Buprenorphine in urine

Application Note

Forensic Toxicology

Authors
Agilent Technologies, Inc.

Introduction
An Agilent VF-DA GC column with GC/MS analyzes a sample of buprenorphine at +/- 5 ng/mL.
Conditions

Technique: GC-capillary

Column: Agilent VF-DA, 0.20 mm x 12 m (df = optimized)
(Part no. CP8964)

Temperature: 70 °C, 1.2 min → 200 °C, 20 °C/min, → 270 °C, 7 °C/min, → 320 °C, 20 °C/min

Carrier Gas: Helium, ca. 1.0 mL/min

Pressure Program: 58.7 kPa, 2.2 min, → 97 kPa, 58 kPa/min → 132 kPa, 3 kPa/min → 180 kPa, 12 kPa/min

Injector: Splitless

Detector: MS in SIM mode

Sample Size: 1 μL

Solvent: methanol

Derivatization: as penta fluoro propionates

Courtesy: Joerg Szigan - Labor Dr. Lembeke, Dr. Lempfrid - Cologne

Peak identification

1. buprenorphine -PFP

Real Sample

Method detection limit ± 5 ng/ml

Calibration curve 0.5-10 ng buprenorphine

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