

Supelco HPLC Column

Selection Guide

◀ Chiral Method Development Screen on reverse

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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 molecule applications.

Phase	Primary Feature	Benefit	Applications	Specifications
Ascentis C18	High Retentivity	Strong retention provides good resolution of non-polar and polar compounds. Increased retentivity allows for higher organic solvent in mobile phase which contributes to greater sensitivity in LC-MS application. High carbon loading and proprietary endcapping reduces silanol activity and improves peak symmetry.	General reversed phase Hydrophobic and polar compounds Small molecule preparative MS	USP Code: L1 Particle Size: 3,5,10 µm Pore Size: 100 Å Surface Area: 450 m²/g pH Range: 2 to 8 Carbon Load: 25%
Discovery C18	Intermediate Pore Size	Intermediate pore size provides the perfect platform for analyzing a wide range of molecular weights (small molecules to biomolecules).	Intermediate pore size for scouting wide range in molecular weights General use C18	USP Code: L1 Particle Size: 5 µm Pore Size: 180 Å Surface Area: 200 m²/g pH Range: 2 to 8 Carbon Load: 12%
SUPELCO SIL LC-18-DB	First Deactivated LC Column	Industry's first base-deactivated column has long history of performance and reproducibility.	Basic compounds Less retentive than Ascentis C18 General use C18	USP Code: L1 Particle Size: 3,5 µm Pore Size: 120 Å Surface Area: 300 m²/g pH Range: 2 to 8 Carbon Load: 11%
Ascentis C8	Excellent Peak Shape	Strong retention provides good resolution of non-polar and polar compounds. Increased retentivity allows for higher organic solvent in mobile phase which contributes to greater sensitivity in LC-MS application. High carbon loading and proprietary endcapping reduces silanol activity and improves peak symmetry.	General reversed phase Hydrophobic and polar compounds Small molecule preparative MS	USP Code: L7 Particle Size: 3,5,10 µm Pore Size: 100 Å Surface Area: 450 m²/g pH Range: 2 to 8 Carbon Load: 15%
Ascentis Phenyl	Alternate Selectivity	The butyl linker and advanced bonding chemistry provide enhanced phenyl selectivity and increased hydrolytic stability as well as low bleed for UV gradient and LC-MS applications .	Hetero-aromatics Pi acceptors MS	USP Code: L11 Particle Size: 3,5 µm Pore Size: 100 Å Surface Area: 450 m²/g pH Range: 2 to 8 Carbon Load: 19%
Ascentis RP-Amide	Alternate Selectivity	True alternate selectivity compared to C18 columns makes it the perfect choice for method development and peak identity confirmation. The amide group and proprietary bonding provides a low bleed column ideally suited for LC-MS applications.	Excellent selectivity for acids, bases, and polar compounds, especially phenols and amines Small molecule preparative purifications MS	USP Code: L60 Particle Size: 3,5,10 µm Pore Size: 100 Å Surface Area: 450 m²/g pH Range: 2 to 8 Carbon Load: 19%
Discovery CN	High Polarity	Highly polar column suitable for reversed phase as well as normal phase. Provides unique selectivity for polar and aromatic compounds.	Polar compound separations including carboxylic acids and amines	USP Code: L10 Particle Size: 5 µm Pore Size: 180 Å Surface Area: 200 m²/g pH Range: 4 to 8 Carbon Load: 4.5%
Discovery HS F5	Versatile Retention Mechanisms	Pentafluorophenyl phase is an excellent phase for basic drug separations. "U-Shape retention" provides efficient separation of bases at high (~90% ACN) organic mobile phase.	Hydrophobic and ion exchange mechanisms create unique selectivity for basic molecules MS	USP Code: L43 Particle Size: 3,5,10 µm Pore Size: 120 Å Surface Area: 300 m²/g pH Range: 2 to 8 Carbon Load: 12%
Discovery Zr Series	Wide pH Range/High Temp	Stability of Zirconia support towards acids and bases allows for use of the full pH spectrum. High temperature capabilities provides unique opportunities for chromatography.	pH range - 1 to 13 Temperature range up to 100 °C (to 200 °C with special hardware) Ion Exchange mechanisms provide alternate selectivity	USP Code: various Particle Size: 3,5 µm Pore Size: 300 Å Surface Area: 30 m²/g pH Range: 1 to 13 Carbon Load: various
Ascentis Si	Normal-Phase and ANP/HILIC	High purity silica particles provide high loading capacity and scalable to prep HPLC . Shipped with ethanol mobile phase for easy use with ANP/HILIC or normal phase solvents.	Polar compounds in ANP/HILIC Non-Polar compounds in normal-phase MS	USP Code: L3 Particle Size: 3, 5, 10 µm Pore Size: 100 Å Surface Area: 450 m²/g pH Range: 2 to 6 Carbon Load: n/a

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

 = Recommended for LC-MS applications

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