

MacroSep BIO and BIO-Gold Wide Pore Columns

We have developed a line of wide pore columns to provide the bioanalytical chromatographer with a highly efficient state-of-the-art base deactivated wide pore HPLC column. The ES Industries MacroSep® BIO line is based upon ultra-high purity metal free silica containing highly controlled pores of 300 Å diameter. This column technology is a superior tool for the analysis of proteins, peptides, and other biomolecules.

The latest line of reversed phase column for analysis of biological compounds is MacroSep BIO-Gold.

MacroSep Bio-Gold packings are based on ultra-high purity spherical silica, state-of-the-art high-density bonding and full end capping for the separation or purification of high molecular weight bio compounds such as proteins and peptides. Significant improvements in acidic and alkaline resistance has been achieved with MacroSep BIO-Gold.

MacroSep BIO-Gold columns are manufactured utilizing tight process control of the silica, bonding and column packing processes. The reproducible column packing method control provides exceptional efficiency, symmetry, and reproducibility. MacroSep Bio-Gold is available in 1.9 µm, 3 µm, 5 µm and 10 µm particle sizes for analytical and preparative chromatography. For your convenience all these materials are available in either 400 Å or 1200 Å pore diameters.



Features and Benefits

- Wide pore surface for the analysis of proteins and peptides
- Ultra-high purity metal free silica for improved peak shape, especially for basic compounds
- State-of-the-art base deactivation to ensure superior recoveries of proteins and peptides

Material Characteristics

Brand	Phase	Particle Size (µm)	Pore Size (Å)	End Cap	pH Range	USP Code
MacroSep BIO	AQS (ether linked C8)	3, 5, 10	300	No	2-8	L7
MacroSep BIO	C18	3, 5, 10	300	Yes	2-8	L1
MacroSep BIO	C4	3, 5, 10	300	Yes	2-8	L26
MacroSep BIO	C8	3, 5, 10	300	Yes	2-8	L7
MacroSep BIO	Cyano	3, 5, 10	300	Yes	2-8	L10
MacroSep BIO	HPR	3, 5, 10	300	Yes	2-8	—
MacroSep BIO-Gold	Biphenyl	1.9, 3, 5, 10	400, 1200	Yes	2-9	L11
MacroSep BIO-Gold	C18	1.9, 3, 5, 10	400, 1200	Yes	2-9	L1
MacroSep BIO-Gold	C4	1.9, 3, 5, 10	400, 1200	Yes	2-9	L26
MacroSep BIO-Gold	C8	1.9, 3, 5, 10	400, 1200	Yes	2-9	L7
MacroSep BIO-Gold	Diphenyl	1.9, 3, 5, 10	400, 1200	Yes	2-9	L11
MacroSep BIO-Gold	HPR	1.9, 3, 5, 10	400, 1200	Yes	2-9	—
MacroSep BIO-Gold	Naphthyl	1.9, 3, 5, 10	400, 1200	Yes	2-9	—
MacroSep BIO-Gold	PFP	1.9, 3, 5, 10	400, 1200	Yes	2-9	L43

Preparative columns of these phases are also available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

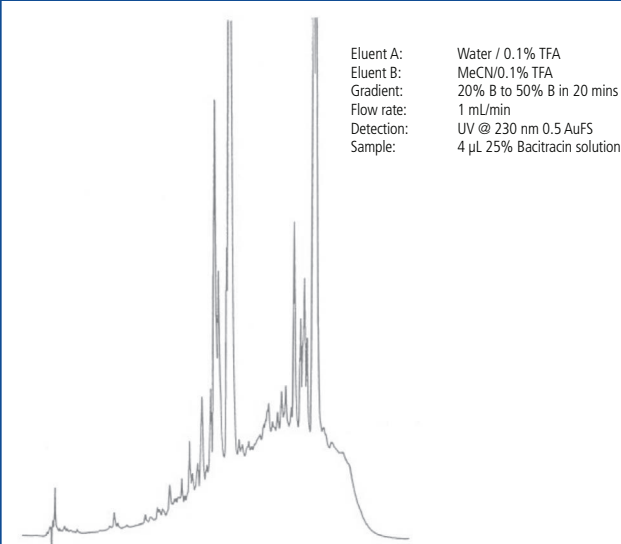
MacroSep BIO AquaSep (AQS)

MacroSep BIO AQS consists of ether linked aliphatic groups bonded to the surface of 300 Å pore diameter ultra-high purity silica. MacroSep AQS is phase collapse resistant with highly aqueous mobile phases. MacroSep AQS can be used to separate glycoproteins, peptides, tryptic digests and hemoglobin variants.

Phase	Length (mm)	ID (mm)	Particle Size (µm)	Pore Size (Å)	Part Number
MacroSep BIO AQS	50	2.1	3	300	112131-MSP-AQS
MacroSep BIO AQS	100	2.1	3	300	122131-MSP-AQS
MacroSep BIO AQS	100	2.1	5	300	122231-MSP-AQS
MacroSep BIO AQS	100	4.6	3	300	125131-MSP-AQS
MacroSep BIO AQS	100	4.6	5	300	125231-MSP-AQS
MacroSep BIO AQS	150	2.1	3	300	132131-MSP-AQS
MacroSep BIO AQS	150	2.1	5	300	132231-MSP-AQS
MacroSep BIO AQS	150	4.6	3	300	135131-MSP-AQS
MacroSep BIO AQS	150	4.6	5	300	135231-MSP-AQS
MacroSep BIO AQS	250	2.1	5	300	112231-MSP-AQS
MacroSep BIO AQS	250	4.6	5	300	155231-MSP-AQS
MacroSep BIO AQS Prep	250	20	5	300	158231-MSP-AQS
MacroSep BIO AQS Analytical Guard Cartridges (Pkg. 5)	10	2.0	5	300	500103-MSP-AQS
MacroSep BIO AQS Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	300	500101-MSP-AQS
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	—	500100

Other column dimensions, particle sizes and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of bacitracin using MacroSep BIO AQS, 250 x 4.6 mm, 5 µm.



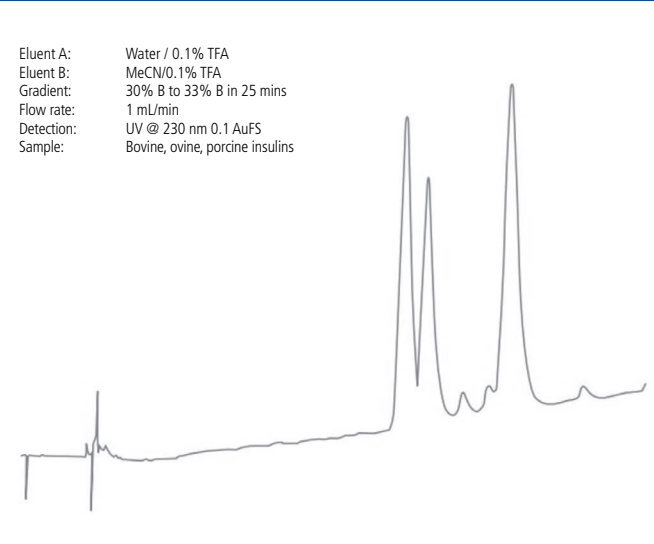
MacroSep BIO C18

MacroSep BIO C18 consists of n-octadecyl aliphatic groups bonded to the surface of 300 Å pore diameter ultra-high purity silica. MacroSep BIO C18 can be used to separate small polypeptides, tryptic digests, synthetic peptides and natural peptides.

Phase	Length (mm)	ID (mm)	Particle Size (µm)	Pore Size (Å)	Part Number
MacroSep BIO C18	50	2.1	3	300	112131-MSP-C18
MacroSep BIO C18	50	2.1	5	300	112231-MSP-C18
MacroSep Bio C18	75	2.1	3	300	192131-MSP-C18
MacroSep BIO C18	100	2.1	3	300	122131-MSP-C18
MacroSep BIO C18	100	2.1	5	300	122231-MSP-C18
MacroSep BIO C18	100	4.6	3	300	125131-MSP-C18
MacroSep BIO C18	100	4.6	5	300	125231-MSP-C18
MacroSep BIO C18	150	2.1	3	300	132131-MSP-C18
MacroSep BIO C18	150	2.1	5	300	132231-MSP-C18
MacroSep BIO C18	150	4.6	3	300	135131-MSP-C18
MacroSep BIO C18	150	4.6	5	300	135231-MSP-C18
MacroSep BIO C18	250	4.6	5	300	155231-MSP-C18
MacroSep Bio C18 Prep	250	20	5	300	158231-MSP-C18
MacroSep Bio C18 Analytical Guard Cartridges (Pkg. 5)	10	2.0	5	300	300103-MSP-C18
MacroSep Bio C18 Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	300	500101-MSP-C18
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	—	500100

Other column dimensions, particle sizes and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of insulins using MacroSep BIO C18, 250 x 4.6 mm, 5 µm.



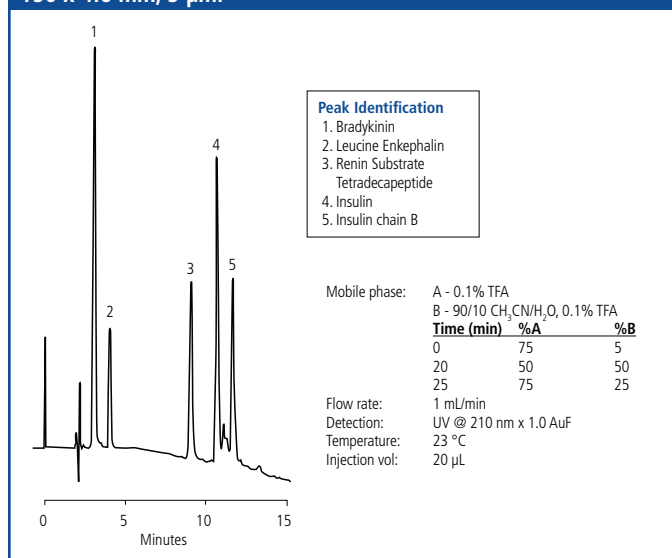
MacroSep BIO C4

MacroSep BIO C4 consists of butyl aliphatic groups bonded to the surface of 300Å pore diameter ultra-high purity silica. MacroSep BIO C4 can be used to separate glycoproteins, hemoglobin variants, human growth hormone and membrane proteins.

Phase	Length (mm)	ID (mm)	Particle Size (μm)	Pore Size (Å)	Part Number
MacroSep Bio C4	50	2.1	3	300	112131-MSP-C4
MacroSep Bio C4	50	2.1	5	300	112231-MSP-C4
MacroSep Bio C4	50	4.6	5	300	115231-MSP-C4
MacroSep Bio C4	100	2.1	3	300	122131-MSP-C4
MacroSep Bio C4	100	2.1	5	300	122231-MSP-C4
MacroSep Bio C4	100	4.6	3	300	125131-MSP-C4
MacroSep Bio C4	100	4.6	5	300	125231-MSP-C4
MacroSep Bio C4	150	2.1	3	300	132131-MSP-C4
MacroSep Bio C4	150	2.1	5	300	132231-MSP-C4
MacroSep Bio C4	150	4.6	3	300	135131-MSP-C4
MacroSep Bio C4	150	4.6	5	300	135231-MSP-C4
MacroSep Bio C4	250	2.1	5	300	152231-MSP-C4
MacroSep Bio C4	250	4.6	5	300	155231-MSP-C4
MacroSep Bio C4 Prep	250	20	5	300	158231-MSP-C4
MacroSep Bio C4 Analytical Guard Cartridges (Pkg. 5)	10	2.0	5	300	500103-MSP-C4
MacroSep Bio C4 Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	300	500101-MSP-C4
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	—	500100

Other column dimensions, particle sizes and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of peptides using MacroSep BIO C4, 150 x 4.6 mm, 5 μm.



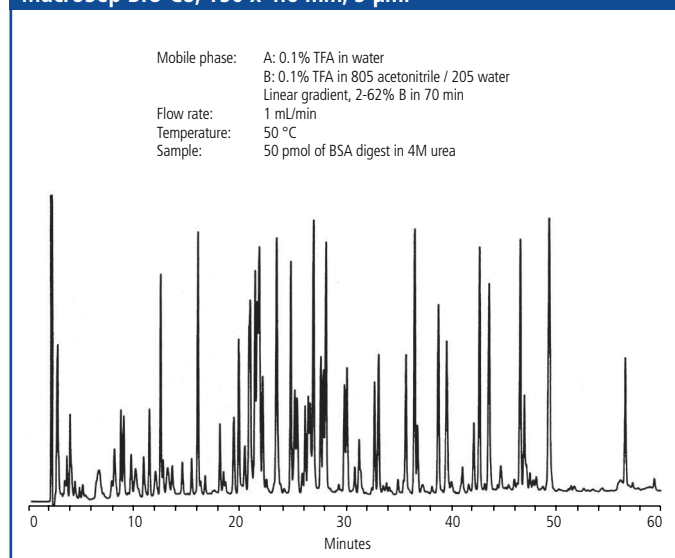
MacroSep BIO C8

MacroSep BIO C8 consists of n-octyl aliphatic groups bonded to the surface of 300Å pore diameter ultra-high purity silica. MacroSep BIO C8 can be used to separate peptides and enzymatic digest fragments.

Phase	Length (mm)	ID (mm)	Particle Size (μm)	Pore Size (Å)	Part Number
MacroSep Bio C8	250	4.6	5	300	155231-MSP-C8
MacroSep Bio C8	50	2.1	3	300	112131-MSP-C8
MacroSep Bio C8	50	2.1	5	300	112231-MSP-C8
MacroSep Bio C8	100	2.1	3	300	122131-MSP-C8
MacroSep Bio C8	100	2.1	5	300	122231-MSP-C8
MacroSep Bio C8	100	4.6	3	300	125131-MSP-C8
MacroSep Bio C8	100	4.6	5	300	125231-MSP-C8
MacroSep Bio C8	150	2.1	3	300	132131-MSP-C8
MacroSep Bio C8	150	2.1	5	300	132231-MSP-C8
MacroSep Bio C8	150	4.6	3	300	135131-MSP-C8
MacroSep Bio C8	150	4.6	5	300	135231-MSP-C8
MacroSep Bio C8	250	4.6	10	300	155331-MSP-C8
MacroSep Bio C8 Prep	250	20	5	300	158231-MSP-C8
MacroSep Bio C8 Analytical Guard Cartridges (Pkg. 5)	10	2.0	5	300	500103-MSP-C8
MacroSep Bio C8 Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	300	500101-MSP-C8
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	—	500100

Other column dimensions and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

HPLC analysis of tryptic digest fragments using MacroSep BIO C8, 150 x 4.6 mm, 5 μm.



MacroSep BIO Cyano

MacroSep BIO Cyano is based upon ultra-high purity metal free silica containing highly controlled pores of 300Å pore diameter. This column technology is a superior tool for the analysis of proteins, peptides and other biomolecules.

Phase	Length (mm)	ID (mm)	Particle Size (µm)	Pore Size (Å)	Part Number
MacroSep Bio Cyano	100	2.1	3	300	122131-MSP-CN

Other column dimensions, particle sizes, and guard cartridges are available. Please enquire for more details at LCA.TechSupport@perkinelmer.com

MacroSep BIO High Protein Recovery (HPR)

MacroSep BIO HPR consists of specially produced perfluorinated aliphatic groups bonded to the surface of 300Å pore diameter ultra-high purity silica. MacroSep HPR is specially engineered for analysis of hydrophobic proteins. It can be used to separate large hydrophobic proteins, lipid peptides, polypeptide with aliphatic side chains and membrane-spanning peptides.

Phase	Length (mm)	ID (mm)	Particle Size (µm)	Pore Size (Å)	Part Number
MacroSep BIO HPR	50	2.1	3	300	112131-MSP-HPR
MacroSep BIO HPR	50	2.1	5	300	112231-MSP-HPR
MacroSep BIO HPR	100	2.1	3	300	122131-MSP-HPR
MacroSep BIO HPR	100	2.1	5	300	122231-MSP-HPR
MacroSep BIO HPR	100	4.6	3	300	125131-MSP-HPR
MacroSep BIO HPR	100	4.6	5	300	125231-MSP-HPR
MacroSep BIO HPR	150	2.1	3	300	132131-MSP-HPR
MacroSep BIO HPR	150	2.1	5	300	132231-MSP-HPR
MacroSep BIO HPR	150	4.6	3	300	135131-MSP-HPR
MacroSep BIO HPR	150	4.6	5	300	135231-MSP-HPR
MacroSep BIO HPR	250	4.6	5	300	155231-MSP-HPR
MacroSep Bio HPR Prep	250	20	5	300	158231-MSP-HPR
MacroSep Bio HPR Analytical Guard Cartridges (Pkg. 5)	10	3.0	5	300	500101-MSP-HPR
Analytical Guard Cartridge Holder with integrated coupler	—	—	—	—	500100

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