific separations can be achieved (Figure 2). This process offers many types of separation phase combinations.

Use any of these columns with centrifugation, vacuum or pressure to clean up your protein, DNA, or carbohydrate samples. The recovery is reproducible and there is almost no sample loss.

**PAGE\*Eraser™** micro filter tips prolong the life of capillary LC-MS columns by removing gel particles from in-gel digests. Recovery of peptides is quantitative from this special low volume 5µm frit.

### MacroSpin Columns:

MacroSpin columns have a packing volume of 185µL, suitable for 50-95µL SEC sample volumes or up to 0.35mL for RPC. Due to their size, MacroSpin columns cannot be attached to a syringe. Other materials such as amino acid specific resins from BioMolecular Technologies are available for proteome fractionation using their amino acid selective chemistries. See:

(<http://www.nestgrp.com/protocols/bmt/pi3index.shtml>)

### 96-Well Format MicroSpin Column Kits:

96-Well Format MicroSpin columns bring speed and low cost to parallel processing, micro sample preparation and are available with 20 different types of column materials. Extended tip wells eliminate cross contamination. Plates come with their own collection wells. Volume control for SEC use is recommended to improve desalting

#### Volume Dependent Salt Removal Results by SEC:

96-Well MACRO-Spin Plate:	Bed	Load	Desalt %
	125µL	125µL	100%
	125µL	225µL	>99%
	125µL	400µL	78%



Figure 1. Semi-Reusable, Color Coded BioPureSPN™

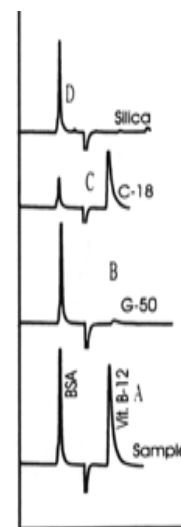
Figure 2. HPLC - Chromatograms after sample prep with MicroSpin column; Sample Vol. 20µL.

(A) Mixture of BSA (MW 68,000) and Vitamin B-12 (MW 1355).

(B) After centrifugation with G-50 (size exclusion) spin column: Smaller molecule (Vitamin B-12) is retained and BSA is eluted. This column can be used for the removal of small molecules such as salt.

(C) After centrifugation with a C18V (PROTO™300 reverse phase) spin column: BSA is retained and Vitamin B-12 is eluted. The C18R column (TARGA C18 reverse phase) can be used for the retention of small molecules in 100% water, after the removal of protein or large molecules.

(D) After centrifugation with Silica (normal phase) spin column: BSA is eluted and Vitamin B-12 is retained. The column can be used for the analysis of small as well as large molecules. By using different eluents, small molecules can be eluted from column after removal of large molecules.



**MiniSpin Column Kits Part Numbers and Pricing**

Available in packs of 96 or 24	Ultra MicroSpin Ultra MicroTIP (2-12µL, SEC)		MicroSpin (5-25µL, SEC)		96-Well SEC 5-25µL, or 40-125µL (-L)		MacroSpin (40-125µL, SEC)	
Description	Part No.	Price	Part No.	Price	Part No.	Price	Part No.	Price
Empty Col. (20µ frit)	SUM 0000	\$180	SEM 0000	\$180	SNS 0000	\$145	SMM 0020	\$180
	SUM 0000.25	\$68	SEM 0000.25	\$68	SNS 0000-L	\$153	SMM 0020.25	\$68
Empty Col. (40µ frit)	SUM 0040	\$180	SEM 0040	\$180	N/A		SMM 0000	\$180
	SUM 0040.25	\$68	SEM 0040.25	\$68	N/A		SMM 0000.25	\$68
PAGE*Eraser µFilters 5µ	SUM 0007	\$180	SEM 0007	\$180	SNS 0007	\$145	SMM 0007	\$180
	SUM 0007.25	\$68	SEM 0007.25	\$68	SNS 0005-L	\$153	SMM 0007.25	\$68
Empty µ-Reactors (96/pk)	SUM 0000-BW	\$201	N/A		N/A		SMM 0000	
<b>Desalt Protein DNA</b>	<b>Gel Filtration</b>		<b>Gel Filtration</b>		<b>Gel Filtration</b>		<b>Gel Filtration</b>	
G-10 (>700Da)	SUM S010	\$412	SEM S010	\$364	SNS S010	\$159	SMM S010	\$335
	SUM S010.25	\$156	SEM S010.25	\$144	SNS S010-L	\$177	SMM S010.25	\$92
G-25 (>5KDa)	SUM S025	\$412	SEM S025	\$364	SNS S025	\$159	SMM S025	\$319
	SUM S025.25	\$156	SEM S025.25	\$140	SNS S025-L	\$177	SMM S025.25	\$97
G-50 (>30KDa)	SUM S050	\$412	SEM S050	\$364	SNS S050	\$159	SMM S050	\$319
	SUM S050.25	\$156	SEM S050.25	\$144	SNS S050-L	\$177	SMM S050.25	\$97
G-100 (>100KDa)	SUM S100	\$412	SEM S100	\$364	SNS S100	\$159	SMM S100	\$319
	SUM S100.25	\$156	SEM S100.25	\$144	SNS S100-L	\$177	SMM S100.25	\$92
<b>Carbohydrate</b>	<b>Gel Filtration</b>		<b>Gel Filtration</b>		<b>Gel Filtration</b>		<b>Gel Filtration</b>	
P-2 (>2KDa)	SUM P020	\$350	SEM P020	\$364	SNS P020	\$204	SMM P020	\$296
(for glycoproteins)	SUM P020.25	\$149	SEM P020.25	\$144	SNS P020-L	\$228	SMM P020.25	\$92
P-6 (>6KDa)	SUM P060	\$350	SEM P060	\$364	SNS P060	\$204	SMM P060	\$328
(for glycoproteins)	SUM P060.25	\$149	SEM P060.25	\$144	SNS P060-L	\$228	SMM P060.25	\$92
Active Charcoal	SUM SC00	\$418	SEM SC00	\$418	SNS SC00	\$172	SMM SC00	\$305
	SUM SC00.25	\$152	SEM SC00.25	\$152	SNS SC00L	\$274	SMM SC00.25	\$131
Cellulose	SUM SCELL	\$375	SEM SCELL	\$355	SNS SCELL	\$159	SMM SCELL	\$277
	SUM SCELL.25	\$149	SEM SCELL.25	\$152	SNS SCELLL	\$220	SMM SCELL.25	\$96

**Microchemical Extraction**

12-100µL (3-30µg)

25-200µL (5-60µg)

25-200µL (5-60µg) & 50-400µL (30-300µg) (-L)

50-300µL (30-300µg)

Reversed Phase								
C-18, 300Å (pept-prot)	HUM S18V	\$345	HEM S18V	\$345			HMM S18V	\$350
BioPureSPN <i>Config'n</i>	HUM S18V.20	\$125	HEM S18V.20	\$125			HMM S18V.20	\$125
C-4, 300Å (pept-prot)	HUM S04V	\$345	HEM S04V	\$345			HMM S04V	\$350
BioPureSPN <i>Config'n</i>	HUM S04V.20	\$125	HEM S04V.20	\$125			HMM S04V.20	\$125
TARGA C-18 (FastEquil.)	HUM S18R	\$345	HEM S18R	\$345			HMM S18R	\$350
BioPureSPN <i>Config'n</i>	HUM S18R.20	\$125	HEM S18R.20	\$125			HMM S18R.20	\$125
C-18, 300Å (pept-prot)	SUM SS18V	\$344	SEM SS18V	\$364	SNS SS18V	\$199	SMM SS18V	\$411
	SUM SS18V.25	\$157	SEM SS18V.25	\$152	SNS SS18V-L	\$255	SMM SS18V.25	\$129
TARGA C-18 (sm. mol.)	SUM SS18R	\$432	SEM SS18R	\$465	SNS SS18R	\$336	SMM SS18R	\$520
	SUM SS18R.25	\$205	SEM SS18R.25	\$168	SNS SS18R-L	\$448	SMM SS18R.25	\$141
C4, 300Å (protein)	SUM SS04V	\$344	SEM SS04V	\$364	SNS SS04V	\$199	SMM SS04V	\$369
	SUM SS04V.25	\$157	SEM SS04V.25	\$152	SNS SS04V-L	\$240	SMM SS04V.25	\$129
CN, 125Å	SUM SSCN	\$344	SEM SSCN	\$364	SNS SSCN	\$159	SMM SSCN	\$301
	SUM SSCN.25	\$156	SEM SSCN.25	\$152	SNS SSCNL	\$193	SMM SSCN.25	\$107
<b>Hydrophilic/IEX</b>								
HILIC/Deter Removal	SUM HIL	\$496	SEM HIL	\$482	SNS HIL	\$496	SMM HIL	\$482
	SUM HIL.25	\$131	SEM HIL.25	\$126	SNS HIL-L	\$536	SMM HIL.25	\$131
DEAE PolyWAX ERLIC	SUM HIL-DE	\$482	SEM HIL-DE	\$482	SNS HIL-DE	\$496	SMM HIL-DE	\$482
	SUM HIL-DE.25	\$131	SEM HIL-DE.25	\$157	SNS HIL-DE-L	\$536	SMM HIL-DE.25	\$132
SCX (PolySULFO)	SUM HIL-SCX	\$482	SEM HIL-SCX	\$482	SNS HIL-SCX	\$496	SMM HIL-SCX	\$482
	SUM HIL-SCX.25	\$131	SEM HIL-SCX.25	\$157	SNS HIL-SCX-L	\$536	SMM HIL-SCX.25	\$137
WCX (PolyCAT A)	SUM HIL-WCX	\$482	SEM HIL-WCX	\$482	SNS HIL-WCX	N/A	SMM HIL-WCX	\$482
	SUM HIL-WCX.25	\$131	SEM HIL-WCX.25	\$157	SNS HIL-WCX-L	\$536	SMM HIL-WCX.25	\$126
<b>Non-Silica IEX</b>								
SAX (CHO Based)	SUM SAX	\$379	SEM SAX	\$395	SNS SAX	\$199	SMM SAX	\$486
	SUM SAX.25	\$158	SEM SAX.25	\$162	SNS SAX-L	\$252	SMM SAX.25	\$119
WAX (CHO Based)	SUM WAX	\$375	SEM WAX	\$382	SNS WAX	\$199	SMM WAX	\$310
	SUM WAX.25	\$158	SEM WAX.25	\$154	SNS WAX-L	\$214	SMM WAX.25	\$109
SCX (CHO Based)	SUM SCX	\$375	SEM SCX	\$380	SNS SCX	\$199	SMM SCX	\$355
	SUM SCX.25	\$158	SEM SCX.25	\$158	SNS SCX-L	N/A	SMM SCX.25	\$109
WCX (CHO Based)	SUM WCX	\$375	SEM WCX	\$367	SNS WCX	\$199	SMM WCX	\$310
	SUM WCX.25	\$158	SEM WCX.25	\$154	SNS WCX-L	\$221	SMM WCX.25	\$109
<b>Affinity</b>								
ConSep™ mAb Conc (100)			ID-CS-100	\$475				
ConSep mAb Conc (25/pk)			ID CS-25	\$135				
Histidine Removal (100/pk)	N/A		ID-HS-100	\$395	N/A		N/A	
Histidine Removal (25/pk)	N/A		ID HS-25	\$110	N/A		N/A	

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