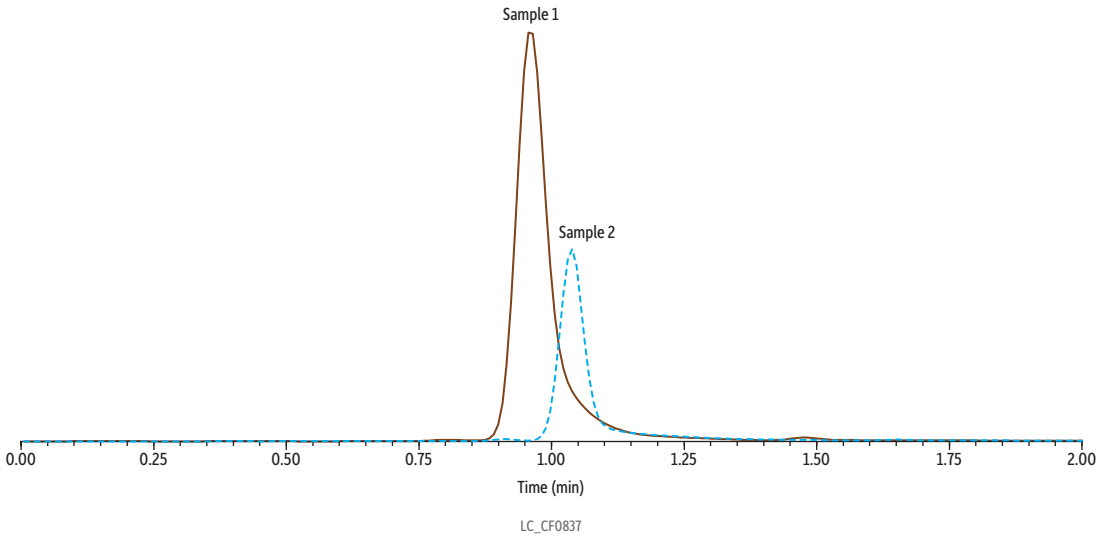
Impact of High Gabapentin Levels on Amphetamine in Urine Analyzed on Raptor Biphenyl Using Method 1



Peaks	Conc. (µg/mL)	t_R (min) (Sample 1)	t_R (min) (Sample 2)	Peak Area (Sample 1)	Peak Area (Sample 2)	Peak Height (Sample 1)	Peak Height (Sample 2)
1. Amphetamine	0.1	0.96	1.03	3351017	1257485	720647	335805

Column Raptor Biphenyl (cat.# 9309A52)
Dimensions: 50 mm x 2.1 mm ID
Particle Size: 2.7 µm
Pore Size: 90 Å
Guard Column: Raptor Biphenyl EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 µm (cat.# 9309A0252)
Temp.: 45 °C
Standard/Sample
Diluent: 90:10 Water:methanol, both with 0.1% formic acid
Inj. Vol.: 5 µL
Mobile Phase
A: Water, 0.1% formic acid
B: Methanol, 0.1% formic acid

Time (min)	Flow (mL/min)	%A	%B
0.00	0.6	90	10
6.00	0.6	25	75
7.00	0.6	0	100
8.00	0.6	0	100
8.01	0.6	90	10
9.00	0.6	90	10

Max Pressure: 300 bar
Detector Shimadzu 8045 LC-MS/MS
Ion Mode: ESI+
Mode: MRM
Instrument Shimadzu Nexera X2
Sample Preparation Control urine (20 µL) was added to a 1.5 mL microcentrifuge tube along with 20 µL of a premade enzyme hydrolysis master mix. The sample was vortexed for 10 seconds and left to incubate at room temperature for 20 minutes. After the incubation, 260 µL of the diluent (water, 0.1 % formic acid:methanol, 0.1 % formic acid 90:10 [v/v]) was added. A 100 µL aliquot was added to a vial insert (cat.# 21776) in a 2.0 mL, amber, short-cap vial (cat.# 21142) and capped with a 9 mm short cap (cat.# 24497) and injected on the LC-MS/MS for analysis.
Notes Sample 1 contained 0.1 µg/mL of gabapentin (not shown) and 0.1 µg/mL of amphetamine.
Sample 2 contained 250 µg/mL of gabapentin (not shown) and 0.1 µg/mL of amphetamine.