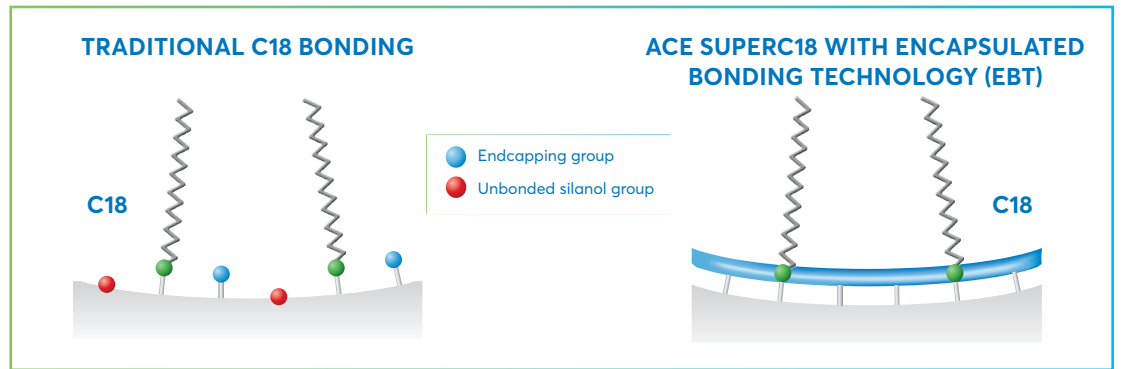
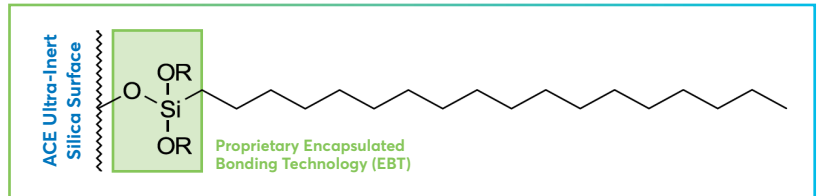


Avantor® ACE® novel chemistries

ACE SUPERC18

- Unique Encapsulated Bonding Technology (EBT) endcapped C18 phase provides pH stability from 1.5–11.5
- Ideal for method development – exploit selectivity changes at low, intermediate and high pH
- Ultra-low bleed for LC-MS compatibility
- Rapid column equilibration without memory effects



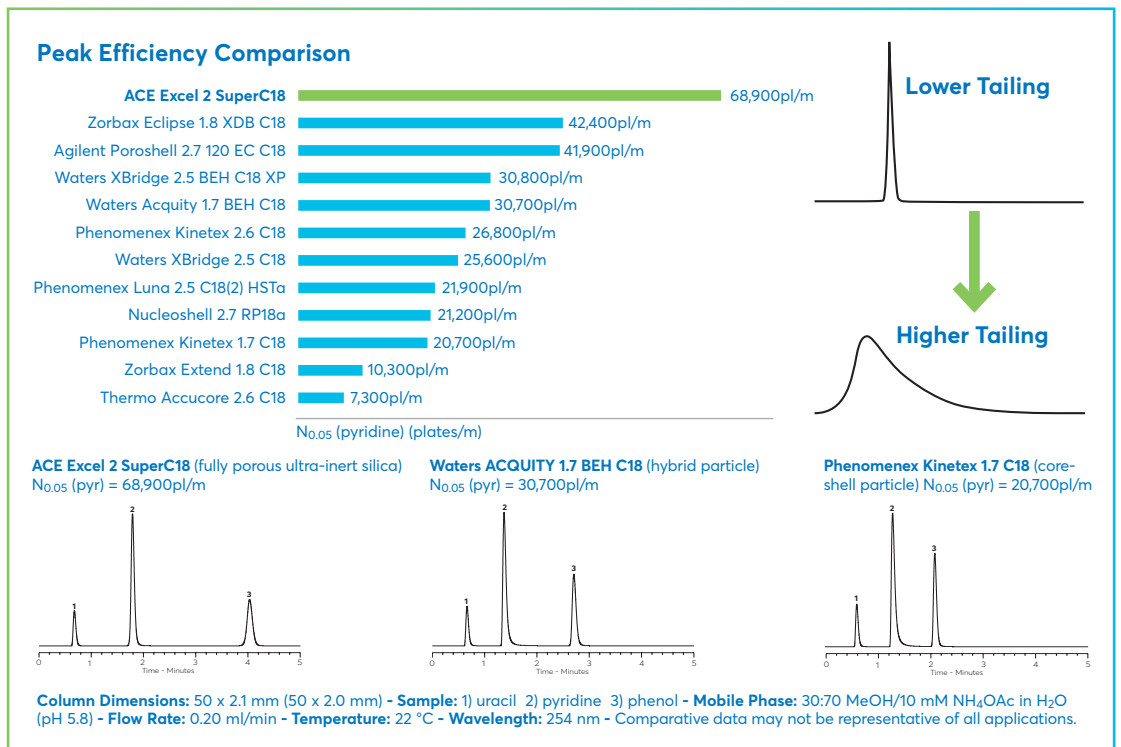
Phase	USP Listing	Functional group	Endcapped	Particle size (µm)	Pore size (Å)	Surface area (m ² /g)	Carbon load (%)	pH range	100% aqueous compatibility
SUPERC18	L1	Octadecyl	Yes (EBT)	1.7, 2, 3, 5, 10	90	400	14.8	1.5–11.5 ^a	–

^a ACE SuperC18 is designed for use with LC-MS compatible buffers.



RECOMMENDED APPLICATIONS

- Starting point for method development
- Analytes differing in hydrophobicity
- Polar, moderately polar and non-polar analytes
- Uncharged acids and bases
- Ionized acids and bases in their non-ionized form by using appropriate pH



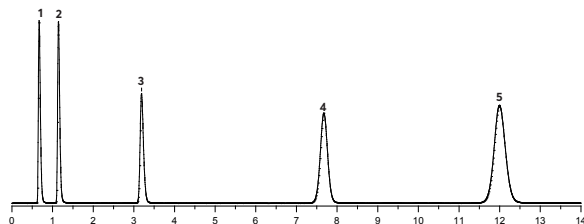
EXCELLENT ACIDIC STABILITY AT pH 1.8

ACIDIC FLOW CONDITIONS

Column: ACE Excel 2 µm SuperC18, 50 x 2.1 mm
 Mobile Phase: 50:50 MeOH/0.1% TFA in H₂O (pH 1.8)
 Temperature: 40 °C
 Flow Rate: 0.20 ml/min

Day 1

k (phenanthrene) = 16.91



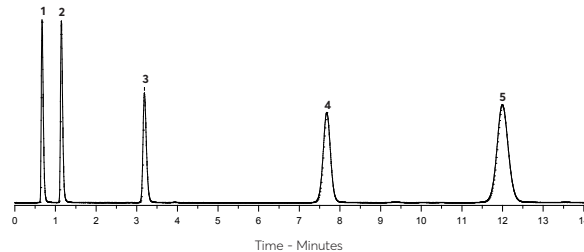
Acidic Mobile Phase (pH 1.8)
 (continuous flow)

>20,000 column volumes
 >2,000 injections



Day 30

k (phenanthrene) = 16.85



EVALUATION CONDITIONS

Sample: 1) uracil 2) dimethyl phthalate 3) toluene 4) biphenyl 5) phenanthrene
 Mobile Phase: 70:30 MeOH:H₂O
 Temperature: 22 °C
 Flow Rate: 0.20 ml/min
 Wavelength: 254nm

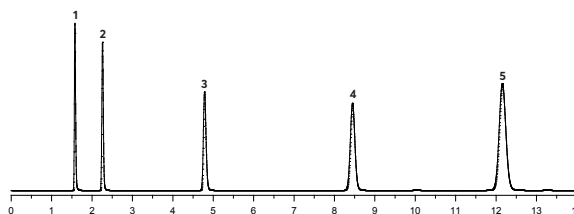
EXCELLENT BASIC STABILITY AT pH 10.7

BASIC FLOW CONDITIONS

Column: ACE Excel 3 µm SuperC18, 150 x 4.6 mm
 Mobile Phase: 50:50 MeCN/0.1% NH₃ in H₂O (pH 10.7)
 Temperature: 40 °C
 Flow Rate: 1.00 ml/min

Day 1

N_{0.5} (biphenyl) = 169,100pl/m



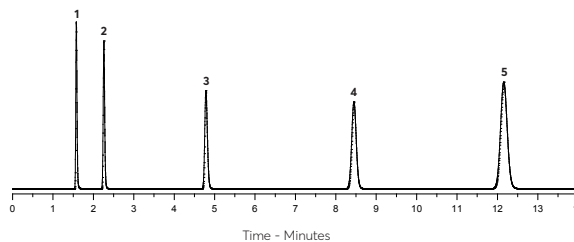
Basic Mobile Phase (pH 10.7)
 (continuous flow)

>20,000 column volumes
 >2,000 injections



Day 30

N_{0.5} (biphenyl) = 168,700pl/m



EVALUATION CONDITIONS

Sample: 1) uracil 2) dimethyl phthalate 3) toluene 4) biphenyl 5) phenanthrene
 Mobile Phase: 80:20 MeOH:H₂O
 Temperature: 22 °C
 Flow Rate: 1.00 ml/min
 Wavelength: 254nm