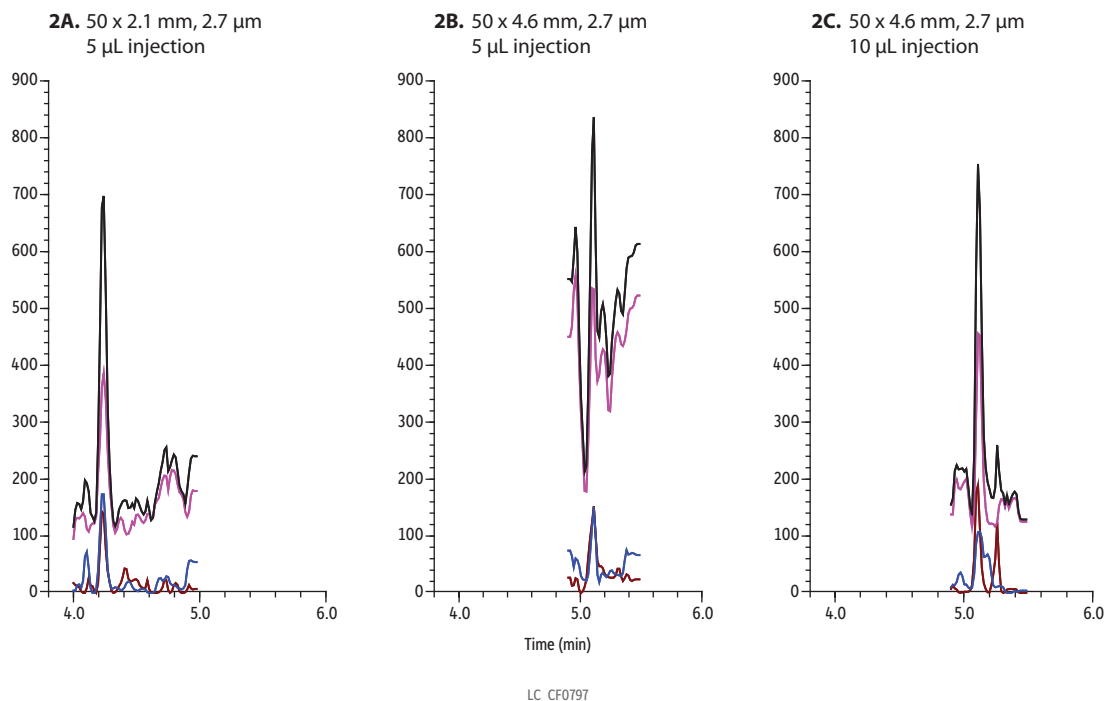


Buprenorphine on Raptor Biphenyl (Figure 2 for Biphenyl Advantage Article)



| Peaks | Precursor | Product Ion 1 | Product Ion 2 | Product Ion 3 |
|------------------|-----------|---------------|---------------|---------------|
| 1. Buprenorphine | 468.3 | 55.1 | 414.2 | 396.4 |

Column See notes
Temp.: 45 °C
Standard/Sample
Diluent: 90:10 Water:methanol containing 0.1% formic acid
Conc.: 2 ng/mL in urine, diluted 30-fold

Mobile Phase
A: Water, 0.1% formic acid
B: Methanol, 0.1% formic acid

| Time (min) | %A | %B |
|------------|----|-----|
| 0.00 | 90 | 10 |
| 6.00 | 25 | 75 |
| 7.00 | 0 | 100 |
| 8.00 | 0 | 100 |
| 8.01 | 90 | 10 |
| 9.00 | 90 | 10 |

Flow: 0.6-0.9 mL/min

Detector Shimadzu 8060
Ion Source: Electrospray
Ion Mode: ESI+

Instrument Shimadzu Nexera X2

Sample Preparation Buprenorphine was spiked at 2 ng/mL into urine, hydrolyzed, diluted 30-fold, and centrifuged. The sample was aliquoted into 2 mL, screw-thread vials (cat.# 21143) and capped with short-cap, screw-vial closures (cat.# 24498).

Notes

Figure 2A

Column: Raptor Biphenyl 50 x 2.1 mm, 2.7 μm (cat.# 9309A52)
 Guard: Raptor Biphenyl EXP guard column cartridge 5 mm, 2.1 mm ID, 2.7 μm (cat.# 9309A0252)
 Inj. Vol.: 5 μL
 Flow (mL/min): 0.6

Figure 2B

Column: Raptor Biphenyl 50 x 4.6 mm, 2.7 μm (cat.# 9309A55)
 Guard: Raptor Biphenyl EXP guard column cartridge 5 mm, 4.6 mm ID, 2.7 μm (cat.# 9309A0252)
 Inj. Vol.: 5 μL
 Flow (mL/min): 0.9

Figure 2C

Column: Raptor Biphenyl 50 x 4.6 mm, 2.7 μm (cat.# 9309A55)
 Guard: Raptor Biphenyl EXP guard column cartridge 5 mm, 4.6 mm ID, 2.7 μm (cat.# 9309A0252)
 Inj. Vol.: 10 μL
 Flow (mL/min): 0.9