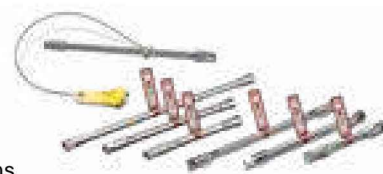


XSelect HPLC Columns are designed for the method-development scientist who requires a diverse selection of sorbents to easily separate the most difficult analyte co-elutions.

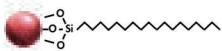
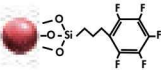
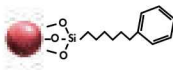
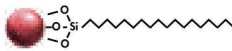
XSelect Columns are:

- Designed for selectivity, improving the separation of closely eluting peaks
- Intended for isolation and purification, loading the highest analyte mass of any columns
- Ideal for rapid method development, reducing the time and cost spent developing methods



The base particle or substrate critically influences analyte selectivity; the bonded ligand influences selectivity to a lesser extent. Neither the substrate nor the ligand alone provides dramatic selectivity changes. Yet in combination, they provide the ultimate means of enhancing analyte selectivity, while ensuring reproducible and robust methods. Accordingly, the XSelect Column family offers the unique optimization of bonded ligands embodied in the particle technologies of high strength silica (HSS) and charged surface hybrid (CSH).

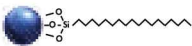
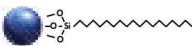

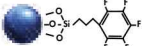
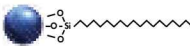
Column Characteristics

	CSH C ₁₈ , 130 Å	CSH Fluoro-Phenyl, 130 Å	CSH Phenyl-Hexyl, 130 Å	Peptide CSH C ₁₈ , 130A
	UHPLC: 2.5 µm XP HPLC: 3.5, 5, 10 µm	UHPLC: 2.5 µm XP HPLC: 3.5, 5 µm	UHPLC: 2.5 µm XP HPLC: 3.5, 5 µm	UHPLC: 2.5 µm XP HPLC: 3.5, 5 µm
Ligand Benefits	General purpose with excellent pH stability and rapid mobile-phase re-equilibration. Yields superior peak shape and increased loading capacity for basic compounds.	General purpose, provides a very high degree of analyte selectivity, especially in low-pH mobile phases. Provides superior peak shape and increased loading capacity for acidic compounds.	General purpose and alternative selectivity versus C ₁₈ . Provides excellent retention for polyaromatic compounds. Maintains excellent reproducibility at pH extremes and delivers superior peak shape and increased loading capacity for basic compounds.	General purpose, offers excellent pH stability and peak shape for basic peptides in low ionic strength mobile phases.
Particle/Ligand				
Ligand Density*	2.3 µmol/m ²	2.3 µmol/m ²	2.3 µmol/m ²	2.3 µmol/m ²
Carbon Load*	15%	10%	14%	15%
Endcapped	Yes	No	Yes	Yes
USP Class No.	L1	L43	L11	L1
pH Range	1–11	1–8	1–11	1–11
Temperature Limits	Low pH = 80 °C, High pH = 45 °C	Low pH = 60 °C, High pH = 45 °C	Low pH = 80 °C, High pH = 45 °C	Low pH = 80 °C, High pH = 45 °C
Surface Area*	185 m ² /g	185 m ² /g	185 m ² /g	185 m ² /g
Performance Standards	Neutrals QC Reference Material p/n: 186006360	Neutrals QC Reference Material p/n: 186006360	Neutrals QC Reference Material p/n: 186006360	Cytochrome c Digestion Standard p/n: 186006371
Application Standards	Reversed-Phase QC Reference Material p/n: 186006363	Reversed-Phase QC Reference Material p/n: 186006363	Reversed-Phase QC Reference Material p/n: 186006363	Peptide Retention Standard p/n: 186006555

*Expected or approximate value.

 XSelect Columns are also available in UPLC particle sizes (ACQUITY UPLC CSH and ACQUITY UPLC HSS), please [refer to pages 113 and 120](#).

Column Characteristics *Continued*

	HSS C ₁₈ [®] , 130 Å	HSS C ₁₈ SB, 130 Å	HSS CN, 130 Å	HSS PFP, 130 Å	HSS T3, 130 Å
	UHPLC: 2.5 µm <i>XP</i> HPLC: 3.5, 5 µm	UHPLC: 2.5 µm <i>XP</i> HPLC: 3.5, 5 µm	UHPLC: 2.5 µm <i>XP</i> HPLC: 3.5, 5 µm	UHPLC: 2.5 µm <i>XP</i> HPLC: 3.5, 5 µm	UHPLC: 2.5 µm <i>XP</i> HPLC: 3.5, 5 µm
Ligand Benefits	Ultra performance and general purpose, provides increased retention, superior peak shape and resists acid hydrolysis at low pH.	Provides unique selectivity for bases when operating in low-pH conditions.	General purpose, shows contrasting analyte selectivity when compared to C ₁₈ phases, can be used in either reversed-phase and normal-phase mode.	General purpose, maximizes selectivity differences for Lewis bases through pi-pi interactions. The rigid aromatic ring provides additional selectivity based on shape, dipole moment, and hydrogen bonding interactions.	Exceptional polar compound retention and aqueous mobile-phase compatible.
Particle/Ligand					
Ligand Density*	3.2 µmol/m ²	1.6 µmol/m ²	2.0 µmol/m ²	3.2 µmol/m ²	1.6 µmol/m ²
Carbon Load*	15%	8%	5%	7%	11%
Endcapped	Yes	No	No	No	Yes
USP Class No.	L1	L1	L10	L43	L1
pH Range	1–8	2–8	2–8	2–8	2–8
Temperature Limits	Low pH = 45 °C, High pH = 45 °C	Low pH = 45 °C, High pH = 45 °C	Low pH = 45 °C, High pH = 45 °C	Low pH = 45 °C, High pH = 45 °C	Low pH = 45 °C, High pH = 45 °C
Surface Area*	230 m ² /g	230 m ² /g	230 m ² /g	230 m ² /g	230 m ² /g
Performance Standards	Neutrals QC Reference Material p/n: 186006360	Neutrals QC Reference Material p/n: 186006360	Neutrals QC Reference Material p/n: 186006360	Neutrals QC Reference Material p/n: 186006360	Neutrals QC Reference Material p/n: 186006360
Application Standards	Reversed-Phase QC Reference Material p/n: 186006363	Reversed-Phase QC Reference Material p/n: 186006363	—	Reversed-Phase QC Reference Material p/n: 186006363	Reversed-Phase QC Reference Material p/n: 186006363

*Expected or approximate value.