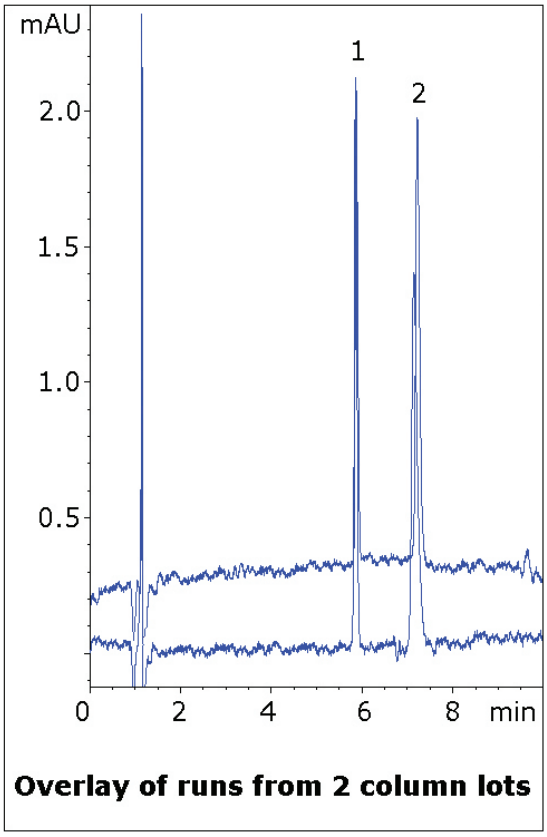
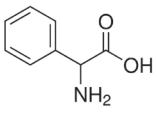
Zoloft® (Sertraline) Tablet

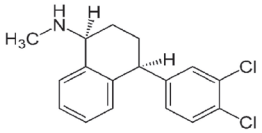
Retention of hydrophobic and hydrophilic analytes by ANP



Overlay of runs from 2 column lots



1. Phenylglycine



2. Sertraline

Note: Sertraline is a selective serotonin reuptake inhibitor used to treat major depressive disorder. It is widely prescribed and sold as Zoloft® from Pfizer.

Method Conditions

Column: **Cogent Diamond Hydride™**, 4µm, 100Å

Catalog No.: 70000-7.5P

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	95
1	95
6	50
7	95

Post Time: 3 min

Injection vol.: 1µL

Flow rate: 1.0 mL/min

Detection: UV 254 nm

Sample: 25mg strength Zoloft® tablet was ground and added to a 25mL volumetric flask. A portion of 50/50 solvent A/solvent B diluent was added and the flask was sonicated 10 min. It was then diluted to mark and mixed. A portion was filtered with a 0.45µm nylon syringe filter (MicroSolv Tech Corp.) and mixed 1:1 with a 1mg/mL phenylglycine solution.

Peaks: 1. Phenylglycine
2. Sertraline

t_0: 0.9 min

Discussion

Sertraline has a log P of 2.9, but still retains well by an aqueous normal phase method. A polar test solute (phenylglycine) was added in order to demonstrate how both nonpolar and polar compounds can be retained in the same run. Furthermore, sertraline's amine group can produce problematic tailing with some reversed phase columns, but the peak symmetry obtained here is excellent.

Data from two column lots is shown to illustrate lot-to-lot consistency.

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