US/EG Bulletin 1946

Just What You Need for Your BioLogic HR! Column Compatibility Guide

UNO™ Revolutionary Biochromatography Columns

UNO chromatography columns are the first to contain the revolutionary Continuous Bed matrix. Unlike traditional columns which contain a bed of packed beads or particles, each UNO column contains an advanced polymer matrix that is completely homogeneous. This new matrix overcomes every problem associated with chromatography using beaded supports, while capitalizing on their advantages. The unique technology behind UNO columns leads to a column that ís number one in resolution, binding capacity, speed, and value.

Column Description	Column Type	Column Volume	Recommended Protein Loading	Recommended Flow Rate	Catalog Number
UNO Q-1 Column	Strong anion exchanger	1.3 ml	20 mg	0.5–5.0 ml/min	720-0001
UNO Q-6 Column	Strong anion exchanger	6 ml	90 mg	0.5–8.0 ml/min	720-0003
UNO Q-12 Column	Strong anion exchanger	12 ml	180 mg	0.5–10.0 ml/min	720-0005
UNO Q Polishing Column	Strong anion exchanger	0.16 ml	2 mg	0.1–1.0 ml/min	720-0009
UNO Q-1 R Replacement Column	Strong anion exchanger	1.3 ml			720-0011
UNO Q-6 R Replacement Column	Strong anion exchanger	6 ml			720-0013
UNO Q-12 R Replacement Column	Strong anion exchanger	12 ml			720-0015
UNO S-1 Column	Strong cation exchanger	1.3 ml	20 mg	0.5–6.0 ml/min	720-0021
UNO S-6 Column	Strong cation exchanger	6 ml	90 mg	0.5–8.0 ml/min	720-0023
UNO S-12 Column	Strong cation exchanger	12 ml	180 mg	0.5–10.0 ml/min	720-0025
UNO S Polishing Column	Strong cation exchanger	0.16 ml	2 mg	0.1–1.0 ml/min	720-0029
UNO S-1 R Replacement Column	Strong cation exchanger	1.3 ml			720-0031
UNO S-6 R Replacement Column	Strong cation exchanger	6 ml			720-0033
UNO S-12 R Replacement Column	Strong cation exchanger	12 ml			720-0035

For additional information, request bulletin 2116.

Bio-Scale Prepacked Medium Pressure Columns

Bio-Scale columns allow rapid and reproducible high resolution separations of proteins, peptides, and polynucleotides in analytical to semi-preparative medium pressure applications. Four column sizes provide unrivaled flexibility for the economical and predictable scale-up of separation and purification protocols, without sacrificing resolution due to overloading. Methods developed on the Bio-Scale columns can easily be transferred to production scale using the Macro-Prep® 50 µm supports.

Column Description	Column Type	Bed Volume	Recommended Protein Loading	Packed Support	Particle Size	Flow Rate (ml/min)	Catalog Number
Bio-Scale Q2 Column	Strong anion exchanger	2 ml	20 mg	Macro-Prep Q	10 µm	0.5–3.0	751-0001
Bio-Scale Q5 Column	Strong anion exchanger	5 ml	50 mg	Macro-Prep Q	10 µm	0.5–5.0	751-0003
Bio-Scale Q10 Column	Strong anion exchanger	10 ml	100 mg	Macro-Prep Q	10 µm	0.5–7.0	751-0005
Bio-Scale Q20 Column	Strong anion exchanger	20 ml	200 mg	Macro-Prep Q	10 µm	0.5–10.0	751-0007
Bio-Scale S2 Column	Strong cation exchanger	2 ml	20 mg	Macro-Prep S	10 µm	0.5–3.0	751-0011
Bio-Scale S5 Column	Strong cation exchanger	5 ml	50 mg	Macro-Prep S	10 µm	0.5–5.0	751-0013
Bio-Scale S10 Column	Strong cation exchanger	10 ml	100 mg	Macro-Prep S	10 µm	0.5–7.0	751-0015
Bio-Scale S20 Column	Strong cation exchanger	20 ml	200 mg	Macro-Prep S	10 µm	0.5–10.0	751-0017
Bio-Scale CHT2-I Column	Ceramic Hydroxapatite	2 ml	20 mg	Macro-Prep CHT-I	10 µm	0.5–3.0	751-0021
Bio-Scale CHT5-I Column	Ceramic Hydroxapatite	5 ml	50 mg	Macro-Prep CHT-I	10 µm	0.5–5.0	751-0023
Bio-Scale CHT10-I Column	Ceramic Hydroxapatite	10 ml	100 mg	Macro-Prep CHT-I	10 µm	0.5–7.0	751-0025
Bio-Scale CHT20-I Column	Ceramic Hydroxapatite	20 ml	200 mg	Macro-Prep CHT-I	10 µm	0.5–10.0	751-0027
Bio-Scale DEAE2 Column	Weak anion exchanger	2 ml	20 mg	Macro-Prep DEAE	10 µm	0.5–3.0	751-0031
Bio-Scale DEAE5 Column	Weak anion exchanger	5 ml	50 mg	Macro-Prep DEAE	10 µm	0.5–5.0	751-0033
Bio-Scale DEAE10 Column	Weak anion exchanger	10 m	100 mg	Macro-Prep DEAE	10 µm	0.5–7.0	751-0035
Bio-Scale DEAE20 Column	Weak anion exchanger	20 ml	200 mg	Macro-Prep DEAE	10 µm	0.5–10.0	751-0037

For additional information, request bulletins 1880, 1881, 1929, 1930.

Bio-Scale MT High Resolution Columns

Bio-Scale MT empty columns allow precise sample application, and provide the low dead volume required for high resolution separations. The optimized design permits easy packing, bed height adjustment, sample application, and equilibration.

Column Description	Column Volume (ml)	Pressure Limit (psi)	Catalog Number
Bio-Scale MT2 Column, 7 x 52 mm	1.9–2.3	1,000	751-0081
Bio-Scale MT5 Column, 10 x 64 mm	4.6–5.7	750	751-0083
Bio-Scale MT10 Column, 12 x 88 mm	9.5–11.3	600	751-0085
Bio-Scale MT20 Column, 15 x 113 mm	19.4–21.9	500	751-0087

For additional information, request bulletin 1970.

High Pressure Size Exclusion and Reversed Phase Columns

Size Exclusion Columns

Bio-Sil® and Bio-Silect® silica based columns are recommended for the separation of peptides, proteins, and nucleic acids, for desalting or buffer exchange, and for molecular weight or molecular constant determination. Columns are available in both stainless steel (Bio-Sil columns) and biocompatible PEEK plastic hardware (Bio-Silect columns).

Column Description	Column Dimensions (mm)	Molecular Weight Range (proteins)	Packed Support	Particle Size	Pore Size (Å)	Protein Capacity (mg)	pH Range	Catalog Number
Bio-Silect SEC 125-5 Column	300 x 7.8	5,000–100,000	Silica	5 µm	125	0.01–1.5	2–8	125-0475
Bio-Silect SEC 250-5 Column	300 x 7.8	10,000–300,000	Silica	5 µm	250	0.01–1.5	2–8	125-0476
Bio-Silect SEC 400-5 Column	300 x 7.8	20,000–1,000,000	Silica	5 µm	400	0.01–1.5	2–8	125-0477
Bio-Sil SEC 125-5 Column	300 x 7.8	5,000–100,000	Silica	5 µm	125	0.01–1.5	2–8	125-0060
Bio-Sil SEC 250-5 Column	300 x 7.8	10,000–300,000	Silica	5 µm	250	0.01–1.5	2–8	125-0062
Bio-Sil SEC 400-5 Column	300 x 7.8	20,000–1,000,000	Silica	5 µm	400	0.01–1.5	2–8	125-0064

For additional information, request bulletin 1737.

Reversed Phase Columns

Hi-Pore® reversed phase columns are commonly used for the purification and analysis of small proteins (<50 kd), peptides, oligonucleotides, and amino acids.

Column Description	Column Dimensions (mm)	Functional Group	Particle Size	Pore Size (Å)	Capacity (peptide)	pH Range	Catalog Number
Hi-Pore RP-304 Column	250 x 4.6	C_4	5 µm	300	3 mg	2–7	125-0550
Hi-Pore RP-304 Column	250 x 10	C_4	5 µm	300	30 mg	2–7	155-0110
Hi-Pore RP-304 Column	250 x 21.5	C_4	10–15 µm	300	150 mg	2–7	155-0116
Hi-Pore RP-318 Column	250 x 4.6	C_{18}	5 µm	300	3 mg	2–7	125-0551
Hi-Pore RP-318 Column	250 x 10	C_{18}	5 µm	300	30 mg	2–7	155-0111
Hi-Pore RP-318 Column	250 x 21.5	C_{18}	10–15 µm	300	150 mg	2–7	155-0117
Hi-Pore Guard	30 x 4.6	C_4	5 µm	300	0.5 mg	2–7	125-0134
Hi-Pore Preparative Guard	80 x 10	C_{18}	10–15 µm	300	N/A	2–7	155-0118

Important Note: For columns packed with particles less than 10 µm, reductions in flow rate may be necessary in order to stay within the 1,000 psi limit of the BioLogic HR system.

Econo-Pac® Low Pressure Chromatography Cartridges

Econo-Pac cartridges are the essential starting tools for biomolecule purification. Both 1 ml and 5 ml formats are available to accommodate most sample loads. The convenience and low cost of the Econo-Pac cartridges make it practical to use the cartridges for rapid and easy method scouting and for first step purification of crude samples.

Cartridge Description	Cartridge Type	Bed Volume	Protein Capacity	Packed Support	Particle Size	Flow Rate (ml/min)	Catalog Number
Econo-Pac High Q Cartridge	Strong anion exchanger	1 ml	40 mg BSA	Macro-Prep high Q	50 µm	0.5–1.0	732-0028
Econo-Pac High Q Cartridge	Strong anion exchanger	5 ml	≥ 170 mg BSA	Macro-Prep high Q	50 µm	1.0–3.0	732-0026
Econo-Pac Q Cartridge	Strong anion exchanger	1 ml	15 mg ferritin	Macro-Prep Q	50 µm	0.5–1.0	732-0023
Econo-Pac Q Cartridge	Strong anion exchanger	5 ml	75 mg ferritin	Macro-Prep Q	50 µm	1.0–3.0	732-0021
Econo-Pac High S Cartridge	Strong cation exchanger	1 ml	55 mg HIgG	Macro-Prep high S	50 µm	0.5–1.0	732-0068
Econo-Pac High S Cartridge	Strong cation exchanger	5 ml	≥ 230 mg HIgG	Macro-Prep high S	50 µm	1.0–3.0	732-0066
Econo Pac S Cartridge	Strong cation exchanger	1 ml	35 mg HIgG	Macro-Prep S	50 µm	0.5–7.0	732-0063
Econo Pac S Cartridge	Strong cation exchanger	5 ml	175 mg HIgG	Macro-Prep S	50 µm	7.0–3.0	732-0061
Econo-Pac CM Cartridge	Weak cation exchanger	1 ml	25 mg hemoglobin	Macro-Prep CM	50 µm	0.5–1.0	732-0003
Econo-Pac CM Cartridge	Weak cation exchanger	5 ml	125 mg hemoglobin	Macro-Prep CM	50 µm	1.0–3.0	732-0001
Econo-Pac t-Butyl HIC Cartridge	Hydrophobic interaction	1 ml	≥ 15 mg HSA	Macro-Prep t-Butyl HIC	50 µm	0.5–1.0	732-0058
Econo-Pac t-Butyl HIC Cartridge	Hydrophobic interaction	5 ml	≥ 65 mg HSA	Macro-Prep t-Butyl HIC	50 µm	1.0–3.0	732-0056
Econo-Pac Methyl HIC Cartridge	Hydrophobic interaction	1 ml	25 mg HSA	Macro-Prep methyl HIC	50 µm	0.5–1.0	732-0053
Econo-Pac Methyl HIC Cartridge	Hydrophobic interaction	5 ml	110 mg HSA	Macro-Prep methyl HIC	50 µm	1.0–3.0	732-0051
Econo-Pac CHT-II Cartridge	Ceramic hydroxyapatite	1 ml	3 mg BSA/6 mg lysozyme	Macro-Prep CHT-II	20 µm	0.6–0.8	732-0083
Econo-Pac CHT-II Cartridge	Ceramic hydroxyapatite	5 ml	15 mg BSA/30 mg lysozyme	Macro-Prep CHT-II	20 µm	0.5–1.0	732-0081
Econo-Pac Protein A Cartridge	Affinity Protein A	1 ml	8 mg mouse monoclonal IgG_1/16 mg HIgG	Affi-Prep® Protein A	50 µm	0.1–0.5	732-0093
Econo-Pac Protein A Cartridge	Affinity Protein A	5 ml	34 mg mouse monoclonal IgG_1/70 mg HIgG	Affi-Prep Protein A	50 µm	0.5–1.5	732-0091
Econo-Pac P6 Cartridge	Gel filtration	5 ml	100 µl to 3.0 ml sample volume	Bio-Gel® P6	120 µm	0.5–1.0	732-0011
Econo-Pac Heparin Cartridge	Affinity heparin	5 ml	Varies greatly depending on protein	Affi-Prep heparin	120 µm	1.0–3.0	732-0071
Econo-Pac DEAE Blue Cartridge	Affinity Cibacron blue F3GA and DEAE	5 ml	0.3–1.0 ml serum	DEAE Affi-Gel® blue	120 µm	0.5–2.5	732-0031
Econo-Pac Blue Cartridge	Affinity Cibacron blue F3GA	5 ml	0.3–1.0 ml serum	Affi-Gel blue	120 µm	0.5–2.5	732-0101

Protein Purification Sampler Packs

Protein Purification Sampler Pack V, includes one each high Q, high S, CM, CHT-II, and methyl HIC 5 ml cartridges	732-0096
Protein Purification Sampler Pack I, includes one each high Q, high S, CM, CHT-II, and methyl HIC 1 ml cartridge.	732-0094

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