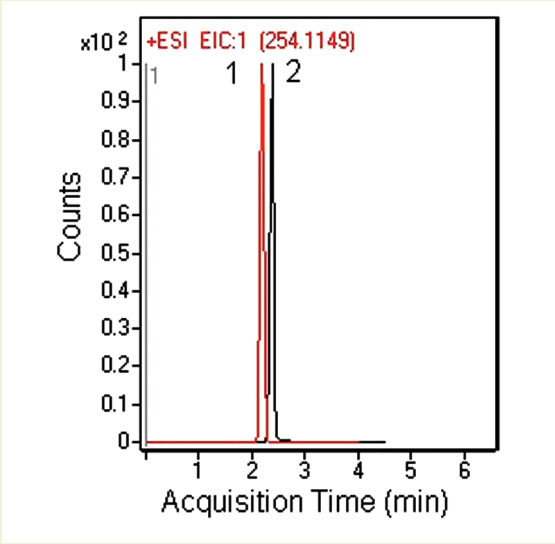
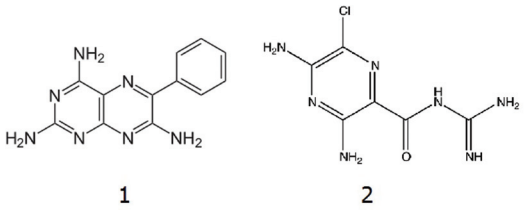
Amiloride and Triamterene

LC-MS method for spiked urine sample





Note: Amiloride and Triamterene are potassium-sparing diuretics. Trade names include Dyrenium® and Midamor®. They are also sometimes combined with hydrochlorothiazide, a diuretic drug.

Method Conditions

Column: **Cogent Diamond Hydride 2.ō™**, 2.2µm, 120Å

Catalog No.: 70200-05P-2

Dimensions: 2.1 x 50 mm

Mobile Phase: A: DI H_2O / 0.1% formic acid
B: Acetonitrile / 0.1% formic acid

Gradient:

time (min.)	%B
0	80
3	30
5	30
6	80

Injection vol.: 1 microL

Flow rate: 0.4 mL/min

Detection: ESI – POS – Agilent 6210 MSD TOF mass spectrometer

Sample: Urine was spiked with amiloride and triamterene standard solutions and filtered with 0.45um nylon syringe filter (MicroSolv Tech Corp.).

Peaks: 1. Triamterene 254.1149 m/z $[M + H]^+$
2. Amiloride 230.0552 m/z $[M + H]^+$

Discussion

This application note describes the separation of two important drugs for treatment of hypertension and congestive heart failure. Both compounds have numerous amine groups, which can contribute to peak tailing in some instances. However, the peak shapes observed here are both symmetrical and very efficient. This is accomplished using the Diamond Hydride 2.ō column, which is well-suited to polar compounds such as these. A spiked urine sample was used to demonstrate the applicability of the data to clinical studies.

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