



# Spin Columns for Sample Preparation

## Micro Bio-Spin and Bio-Spin™ Columns for Probe Cleanup and Dye Terminator Removal

The production of radiolabeled DNA and RNA is a common molecular biology application in applications including end labeling reactions, nick translation, purification of fluorescent sequencing reaction mixtures, and exchange of buffer salts in multiple restriction digests. The unincorporated radioactive nucleotides are typically removed from the reaction mixture by gel filtration chromatography, phenol extraction, or alcohol precipitation. These tedious and time-consuming steps can be eliminated with Micro Bio-Spin and Bio-Spin Chromatography Columns. The spin column technique combines the ease and speed of centrifugation with the efficiency of gel filtration for separating molecules by size, with desired sample molecules purified in the collection tube.

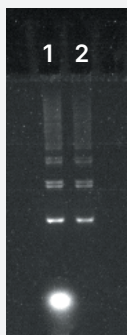
These products are ideal for quick and effective cleanup and removal of salts, nucleotides, dye terminators, and small molecules from DNA, RNA, and protein samples.

- Prepacked with a specially-sized Bio-Gel™ polyacrylamide size-exclusion gel to match your specific application
- Prehydrated with 10 mM Tris or SSC buffer so you can start immediately
- Easy procedure: drain buffer, apply sample, and spin. Purified sample elutes in the centrifuge tube, leaving contaminants behind in the column
- Fast and efficient: from start to finish in less than 10 min
- An effective way to eliminate phenol extractions, gravity columns, binding and wash buffer steps, and loss from ethanol precipitations

### Efficient Primer, Probe, and Template Cleanup

- Dye terminator removal in minutes, with improved yield and recovery over ethanol precipitations
- Removal of excess dNTPs, label, and small molecules for cleaner probes and primers
- Sample loads from 10-100  $\mu$ L for labeling and desalting applications
- Safe riboprobe preparation with RNase-free Micro Bio-Spin 30 Tris Spin Columns
- Available with P-6 Gel and Tris or SSC buffer for desalting and buffer exchange applications
- Available in Tris buffer for molecular biology applications

Application	Recommended Column
Dye terminator removal in cycle sequencing reactions	Bio-Spin/Micro Bio-Spin 30, Tris
Labeling reactions: removal of unincorporated labeled nucleotides from labeled DNA >20 bases or bp	Bio-Spin/Micro Bio-Spin 30, Tris
Desalting of newly synthesized oligonucleotides >20 bases	Bio-Spin/Micro Bio-Spin 6, Tris
Buffer exchange of restriction fragments, PCR products, enzymatic reactions, and sequencing templates	Bio-Spin/Micro Bio-Spin 6 or 30, Tris
Riboprobe cleanup	Micro Bio-Spin 30 Tris, RNase free
Desalting of antibody, enzyme, and protein solutions	Bio-Spin/Micro Bio-Spin 6 or 30
Purify proteins >6,000 molecular weight	Bio-Spin/Micro Bio-Spin 6
Purify proteins >40,000 molecular weight	Bio-Spin 30



### Removal of unincorporated label with a Micro Bio-Spin 30 Column.

Lane 1, TBE-agarose gel analysis of a 100 bp molecular ruler end-labeled with a fluorescein dCTP DNA labeling kit prior to removal of unincorporated labeled dCTP; lane 2, aliquot of labeled 100 bp molecular ruler after purification with a Micro Bio-Spin 30 Column.



## Micro Bio-Spin Columns

Micro Bio-Spin 30 Chromatography Columns are the ideal means for removing unincorporated dye terminators from automated sequencing reactions quickly and inexpensively. Prepacked Micro Bio-Spin Columns are:

- Available in RNase-free form for riboprobe purification
- Suitable for use in a microcentrifuge
- Available in two buffer formulations for molecular biology or buffer exchange applications
- Ideal for removal of ddNTPs and unincorporated label from reaction mixtures (Tris buffer)

## Technical Information

	Bio-Spin 6	Micro Bio-Spin 6	Bio-Spin 30	Micro Bio-Spin 30
Packed support	Special grade Bio-Gel P-6 Gel	Special grade Bio-Gel P-6 Gel	Special grade Bio-Gel P-30 Gel	Special grade Bio-Gel P-30 Gel
Equilibration buffers	10 mM Tris, pH 7.4 or SSC buffer*	10 mM Tris, pH 7.4 or SSC buffer*	10 mM Tris, pH 7.4 or SSC buffer*	10 mM Tris, pH 7.4 or SSC buffer*
Application	Desalting and buffer exchange	Desalting and buffer exchange	DNA sequencing reaction mixtures (Tris) and small molecule removal	DNA sequencing reaction mixtures (Tris) and small molecule removal
Bed volume	1.1 mL	0.7 mL	1.1 mL	0.7 mL
Retention and recovery	90% recovery of 20 bases or bp, 99% retention of salts	90% recovery of 20 bases or bp, 99% retention of salts	95% recovery of 22 bases or bp, 98% retention of dNTPs	95% recovery of 22 bases or bp, 98% retention of dNTPs
Exclusion limit, globular proteins	6,000	6,000	40,000	40,000
Sample volume	20–100 µL	10–75 µL	20–100 µL	10–75 µL
Centrifuge type	Swinging bucket	Microcentrifuge	Swinging bucket	Microcentrifuge
Autoclavable	Yes	Yes	Yes	Yes

\*150 mM NaCl, 17.5 mM sodium citrate, pH 7.0.

## Ordering Information

Catalog #	Description		
7326223	Micro Bio-Spin 30 Columns, Tris, 25	7326227	Bio-Spin 6 Columns, Tris, 25
7326224	Micro Bio-Spin 30 Columns, Tris, 100	7326228	Bio-Spin 6 Columns, Tris, 100
7326250	Micro Bio-Spin 30 Columns, Tris, RNase free, 25	7326202	Micro Bio-Spin 30 Columns, SSC, 25
7326251	Micro Bio-Spin 30 Columns, Tris, RNase free, 100	7326203	Micro Bio-Spin 30 Columns, SSC, 100
7326221	Micro Bio-Spin 6 Columns, Tris, 25	7326200	Micro Bio-Spin 6 Columns, SSC, 25
7326222	Micro Bio-Spin 6 Columns, Tris, 100	7326201	Micro Bio-Spin 6 Columns, SSC, 100
7326231	Bio-Spin 30 Columns, Tris, 25	7326006	Bio-Spin 30 Columns, SSC, 25
7326232	Bio-Spin 30 Columns, Tris, 100	7326002	Bio-Spin 6 Columns, SSC, 25

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