

C18

Mechanisms of Separation

Hydrophobic binding interactions

Strength of Interaction

Strong

Shape selectivity

Weak

Target Analytes

Analytes differing in hydrophobicity

Polar, moderately polar and nonpolar analytes

Uncharged acids and bases

Ionized acids or bases using ion-pairing

Recommended Applications

Analytes differing in hydrophobicity

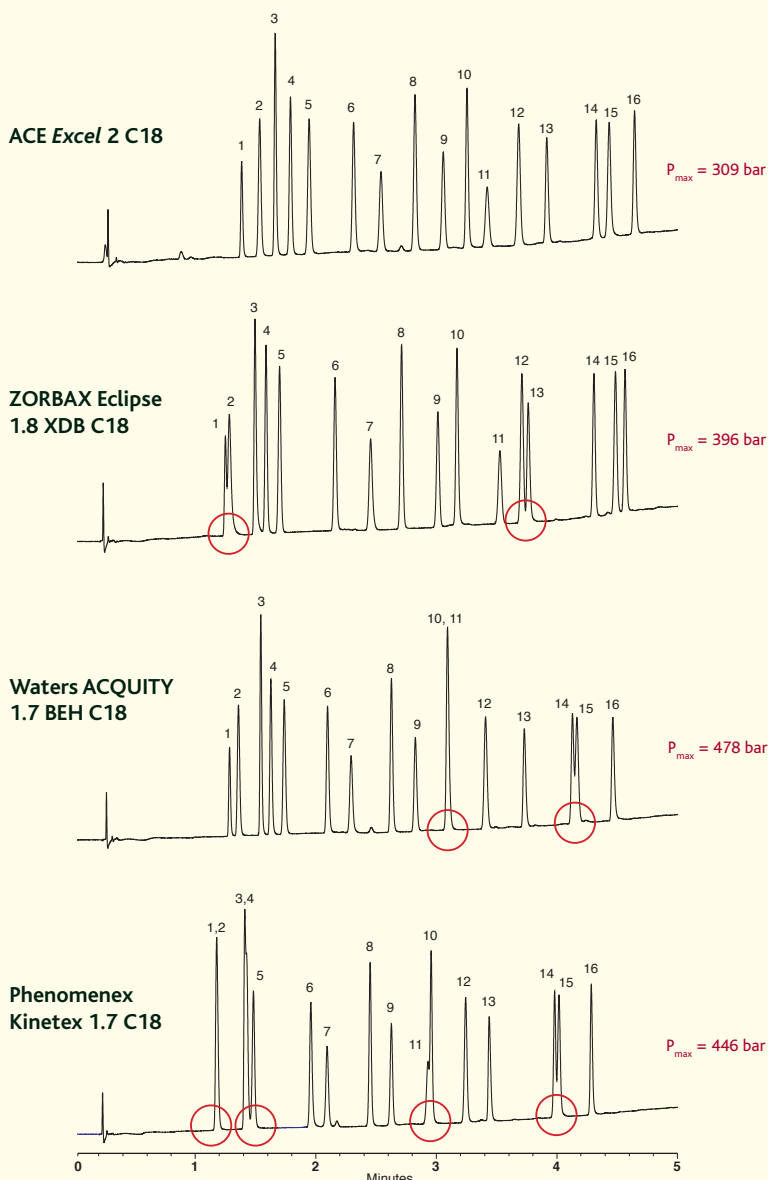
Homologous compounds differing by $-CH_2$

Ideal starting point for method development

Figure 6: Comparison of selectivity and characteristics of ACE[®] Excel[™] 2 μ m C18 to other manufacturers' columns
Application #1503 – Rapid UHPLC Screening of 16 Pharmaceuticals and Related Compounds

Mobile Phase: A = 20 mM KH_2PO_4 , pH 2.7 and
B = 20 mM KH_2PO_4 , pH 2.7 in MeOH/ H_2O (65:35 v/v)
Gradient: 3 to 100% B in 5 minutes
Flow Rate: 0.6 mL/min
Temperature: 60°C
Detection: UV, 214 nm
Column Dimensions: 50 x 2.1mm

- | | |
|---------------------------|-------------------------|
| 1. N-acetylprocainamide | 9. 1,2-dimethoxybenzene |
| 2. 3-hydroxybenzoic acid | 10. furosemide |
| 3. pindolol | 11. anisole |
| 4. methylphenylsulphoxide | 12. methylbenzoate |
| 5. benzylalcohol | 13. remacemide |
| 6. quinoxaline | 14. nimesulide |
| 7. 1,4-dinitrobenzene | 15. ethylbenzoate |
| 8. phenacetin | 16. diflunisal |



Comparative data may not be representative of all applications.
Please see p.10 for acknowledgement of trademarks

In this example the ACE Excel[™] C18 UHPLC column provides retention and selectivity similar to the other C18 UHPLC columns (although there may be slight selectivity differences between different C18 phases). Under these conditions, these slight differences allow the ACE Excel[™] C18 to fully separate all 16 components of interest.

As with all ACE HPLC columns, ACE Excel[™] UHPLC columns also deliver excellent peak shape for your analytes. Additionally, owing to the optimal 2 μ m particle size and a rigorous classification protocol, back pressure for all ACE Excel[™] UHPLC columns is significantly lower than for these leading UHPLC columns packed with <2 μ m particles.

Further Information;

An HPLC product brochure discussing ACE C18 and all ACE phases is available.
Contact your distributor to request your copy or visit www.ace-hplc.com for further details.