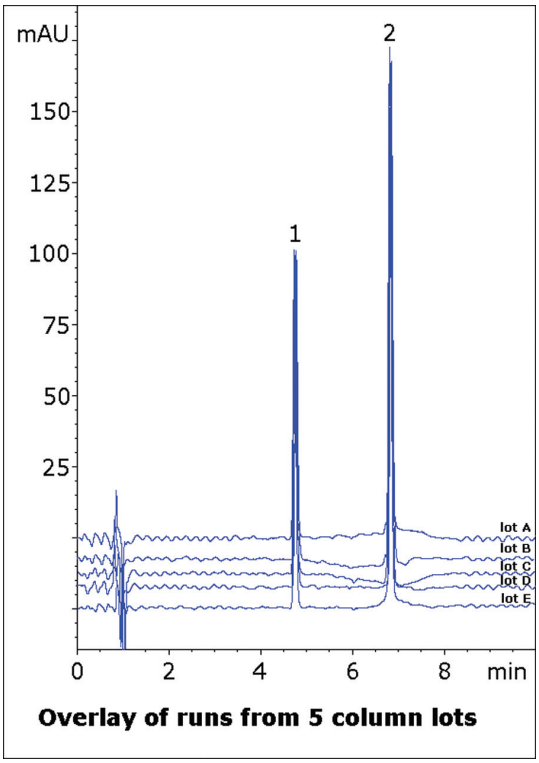
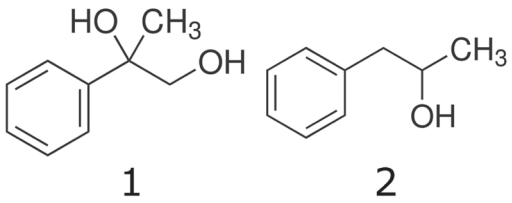
Organic Alcohols

1-Phenyl-2-propanol and 2-Phenyl-1,2-propanediol



Overlay of runs from 5 column lots



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Note: These two compounds have applications as starting materials in organic syntheses. As such, the method has relevance in impurities testing of finished products to ensure no starting materials are present.

Method Conditions

Column: **Cogent Bidentate C18™**, 4µm, 100Å

Catalog No.: 40018-75P

Dimensions: 4.6 x 75 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	10
2	10
6	50
7	10

Post Time: 3 min

Injection vol.: 5µL

Flow rate: 1.0 mL/min

Detection: UV 220 nm

Sample: 0.1 µL/mL 1-Phenyl-2-propanol and 0.1 mg/mL 2-Phenyl-1,2-propanediol in diluent of 50/50 solvent A / solvent B.

Peaks: 1. 2-Phenyl-1,2-propanediol
2. 1-Phenyl-2-propanol

t_0: 0.9 min

Discussion

In this method, separation is obtained between two structurally similar organic alcohols. The method illustrates the type of retention and selectivity that can be obtained for these kinds of compounds. Furthermore, the mobile phase solvents are simple to prepare and LC-MS compatible.

The overlay in the figure demonstrates how the stationary phase material can be produced with reliable consistency from lot-to-lot, which is a critical feature of HPLC columns. Columns from five different material lots were investigated and retention time RSD values of 0.5% and 0.3% were obtained for the two peaks between the lots.

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