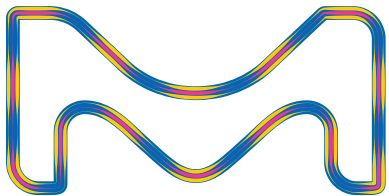


# Biochromatography Portfolio Guide

Bulk Resin, Membranes and Prepacked Columns



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Merck operates as MilliporeSigma  
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**Millipore®**

Preparation, Separation,  
Filtration & Monitoring Products

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Devices	Catalog No.	Bulk Media	Catalog No.
Strong anion exchangers (AEX)	<b>Eshmuno® Q resin</b> Base matrix: Hydrophilic Polyvinyl Ether	TMAE Trimethylammoniumethyl	Purification of acidic and neutral proteins and peptides from different sources, (including plasma proteins). DNA removal. Designed specifically for highly productive downstream bioprocessing. Separation at high flow rates.	<ul style="list-style-type: none"> <li>• Mean particle size: <math>d_{50}</math> 85 <math>\mu\text{m}</math></li> <li>• Protein binding capacity about 150 mg BSA/mL of gel</li> <li>• pH stability range (working): 2–12</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to <math>\sim</math>1000 cm/h &lt; 2.5 bar net pressure</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)		1250650001 1250740001  1251330001 1251410001	10 mL 100 mL 500 mL 5 L	1200790010 1200790100 1200790500 1200795000
	<b>Fractogel® EMD TMAE (M) resin</b> Base matrix: Methacrylate		Purification of acidic and neutral proteins and peptides from different sources, (including plasma proteins). DNA and virus removal, plasmid isolation, vaccine purification.	<ul style="list-style-type: none"> <li>• Particle size: 40–90 <math>\mu\text{m}</math></li> <li>• Protein binding capacity about 100 mg BSA/mL of gel</li> <li>• pH stability range (working): 2–12</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to <math>\sim</math>240 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)		1250540001 1250690001  1250840001 1251360001	10 mL 100 mL 500 mL 5 L	1168810010 1168810100 1168810500 1168815000
	<b>Fractogel® EMD TMAE (S) resin</b> Base matrix: Methacrylate			<ul style="list-style-type: none"> <li>• Particle size: 20–40 <math>\mu\text{m}</math></li> <li>• Protein binding capacity about 100 mg BSA/mL of gel</li> <li>• pH stability range (working): 2–12</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to <math>\sim</math>80 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)		1250570001 1250710001  1250860001 1251380001	10 mL 100 mL 500 mL 5 L	1168870010 1168870100 1168870500 1168875000
	<b>Fractogel® EMD TMAE Hicap (M) resin</b> Base matrix: Methacrylate			<ul style="list-style-type: none"> <li>• Particle size: 40–90 <math>\mu\text{m}</math></li> <li>• Protein binding capacity about 180 mg BSA/mL of gel</li> <li>• pH stability range (working): 2–12</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to <math>\sim</math>180 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)		1250550001 1250700001  1250850001 1251370001	10 mL 100 mL 500 mL 5 L	1103160010 1103160100 1103160500 1103165000
	<b>Fractogel® EMD TMAE Medcap (M) resin</b> Base matrix: Methacrylate			<ul style="list-style-type: none"> <li>• Particle size: 40–90 <math>\mu\text{m}</math></li> <li>• Protein binding capacity about 150 mg BSA/mL of gel</li> <li>• pH stability range (working): 2–12</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to <math>\sim</math>180 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)		1250560001 1250780001  1251440001 1251500001	10 mL 100 mL 500 mL 5 L	1168850010 1168850100 1168850500 1168855000
	<b>Natrix® Q membrane adsorber</b> Base matrix: Porous polyacrylamide	High density quaternary amine chemistry (amidopropyl trimethylammonium chloride)	Single-use membrane adsorber for host cell proteins, virus, DNA and endotoxin removal.	<ul style="list-style-type: none"> <li>• Nominal pore size: 0.4 <math>\mu\text{m}</math></li> <li>• Protein binding capacity: &gt; 200 mg BSA/mL of membrane</li> <li>• Flow rate: 5–25 membrane volume per minute (2.4–12 seconds residence time)</li> </ul>		<b>Natrix® Q Recon Mini (0.2 mL)</b> <b>Natrix® Q Pilot (15 mL)</b> <b>Natrix® Q Process 150 (115 mL)</b> <b>Natrix® Q Process 600 (460 mL)</b>		NXF-01 NXF-10 NXF-20 NXF-50	

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Catalog No.	Bulk Media	Catalog No.
Weak anion exchangers (AEX)	<b>Fractogel® EMD DEAE (M) resin</b> Base matrix: Methacrylate	DEAE Diethylaminoethyl	Purification of acidic and neutral proteins and peptides from different sources, (including plasma proteins), DNA removal, vaccine purification, blood fractionation.  Due to the titration behavior, the ion exchange media can be used from pH 2 up to pH 9.5.	<ul style="list-style-type: none"> <li>Particle size: 40–90 µm</li> <li>Protein binding capacity about 100 mg BSA/mL of gel</li> <li>pH stability range (working): 2–13</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~170 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1250580001 1250790001	10 mL 100 mL 500 mL 5 L	1168830010 1168830100 1168830500 1168835000
	<b>Fractogel® EMD DMAE (M) resin</b> Base matrix: Methacrylate	DMAE Dimethylaminoethyl	Purification of acidic and neutral proteins (e.g. plasma proteins), peptides, and nucleic acids (e.g. plasmid DNA), blood fractionation.  Due to the titration behavior, the ion exchange media can be used from pH 2 up to pH 8.5.	<ul style="list-style-type: none"> <li>Particle size: 40–90 µm</li> <li>Protein binding capacity about 100 mg BSA/mL of gel</li> <li>pH stability range (working): 2–13</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~170 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1250590001 1250800001	10 mL 100 mL 500 mL 5 L	1168840010 1168840100 1168840500 1168845000
Strong cation exchangers (CEX)	<b>Eshmuno® S resin</b> Base matrix: Hydrophilic Polyvinyl Ether	SO <sub>3</sub> Sulfoisobutyl	Purification of basic and neutral proteins (e.g. antibodies) and peptides, designed specifically for highly productive downstream bioprocessing.  High flowrate applications.	<ul style="list-style-type: none"> <li>Mean particle size d50: 85 µm</li> <li>Protein binding capacity about 165 mg lysozyme/mL of gel</li> <li>pH stability range (working): 2–12</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~1000 cm/h (&lt; 2.5 bar net pressure)</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1250640001 1250730001	10 mL 100 mL 500 mL 5 L	1200780010 1200780100 1200780500 1200785000
	<b>Eshmuno® CPX resin</b> Base matrix: Hydrophilic Polyvinyl Ether		Intermediate or pol-ishing purification of monoclonal antibodies.  High aggregate removal efficiency.  Excellent IgG dynamic binding capacity.  Wide pH and conductivity operating window.	<ul style="list-style-type: none"> <li>Mean particle size d50: 50 µm</li> <li>Protein binding capacity about 120 mg lysozyme/mL of gel</li> <li>pH stability (working): 2–12</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~500 cm/h (&lt;3.0 bar net pressure)</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1251560001 1251570001	10 mL 100 mL 500 mL 5 L	1200830010 1200830100 1200830500 1200835000
	<b>Eshmuno® CP-FT resin</b> Base matrix: Hydrophilic Polyvinyl Ether		Intermediate or polishing purification of monoclonal antibodies in frontal chromatography mode, for the removal of aggregates	<ul style="list-style-type: none"> <li>Mean particle size d50: 50 µm</li> <li>Protein binding capacity about 70 mg lysozyme/mL of gel</li> <li>pH stability (working): 2–12</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~400 cm/h (&lt; 3.0 bar net pressure)</li> </ul>	<b>MiniChrom Columns:</b> 0.2 mL (5 x 10 mm) 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1251700001 1251680001 1251690001	10 mL 100 mL 500 mL 5 L	1200930010 1200930100 1200930500 1200935000

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Catalog No.	Bulk Media	Catalog No.
Strong cation exchangers (CEX)	<b>Eshmuno® CPS resin</b> Base Matrix: Hydrophilic Polyvinyl Ether	SO <sub>3</sub> <sup>-</sup> Sulfoisobutyl	Intermediate or polishing purification of recombinant proteins providing high capacity and salt tolerance.	<ul style="list-style-type: none"> <li>• Mean Particle Size d50: 50 µm</li> <li>• Protein binding capacity about 160 mg lysozyme/mL of gel</li> <li>• pH stability (working): 2-12</li> <li>• pH stability range (CIP): 0-14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to ~500cm/h (&lt;3.0 bar net pressure)</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1251640001 1251650001	10 mL 100 mL 500 mL 5 L	1200840010 1200840100 1200840500 1200845000
	<b>Fractogel® EMD SO<sub>3</sub><sup>-</sup> (M) resin</b> Base matrix: Methacrylate		Purification of basic and neutral proteins (e.g. antibodies) and peptides.	<ul style="list-style-type: none"> <li>• Particle size: 40–90 µm</li> <li>• Protein binding capacity about 130 mg lysozyme/mL of gel</li> <li>• pH stability range (working): 1–13</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to ~200 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1250610001 1250720001	10 mL 100 mL 500 mL 5 L	1168820010 1168820100 1168820500 1168825000
	<b>Fractogel® EMD SO<sub>3</sub><sup>-</sup> (S) resin</b> Base matrix: Methacrylate		Purification of basic and neutral proteins (e.g. antibodies) and peptides.	<ul style="list-style-type: none"> <li>• Particle size: 20–40 µm</li> <li>• Protein binding capacity about 150 mg lysozyme/mL of gel</li> <li>• pH stability range (working): 1–13</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to ~80 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1251810001 1251820001	10 mL 100 mL 500 mL 5 L	1168900010 1168900100 1168900500 1168905000
	<b>Fractogel® EMD SE Hicap (M) resin</b> Base matrix: Methacrylate	SO <sub>3</sub> <sup>-</sup> Sulfoethyl	Purification of basic and neutral proteins (e.g. antibodies) and peptides.	<ul style="list-style-type: none"> <li>• Particle size: 40–90 µm</li> <li>• Protein binding capacity about 160 mg lysozyme/mL of gel</li> <li>• pH stability range (working): 1–13</li> <li>• pH stability range (CIP): 0–14</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate up to ~220 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1250600001 1250810001	10 mL 100 mL 500 mL 5 L	1148940010 1148940100 1148940500 1148945000

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Catalog No.	Bulk Media	Catalog No.
Weak cation exchangers (CEX)	Fractogel® EMD COO- (M) resin Base matrix: Methacrylate	COO- Carboxyethyl	Purification of basic and neutral proteins (e.g. antibodies) and peptides. Due to the titration behavior, the ion exchange media can be used from pH 6 up to pH 12. Efficient for difficult aggregate removal.	<ul style="list-style-type: none"> <li>Particle size: 40–90 µm</li> <li>Protein binding capacity about 100 mg lysozyme/mL of gel</li> <li>pH stability range (working): 1–12</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~300 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)	1250620001 1250820001  1251480001 1251540001	10 mL 100 mL 500 mL 5 L	1168860010 1168860100 1168860500 1168865000
Mixed-mode cation exchange media (CEX)	Eshmuno® CMX Base matrix: Hydrophilic Polyvinyl Ether	COO-(weak cation exchange) and alkyl-functional groups	Weak cation exchange properties with hydrophobic interaction, providing high selectivity for mAbs, fusion protein and antibody drug conjugates (ADCs) purification as well as separation of low molecular weight impurities and host cell proteins (HCPs). High dynamic binding capacity and high recovery rates.	<ul style="list-style-type: none"> <li>Mean particle size <math>d_{50}</math>: 50 µm</li> <li>Protein binding capacity 60 mg pIgG/mL packed resin</li> <li>pH stability range (working): 2-12</li> <li>pH stability range (CIP): 0-14</li> <li>Pressure limit: 8 bar</li> <li>Linear flow rate up to 300cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)	1251850001 1251860001  1251870001 1251880001	10 mL 100 mL 500 mL 5 L	1206500010 1206500100 1206500500 1206505000
CEX High salt-tolerant (mixed mode chromatography)	Eshmuno® HXC resin Base matrix: Hydrophilic Polyvinyl Ether	Sulfo + carboxy + phenyl	Direct capture and intermediate polishing from clarified feed stocks. High dynamic binding capacity at high conductivity applications.	<ul style="list-style-type: none"> <li>Mean particle size <math>d_{50}</math>: 85 µm</li> <li>Protein binding capacity about 50 mg pIgG/ mL of gel</li> <li>pH stability range (working): 2–12</li> <li>pH stability range (CIP): 2–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~1000 cm/h (&lt; 2.5 bar net pressure)</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)	1250660001 1250750001  1251340001 1251420001	10 mL 100 mL 500 mL 5 L	1200870010 1200870100 1200870500 1200875000
Immobilized metal affinity chromatography (IMAC)	Fractogel® EMD Chelate (M) resin Base matrix: Methacrylate	Iminodiacetic acid	Various proteins, e.g. histidine-tailed recombinant proteins or proteins with exposed histidine residues. The metal ion can coordinate to non-bonding electron pairs of the amino acid side chains.	<ul style="list-style-type: none"> <li>Particle size: 40–90 µm</li> <li>Protein binding capacity about 60 mg lysozyme/mL of gel</li> <li>Metal ion binding capacity about 75 µmol copper/mL of gel</li> <li>pH stability range (working): 1–12</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to ~240 cm/h</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)  <b>RoboColumns®:</b> 0.2 mL (5 x 10 mm) 0.6 mL (5 x 30 mm)	1250630001 1250830001  1251490001 1251550001	10 mL 100 mL 250 mL 500 mL 5 L	1103380010 1103380100 1103380250 1103380500 1103385000

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Catalog No.	Bulk Media	Catalog No.	
Protein A affinity chromatography	<b>Eshmuno® A resin</b> Base matrix: Hydrophilic Polyvinyl Ether	Merck proprietary ligand recombinantly expressed in <i>E. coli</i>	High capacity caustic stable Protein A affinity chromatography resin for the purification of Fc-containing proteins, including but not limited to monoclonal antibodies	<ul style="list-style-type: none"> <li>• Mean particle size <math>d_{50}</math>: 50 <math>\mu\text{m}</math></li> <li>• Protein binding capacity 40–55mg/mL at 3–6 min RT and 5% breakthrough for mAbs</li> <li>• pH stability range 1.5–13.5</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate &gt; 500 cm/hr</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1251600001 1251610001	10 mL 100 mL 500 mL 5 L 10 L	1200890010 1200890100 1200890500 1200895000 1200899010	
	<b>ProSep® Ultra Plus resin</b> Base matrix: Controlled Pore Glass (CPG)	rSPA = recombinant structurally conserved natural protein A ( <i>E. coli</i> )	High capacity Protein A affinity chromatography resin for the purification of Fabs and Fc-containing proteins, including but not limited to monoclonal antibodies.	<ul style="list-style-type: none"> <li>• Particle size: 37–74 <math>\mu\text{m}</math></li> <li>• Dynamic Binding Capacity: &gt; 50 mg/mL</li> <li>• pH stability range: 1–8.5</li> <li>• Pressure limit 10 bar</li> <li>• Linear flow rate up to 500 cm/h at 2 bar at 20 cm bed height</li> </ul>	<b>MiniChrom Columns:</b> 1 mL (8 x 20 mm) 5 mL (8 x 100 mm)	1250670001 1250760001	10 mL 100 mL 1 L 5 L 10 L 25L	175118824 175118827 175118830 175118833 175118835 175118834	
	<b>ProSep®-vA Ultra resin</b> Base matrix: Controlled Pore Glass (CPG)	nPA = native animal free protein A from <i>Staphylococcus aureus</i>	Affinity purification of mAbs.	<ul style="list-style-type: none"> <li>• Particle size: 75–125 <math>\mu\text{m}</math></li> <li>• Dynamic Binding Capacity: ~35 mg/mL</li> <li>• pH stability range: 1–8.5</li> <li>• Pressure limit 10 bar</li> <li>• Linear flow rate up to 1000 cm/h at 2 bar at 20 cm bed height</li> </ul>				10 mL 100 mL 1 L 5 L 10 L 25L	115115824 115115827 115115830 115115833 115115835 115115834
	<b>ProSep®-vA High Capacity resin</b> Base matrix: Controlled Pore Glass (CPG)	nPA = native animal free protein A from <i>Staphylococcus aureus</i>	Affinity purification of mAbs.	<ul style="list-style-type: none"> <li>• Particle size: 75–125 <math>\mu\text{m}</math></li> <li>• Dynamic Binding Capacity: &gt; 20 mg/mL at 10% breakthrough and 3–6 minute residence time</li> <li>• H stability range: 1–8.5</li> <li>• Pressure limit 10 bar</li> <li>• Linear flow rate up to 1000 cm/h at 2 bar at 20 cm bed height</li> </ul>				10 mL 100 mL 1 L 5 L 10 L	113115824 113115827 113115830 113115833 113115835
Affinity Chromatography	<b>Eshmuno® P anti-A and Eshmuno® P anti-B resin</b> Base matrix: Hydrophilic Polyvinyl Ether	Trisaccharide blood group antigens (A or B)	Removal of anti-A/B antibodies from immunoglobulin (Ig)	<ul style="list-style-type: none"> <li>• Particle size <math>d_{50}</math>: 50 <math>\mu\text{m}</math></li> <li>• pH stability range: 1.5–13.5</li> <li>• Pressure limit 8 bar</li> <li>• Linear flow rate &gt; 500 cm/hr</li> <li>• &gt; 75% of anti-A and anti-B removal</li> </ul>			10 mL 100 mL 500 mL 5 L  10 mL 100 mL 500 mL 5 L	<b>anti-A</b> 1200940010 1200940100 1200940500 1200945000 <b>anti-B</b> 1200950010 1200950100 1200950500 1200955000	

\* Cat. no. needs to be complemented by the 4-digit volume indication: 10 g: 0010; 100 g: 0100; 1000 g: 1000; 5000 g: 5000

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Catalog No.	Bulk Media	Catalog No.
Size exclusion chromatography (SEC)	Fractogel® EMD BioSEC (S) resin Base matrix: Methacrylate	Modified pore structure	Separation of proteins in the range between 5 kDa and 1000 kDa.	<ul style="list-style-type: none"> <li>Particle size: 20–40 µm</li> <li>pH stability range (working): 1–12</li> <li>pH stability range (CIP): 0–14</li> <li>Pressure limit 8 bar</li> <li>Linear flow rate up to 100 cm/h</li> </ul>			150 mL 250 mL 5 L	1103170150 1103170250 1103175000
	Normal-phase and Reversed-phase Chromatography	PharmPrep™ P100 sorbent Base matrix: Spherical silica gel particles	Peptides (insulin), APIs, antibiotics, intermediates.	<ul style="list-style-type: none"> <li>Spherical high-performance sorbent</li> <li>Mean pore size: 10 nm</li> <li>Pressure PharmPrep™ P Si 100 ≤ 25 bar (10 µm), ≤ 10 bar (20 µm)</li> <li>Pressure PharmPrep™ P100 RP-18e ≤ 40 bar (10 µm), ≤ 25 bar (20 µm)</li> <li>Pressure PharmPrep™ P100 RP-8e ≤ 40bar (10 µm)</li> </ul>	<b>Ready to use columns for method development Scout columns 250 x 4.6 mm</b>  PharmPrep™ P100 RP-18e, 10 µm PharmPrep™ P100 RP-18e, 20 µm PharmPrep™ P100 RP-8e, 10 µm	1205710001 1205720001 1205940001	10, 100, 1000 g x PharmPrep™ P Si 100, 10 µm PharmPrep™ P Si 100, 20 µm PharmPrep™ P100 RP-18e, 10 µm PharmPrep™ P100 RP-18e, 20 µm PharmPrep™ P100 RP-8e, 10 µm	1.19681 1.19682 1.19995 1.19996 1.19132
					<b>Validation kit (3x Scout columns 250 x 4.6mm)</b> PharmPrep™ P100 RP-8e, 10 µm  <b>Ready to use columns for preparative chromatography HIBAR® prepacked columns 250 x 25 mm</b> PharmPrep™ P100 RP-18e, 10 µm PharmPrep™ P100 RP-18e, 20 µm PharmPrep™ P100 RP-8e, 10 µm  PharmPrep™ P Si100 10 µm and 20 µm are also available in HIBAR® prepacked columns 250 x 25 mm on demand (customized).	1205730001 1205740001 1205880001	<b>All PharmPrep™ products are available in HIBAR® prepacked columns 250 x 50 mm on demand, customized.</b> Validation kit (3 x 100 g) PharmPrep™ P100 RP-8e, 10 µm Validation kit PharmPrep™ P100 RP-18e, 10 µm Validation kit PharmPrep™ P100 RP-18e, 20 µm	1191320003 1199950003 1199960003
	LiChrorep® sorbent Base matrix: Irregular-shaped silica gel particles	Si 60, RP-8, RP-18	APIs, antibiotics, steroids, intermediates, natural products.	<ul style="list-style-type: none"> <li>Irregular-shaped silica gel particles</li> <li>15–25 µm, 25–40 µm, 40–63 µm</li> <li>Mean pore size of RP-18, RP-8: 10 nm</li> <li>Mean pore size of Si 60: 6 nm</li> </ul>	<b>Ready to use columns for preparative chromatography</b> HIBAR® prepacked columns 250 x 25 mm, 250 x 50 mm	On demand	LiChrorep® sorbent Si 60, 15–25 µm LiChrorep® sorbent Si 60, 25–40 µm LiChrorep® sorbent Si 60, 40–63 µm LiChrorep® sorbent RP-8, 40–63 µm LiChrorep® sorbent RP-18, 15–25 µm LiChrorep® sorbent RP-18, 25–40 µm LiChrorep® sorbent RP-18, 40–63 µm	1.09336 100 g, 500 g, 5 kg, 25 kg 1.09390 250 g, 1 kg, 25 kg 1.13905 250 g 1.09362 250 g, 1 kg 1.13901 1 kg, 25 kg 1.09303 1 kg 1.13900 250 g, 1 kg 1139730250 100 g, 500 g, 1 kg

\* Cat. no. needs to be complemented by the 4-digit volume indication: 10 g: 0010; 100 g: 0100; 1000 g: 1000; 5000 g: 5000

Media Type	Product Description	Ligand	Application	Product Characteristics	Prepacked Columns	Catalog No.	Bulk Media	Catalog No.
Normal phase/Reversed phase chromatography and Silica gel	<b>Silica gel</b> Base matrix: Irregular-shaped silica gel particles	Si 60, Silanized	Natural ingredients, vitamins, fine chemicals.	<ul style="list-style-type: none"> <li>For normal-phase chromatography, filtration, flash chromatography</li> <li>Particle size: 15–40 µm 35–70 µm 40–63 µm 63–200 µm 200–500 µm</li> <li>Mean pore size: 6 nm</li> </ul>	<b>Ready to use columns for preparative chromatography</b> HIBAR® prepacked columns 250 × 25 mm, 250 × 50 mm	On demand	<b>500 g to 400 kg x</b> Silica gel Si 60, 15–40 µm Silica gel Si 60, 40–63 µm Silica gel Si 60, 63–100 µm Silica gel Si 60, 63–200 µm Silica gel Si 60 silanized, 63–200 µm Silica gel Si 60 extra pure, 63–200 µm Silica gel Si 60, 200–500 µm	1.15111 1.09385 1.15101 1.07734 1.07719 1.07754 1.07733
	<b>Aluminium Oxide</b> Base matrix: Irregular-shaped aluminium oxide particles	≥60 active basic, ≥90 active acidic, 90 active neutral, 90 active basic, 90 standardized, 150 basic	Intermediates, antibiotics, removal of polar organic compounds, fine chemicals.	<ul style="list-style-type: none"> <li>For normal-phase chromatography</li> <li>High pH stability in the alkaline range. Anion and cation properties</li> <li>Mean pore size: 6 nm/9 nm/15 nm</li> </ul> <b>Activity grades according to Brockmann</b> <ul style="list-style-type: none"> <li>Activity grade I: Aluminium oxide 60, active basic Aluminium oxide 90, active basic Aluminium oxide 90 active neutral Aluminium oxide 90, active acidic</li> <li>Activity grade I–II: Aluminium oxide 150, basic</li> <li>Activity grade II–III: Aluminium oxide 90, standardized</li> </ul>				Aluminium Oxide 60, active basic, 63–200 µm Aluminium Oxide 90, active acidic, 63–200 µm Aluminium Oxide 90, active neutral, 63–200 µm Aluminium Oxide 90, active basic, 63–200 µm Aluminium Oxide 90, standardized, 63–200 µm Aluminium Oxide 150, basic, 63–200 µm

\* Cat. no. needs to be complemented by the 4-digit volume indication: 10 g: 0010; 100 g: 0100; 1000 g: 1000; 5000 g: 5000

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