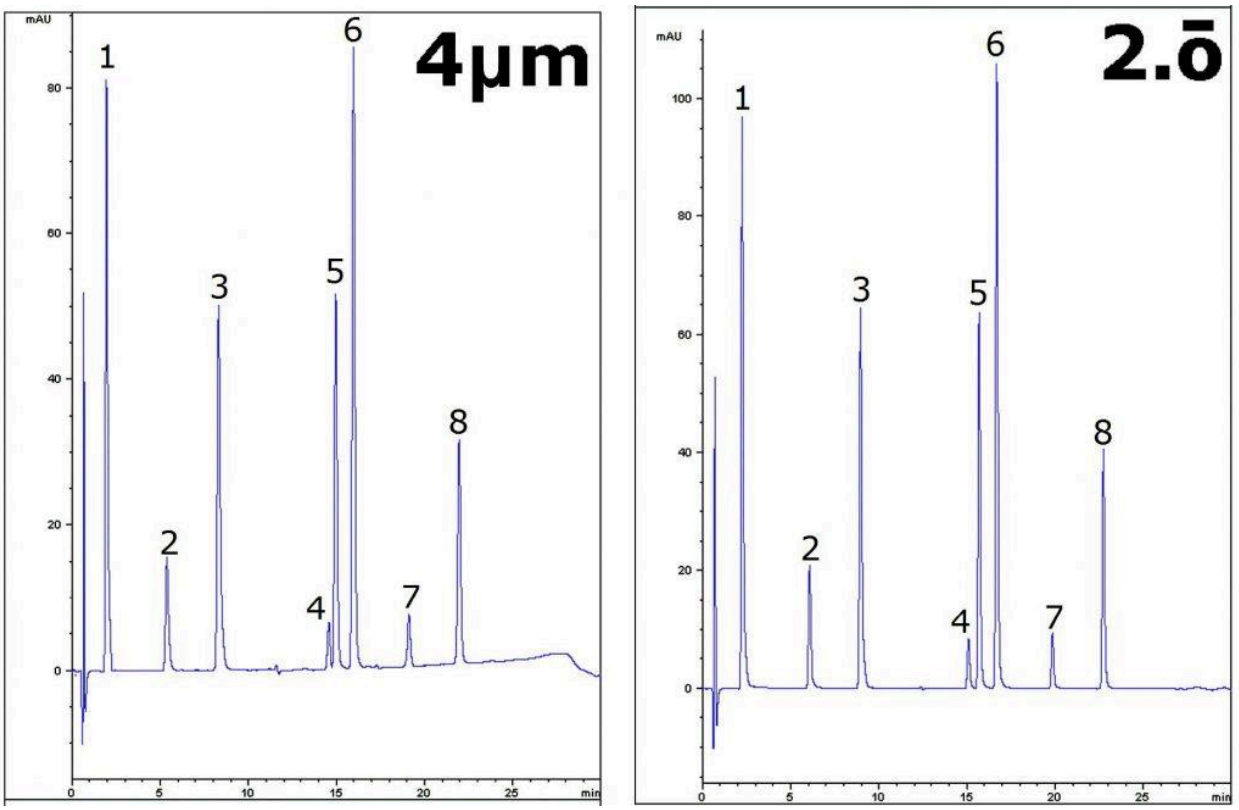
Hydrophobic Compounds Method Transfer to Near UHPLC - AppNote

Separation of Hydrophobic Compounds by HPLC & UHPLC

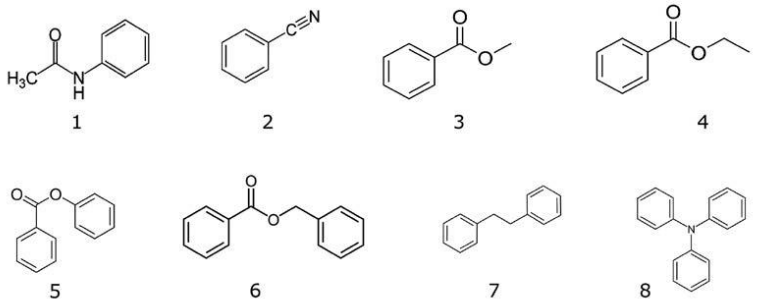
This AppNote shows separation of analytes within a range of hydrophobicity. A simple gradient is used to elute all the compounds and baseline separation is obtained for the critical pair (*peaks 4 and 5*) and the least hydrophobic compound is adequately retained.

A comparison is shown in the figure below with a 4µm Cogent Bidentate C18 Column and a similar 2.o (2.2µm) Column. The retention profiles are quite comparable, meaning Method Transfer from one Column to the other will be easy to achieve.



Peaks:

1. Acetanilide, 2. Benzonitrile, 3. Methyl Benzoate, 4. Ethyl Benzoate,
5. Phenyl Benzoate, 6. Benzyl Benzoate, 7. Bibenzyl 8. Triphenylamine



Method Conditions

Columns: Cogent Bidentate C18 2.o™, 2.2µm, 120Å; Cogent Bidentate C18™, 4um, 100Å
Catalog Nos.: 40218-05P-2; 40018-05P-2
Dimensions: 2.1 x 50mm for both Columns

Mobile Phase:
A: DI Water / 0.1% Formic Acid (v/v)
B: Acetonitrile / 0.1% Formic Acid (v/v)
Gradient:

Time *(minutes)*	%B
0	20
1	20
25	80
26	80
27	20

Injection vol.: 1 µL
Flow rate: 0.3mL / minute
Detection: UV @ 254nm

Sample Preparation: Mixture of solutes in 80:20:0.1 Acetonitrile / DI Water / Formic Acid Diluent.
Peak identities were confirmed with individual standards.
t 0 : 0.7 minutes

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