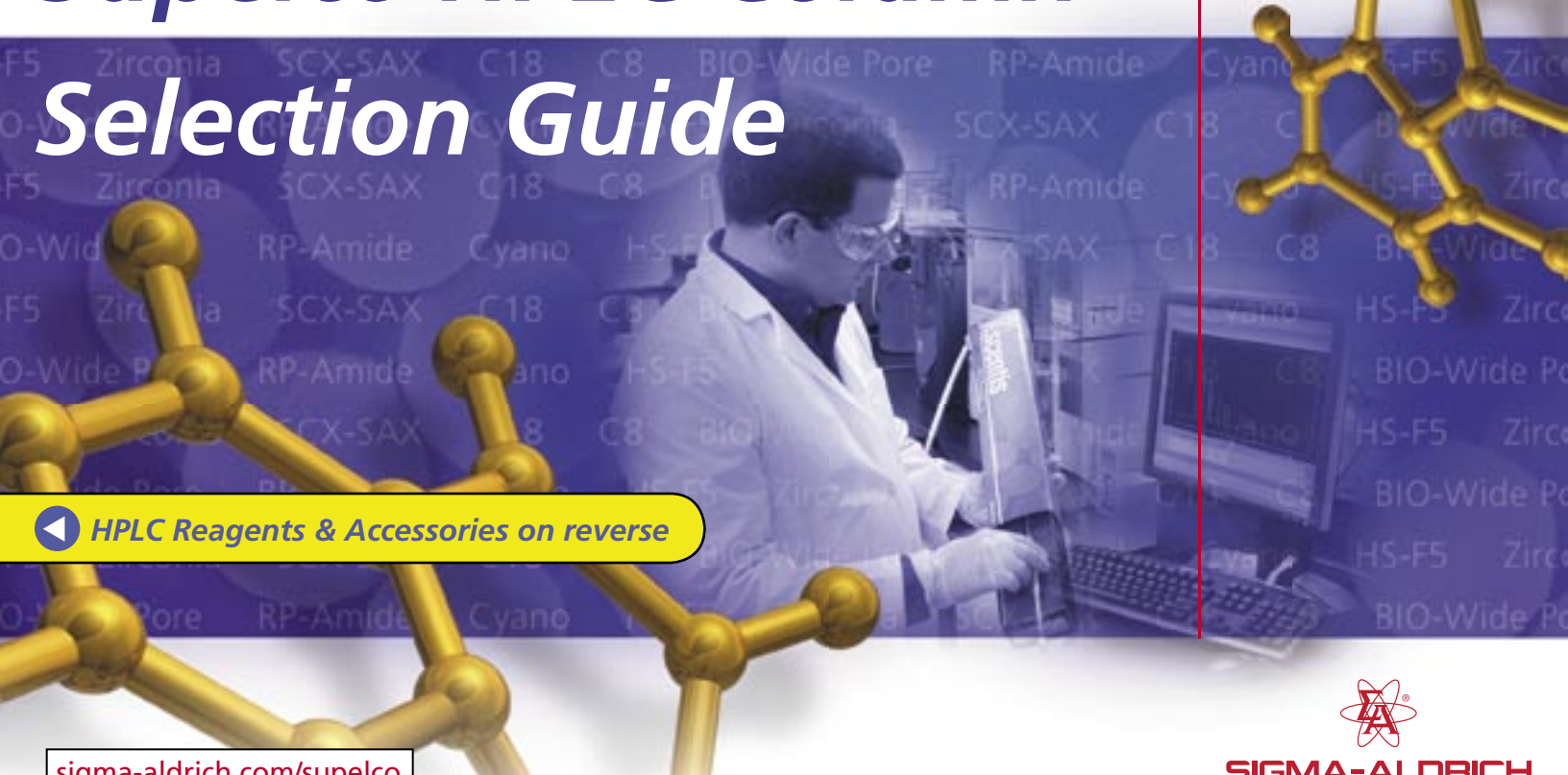


Supelco HPLC Column Selection Guide



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The Supelco HPLC Column Selection Guide is designed to assist you in choosing the right column for your application based on the features, benefits and specifications of some of our most popular phases.

This guide provides one of the most diverse sets of HPLC phases available from any company. We not only emphasize our newest family of columns, Ascentis™, but also cover our 25-year history of excellence in HPLC columns. For instance, SUPELCOSIL® LC-18-DB was the industry's first base-deactivated column.

The Discovery® line introduced the versatile Discovery HS F5 and the Zr series for high temperature and extreme pH conditions as well as the BIO wide series for proteins and peptides.

Our newest HPLC family, Ascentis, is the fourth generation of columns available from the team at Supelco. The Ascentis column family is designed to deliver excellence in retentivity, selectivity and low bleed for LC-MS applications for all of your small mol-

Phase	Primary Feature	Benefit	Applications	Specifications
Ascentis C18	High Retentivity	<p>Strong retention provides good resolution of non-polar and polar compounds.</p> <p>Increased retentivity allows for higher organic solvent in mobile phase which contributes to greater sensitivity in LC-MS application.</p> <p>High carbon loading and proprietary endcapping reduces silanol activity and improves peak symmetry.</p>	<p>General reversed phase</p> <p>Hydrophobic and polar compounds</p> <p>Small molecule preparative</p> <p>MS</p>	<p>USP Code: L1</p> <p>Particle Size: 3.5, 10 µm</p> <p>Pore Size: 100 Å</p> <p>Surface Area: 450 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: 25%</p>
Discovery C18	Intermediate Pore Size	<p>Intermediate pore size provides the perfect platform for analyzing a wide range of molecular weights (small molecules to biomolecules).</p>	<p>Intermediate pore size for scouting wide range in molecular weights</p> <p>General use C18</p>	<p>USP Code: L1</p> <p>Particle Size: 5 µm</p> <p>Pore Size: 180 Å</p> <p>Surface Area: 200 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: 12%</p>
SUPELCOSIL LC-18-DB	First Deactivated LC Column	<p>Industry's first base-deactivated column has long history of performance and reproducibility.</p>	<p>Basic compounds</p> <p>Less retentive than Ascentis C18</p> <p>General use C18</p>	<p>USP Code: L1</p> <p>Particle Size: 3.5 µm</p> <p>Pore Size: 120 Å</p> <p>Surface Area: 300 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: 11%</p>
Ascentis C8	Excellent Peak Shape	<p>C8 chemistry provides similar selectivity with shorter retention than C18.</p> <p>Proprietary endcapping improves peak symmetry.</p>	<p>Less retentive with similar selectivity as C18</p> <p>Improved peak shape on difficult compounds</p> <p>MS</p>	<p>USP Code: L7</p> <p>Particle Size: 3.5, 10 µm</p> <p>Pore Size: 100 Å</p> <p>Surface Area: 450 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: 15%</p>
Discovery BIO Wide Series	Wide Pore Size	<p>Large pore size is key to separation of peptides, proteins, and other large molecules (>2000 MW). Phases include C18, C8, and C5 for a variety of hydrophobicities.</p>	<p>Suitable for peptides, proteins, proteomics and proteolytic digests</p> <p>Scalable from analytical to prep</p>	<p>USP Code: Various</p> <p>Particle Size: 3.5, 10 µm</p> <p>Pore Size: 300 Å</p> <p>Surface Area: 100 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: Various%</p>
Ascentis RP-Amide	Alternate Selectivity	<p>True alternate selectivity compared to C18 columns makes it the perfect choice for method development and peak identity confirmation.</p> <p>The amide group and proprietary bonding provides a low bleed column ideally suited for LC-MS applications.</p>	<p>Excellent selectivity for acids, bases, and polar compounds, especially phenols and amines</p> <p>Small molecule preparative purifications</p> <p>MS</p>	<p>USP Code: L60</p> <p>Particle Size: 3.5, 10 µm</p> <p>Pore Size: 100 Å</p> <p>Surface Area: 450 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: 19%</p>
Discovery CN	High Polarity	<p>Highly polar column suitable for reversed phase as well as normal phase. Provides unique selectivity for polar and aromatic compounds.</p>	<p>Polar compound separations including carboxylic acids and amines</p>	<p>USP Code: L10</p> <p>Particle Size: 5 µm</p> <p>Pore Size: 180 Å</p> <p>Surface Area: 200 m²/g</p> <p>pH Range: 4 to 8</p> <p>Carbon Load: 4.5%</p>
Discovery HS F5	Versatile Retention Mechanisms	<p>Pentafluorophenyl phase is an excellent phase for basic drug separations.</p> <p>"U-Shape retention" provides efficient separation of bases at high (~90% ACN) organic mobile phase.</p>	<p>Hydrophobic and ion exchange create unique selectivity for basic molecules</p> <p>MS</p>	<p>USP Code: L43</p> <p>Particle Size: 3.5, 10 µm</p> <p>Pore Size: 120 Å</p> <p>Surface Area: 300 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: 12%</p>
Discovery Zr Series	Wide pH Range/High Temp	<p>Stability of Zirconia support towards acids and bases allows for use of the full pH spectrum.</p> <p>High temperature capabilities provides unique opportunities for chromatography.</p>	<p>pH range - 1 to 13</p> <p>Temperature range up to 100 °C (to 200 °C with special hardware)</p> <p>Ion Exchange mechanisms provide alternate selectivity</p>	<p>USP Code: various</p> <p>Particle Size: 3.5 µm</p> <p>Pore Size: 300 Å</p> <p>Surface Area: 30 m²/g</p> <p>pH Range: 1 to 13</p> <p>Carbon Load: various</p>
SUPELCOSIL SCX SAX	Ion Separations	<p>Ion exchange columns.</p>	<p>Aminopropyl phase for separation of anions</p> <p>Propylsulfonic acid groups for separating cations</p>	<p>USP Code: L9 & L52/L14</p> <p>Particle Size: 5 µm</p> <p>Pore Size: 120 Å</p> <p>Surface Area: 170 m²/g</p> <p>pH Range: 2 to 8</p> <p>Carbon Load: n/a</p>

For product dimensions, pricing, and availability, please contact sales at 877-787-4437.

For technical assistance with Supelco HPLC columns and accessories, call 800-359-3041/814-359-3041 or email techservice@sial.com

= 100% Aqueous compatible

MS = Recommended for LC-MS applications

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