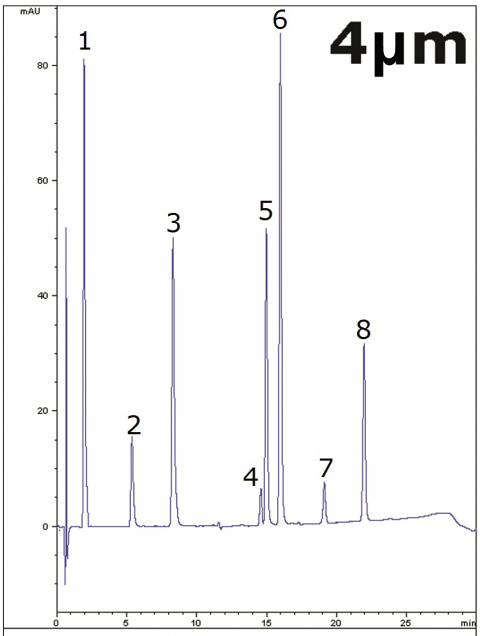
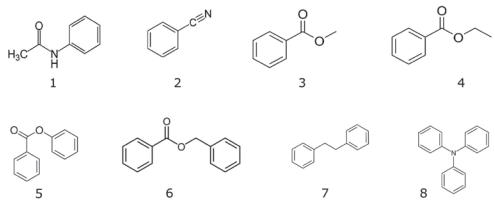
Separation of Hydrophobic Compounds

Method transfer from 4µm to 2.ō™





Method Conditions

Column: **Cogent Bidentate C18™**, 2.2µm, 120Å

Catalog No.: 40218-05P-2

Dimensions: 2.1 x 50 mm

Solvents: A: DI H_2O / 0.1% formic acid (v/v)
B: Acetonitrile / 0.1% formic acid (v/v)

Gradient:

time (min.)	%B
0	20
1	20
25	80
26	80
27	20

Injection vol.: 1 microL

Flow rate: 0.3mL/min

Detection: UV 254 nm

Sample: Mixture of solutes in 80/20/0.1 acetonitrile / DI H_2O / formic acid diluent. Peak identities were confirmed with individual standards.

Peaks: 1. Acetanilide
2. Benzonitrile
3. Methyl benzoate
4. Ethyl benzoate
5. Phenyl benzoate
6. Benzyl benzoate
7. Bibenzyl
8. Triphenylamine

t_0: 0.7 min

Discussion

This method shows separation of analytes with a range of hydrophobicity. A simple gradient is used to elute all the compounds. 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 with a 4µm Cogent Bidentate C18 column and a 2.ō column. The retention profiles are quite similar, meaning method transfer from one column to the other will be easy to achieve.

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