

## LC-MS Solutions

# Avantor® ACE® HPLC / UHPLC columns specification table

PHASE	USP LISTING	FUNCTIONAL GROUP	ENDCAPPED	PARTICLE SIZE (µm)	PORE SIZE (Å)	SURFACE AREA (m <sup>2</sup> /g)	CARBON LOAD (%)	pH RANGE	100% AQUEOUS COMPATIBLE
<b>Avantor® ACE® Traditional Chemistries</b>									
C18	L1	Octadecyl	Yes	1.7, 2, 3, 5, 10	100	300	15.5	2 – 8	-
C18-HL	L1	Octadecyl	Yes	3, 5, 10	90	400	20	2 – 8	-
C8	L7	Octyl	Yes	2, 3, 5, 10	100	300	9	2 – 8	-
C4	L26	Butyl	Yes	2, 3, 5, 10	100	300	5.5	2 – 8	-
Phenyl	L11	Phenyl	Yes	2, 3, 5, 10	100	300	9.5	2 – 8	-
CN	L10	Cyano	Yes	2, 3, 5, 10	100	300	5.5	2 – 7	-
AQ	L1	Proprietary	Yes	2, 3, 5, 10	100	300	14	2 – 8	Yes
SIL	L3	Unbonded	No	2, 3, 5, 10	100	300	N/A	2 – 7	-
NH <sub>2</sub>	L8	Aminopropyl	Proprietary	1.7, 3, 5	100	300	3.5	2 – 7	Yes
<b>Avantor® ACE® Novel Chemistries</b>									
SuperC18	L1	Octadecyl encapsulated	Encapsulated	1.7, 2, 3, 5, 10	90	400	14.8	1.5 – 11.5	-
C18-AR	L1	Octadecyl with integral phenyl	Yes	1.7, 2, 3, 5, 10	100	300	15.5	2 – 8	Yes
C18-PFP	L1	Octadecyl with integral PFP	Yes	1.7, 2, 3, 5, 10	100	300	14.3	2 – 8	Yes
C18-Amide	L60	Polar embedded amide	Yes	1.7, 2, 3, 5, 10	100	300	16.4	2 – 8	Yes
CN-ES	L10	CN with extended alkyl spacer	Yes	1.7, 2, 3, 5, 10	100	300	12.6	2 – 8	Yes
<b>Solid Core Technology Avantor® ACE® Phases</b>									
UltraCore SuperC18	L1	Octadecyl encapsulated	Encapsulated	2.5	95	130	7	1.5 – 11.0	-
				5		100	5.4		
UltraCore SuperPhenylHexyl	L11	Phenyl Hexyl encapsulated	Encapsulated	2.5	95	130	4.6	1.5 – 11.0	-
				5		100	3.6		
UltraCore C18	L1	Octadecyl	Yes	3.5	95	115	8.2	2 – 8*	-
UltraCore Phenylhexyl	L11	Phenylhexyl	Yes	3.5	95	115	6.2	2 – 8*	Yes
UltraCore Biphenyl	L11	Biphenyl	Yes	3.5	95	115	6.5	2 – 8*	Yes
UltraCore C18-Amide	L60	Polar embedded amide	Yes	3.5	95	120	5.5	2 – 8*	Yes
<b>Avantor® ACE® HILIC Phases</b>									
HILIC-A	L3	Proprietary SIL	No	1.7, 3, 5	100	300	N/A	2 – 7	-
HILIC-B	L8	Proprietary aminopropyl	No	1.7, 3, 5	100	300	4	2 – 7	-
HILIC-N	pending	Proprietary polyhydroxy	No	1.7, 3, 5	100	300	7	2 – 7	-
<b>Avantor® ACE® HTP-MS</b>									
HTP-MS	L1	Proprietary	Yes	2	100	300	15.5	2 – 8	Yes
<b>Avantor® ACE® Method Development Kits (MDKs)</b>									
Advanced MDK	3 column kit	Contains C18, C18-AR, C18-PFP columns	Yes	1.7, 2, 3, 5	Data for these categories are as above for the individual column chemistries				
Extended MDK	3 column kit	Contains SuperC18, C18-Amide, CN-ES columns	Yes	1.7, 2, 3, 5					
UltraCore MDK	2 column kit	Contains SuperC18, SuperPhenylHexyl columns	Yes	2.5, 5					
HILIC MDK	3 column kit	Contains HILIC-A, HILIC-B, HILIC-N columns	No	1.7, 3, 5					

\* Upper pH limit of 9 at 40°C

PHASE	USP LISTING	FUNCTIONAL GROUP	ENDCAPPED	PARTICLE SIZE (µm)	PORE SIZE (Å)	SURFACE AREA (m <sup>2</sup> /g)	CARBON LOAD (%)	pH RANGE	100% AQUEOUS COMPATIBLE
<b>Large Molecule Wide Pore Avantor® ACE® Phases</b>									
C18-300	L1	Octadecyl	Yes	3, 5, 10	300	100	9	2 – 8	Yes
C8-300	L7	Octyl	Yes	3, 5, 10	300	100	5	2 – 8	Yes
C4-300	L26	Butyl	Yes	3, 5, 10	300	100	2.6	2 – 8	Yes
CN-300	L10	Cyano	Yes	3, 5, 10	300	100	2.6	2 – 7	Yes
Phenyl-300	L11	Phenyl	Yes	3, 5, 10	300	100	5.3	2 – 8	Yes
<b>Solid Core for Biomolecules Avantor® ACE® Phases</b>									
UltraCore BIO C18	L1	Octadecyl	Yes	2.5	500	23	1.4	1 – 8	Yes
				3.5	300	16	1		
UltraCore BIO C4	L26	Butyl	Yes	2.5	500	23	0.6	2 – 9	-
				3.5	300	16	0.4		
UltraCore BIO Phenyl2	L11	Diphenyl	Yes	2.5	500	23	1	2 – 9	-
				3.5	300	16	0.7		
<b>Avantor® ACE® Excel Oligo and Glycan Phases</b>									
Oligo	L1	Proprietary	Yes	1.7, 3	90	400	14.8	1.5 – 11.5	-
Glycan	pending	Proprietary	No	1.7, 3	100	300	7	2 – 7	-
<b>Avantor® ACE® Method Development Kits (MDKs)</b>									
Biomolecule MDK	3 column kit	Contains C18-300, C4-300, Ph-300 columns	Yes	3, 5	Data for these categories are as above for the individual column chemistries				