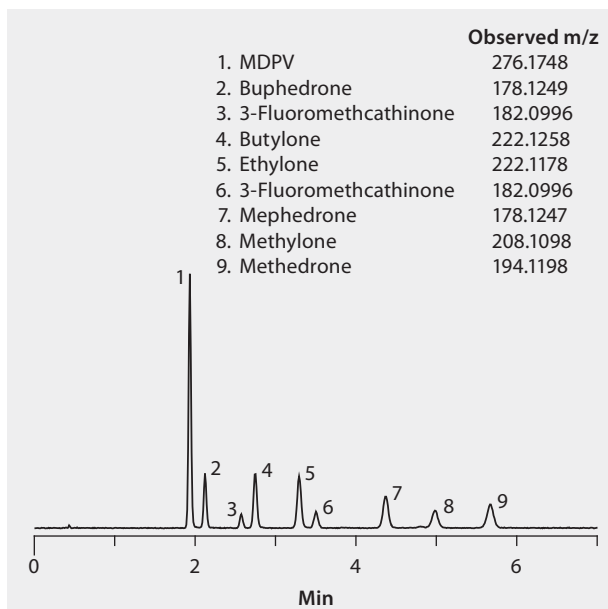


LC/MS Analysis of Illicit Phenethylamine and Cathinone “Bath Salts” in Plasma on Ascentis® Express 2.7 µm HILIC after Extraction using SPME LC Tips

Solid phase microextraction (SPME) was used in this application to extract phenethylamine and cathinone "bath salts" from spiked plasma. After elution from the SPME fiber, the compounds were separated on an Ascentis Express HILIC column and detected using MS ESI(+) detection. Cerilliant CRMs were used to ensure reliable MS identification and quantification.

market focus	Forensics and Toxicology
sample/matrix	Rat plasma was adjusted to pH 3.0 with phosphoric acid and spiked at 50 ng/mL with selected Bath Salt compounds. (A 750 µL aliquot of the spiked plasma was placed into each well of a 1.0 mL 96 well collection plate.)
SPME fiber	SPME LC Tip (57234-U)
extraction	SPME LC fibers were preconditioned in 50:50 methanol:water and placed into sample wells. Extraction was performed for 15 minutes on an IKA VORTEX MS3 shaker at 500 rpm.
desorption process	The SPME LC Tip fibers were then desorbed in 100 µL of 0.5% ammonium hydroxide in methanol for 60 minutes at 500 rpm vortex. (Desorbed samples were evaporated and reconstituted in 40 µL of acetonitrile and injected directly into the LC/MS system.)
column	Ascentis Express HILIC, 10 cm x 2.1 mm I.D., 2.7 µm particles (53939-U)
mobile phase	5 mM ammonium formate (98:2 acetonitrile:water)
flow rate	0.6 mL/min
pressure	1842 psi (127 bar)
column temp.	35 °C
detector	ESI(+), 100-1000 m/z
injection	1.0 µL
Application No.	G006234



Components

- 3,4-Methylenedioxypropylvalerone HCl (MDPV) solution (Cerilliant M-146)
- Buphedrone hydrochloride solution (Cerilliant B-047)
- 3-Fluoromethcathinone hydrochloride solution (Cerilliant F-016)
- Butylone hydrochloride solution (Cerilliant B-045)
- Ethylone hydrochloride (Cerilliant E-071)
- 4-Fluoromethcathinone hydrochloride solution (Cerilliant F-015)
- Mephedrone hydrochloride solution (Cerilliant M-138)
- Methylone hydrochloride (Cerilliant M-140)
- Methedrone hydrochloride solution (Cerilliant M-147)

Related Products

- accessory
 - IKA® MS 3 digital shakers (Aldrich Z645036)
- analytical column
 - Ascentis® Express HILIC, 2.7 Micron HPLC Column (Supelco 53939-U)
- eluent
 - Acetonitrile (Fluka 14261)
 - Ammonium formate (Fluka 70221)
 - Water (Fluka 14263)
- standard
 - Buphedrone hydrochloride solution (Cerilliant B-047)
 - Butylone hydrochloride solution (Cerilliant B-045)
 - Ethylone hydrochloride (Cerilliant E-071)
 - 3-Fluoromethcathinone hydrochloride solution (Cerilliant F-016)
 - 4-Fluoromethcathinone hydrochloride solution (Cerilliant F-015)
 - Mephedrone hydrochloride solution (Cerilliant M-138)
 - Methedrone hydrochloride solution (Cerilliant M-147)
 - Methylone hydrochloride (Cerilliant M-140)