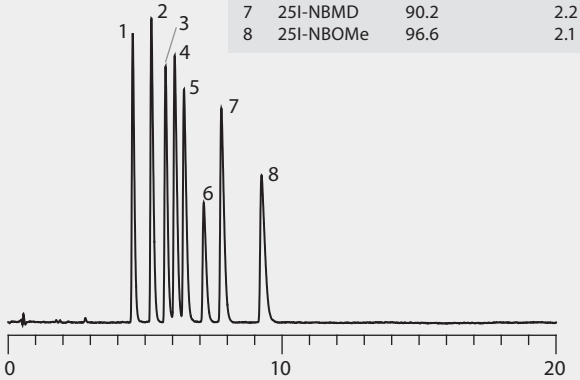
UHPLC/MS Analysis of NBOMe Designer Drugs in Urine on Ascentis® Express C18 after Solid Phase Extraction (SPE) using Supel™-Select HLB

The NBOMe designer drugs comprise various derivatives of the 2C family of illicit psychoactive phenethylamines. Shown here is a rapid sample preparation method for extraction of NBOMe drugs from human urine for LC/MS analysis. NBOMe standards were acquired from Cerilliant and optimized reversed phase chromatographic conditions were developed on an Ascentis Express C18 2.0 µm column. Sample preparation of spiked human urine was carried out on Supel-Select HLB in a 96-well format. Absolute recovery data was determined. Cerilliant CRMs provided reliable quantification and Fluka CHROMASOLV solvents gave clean and robust operation.

market focus	Forensics and Toxicology
sample preparation	SPE (Solid Phase Extraction)
sample/matrix	human trine spiked at 100 ng/mL each compound
SPE well plate	Supel-Select HLB 96-well pate, 30 mg/well (575661-U)
condition	1 mL methanol followed by 1 mL water
sample addition	1 mL
washing	1 mL water followed by 1 mL water:methanol (75:25)
eluate post-treatment	evaporate sample to dryness and reconstitute in 1 mL water:acetonitrile (50:50)
column	Ascentis Express C18, 10 cm x 3 mm I.D., 2 µm particles (50819-U)
mobile phase	[A] 20 mM ammonium acetate, pH 4 with acetic acid; [B] acetonitrile; (60:40, A:B)
flow rate	0.8 mL/min
pressure	7700 psi (531 bar)
column temp.	50 °C
detector	UV, 280 nm
injection	1 µL
Application No.	G006431

Peak No.	Analyte	Recovery from urine (%)	CV
1	25T-NBOMe	80.3	4.2
2	25C-NBOMe	86.0	4.0
3	25I-NBOH	84.6	4.1
4	25D-NBOMe	84.1	2.8
5	25B-NBOMe	88.2	2.2
6	25I-NBF	88.6	2.7
7	25I-NBMD	90.2	2.2
8	25I-NBOMe	96.6	2.1



Related Products

analytical column
Ascentis® Express C18, 2 Micron UHPLC Column (Supelco 50819-U)
eluent
Methanol (Sigma-Aldrich 34885)
Water (Sigma-Aldrich 34877)
mobile phase component
Acetic acid (Fluka 49199)
Acetonitrile (Fluka 14261)
Ammonium acetate (Fluka 14267)
SPE tube or plate
Supel™ - Select HLB SPE 96-well Plate (Supelco 575661-U)

Related Products

standard
25I-NBF hydrochloride solution (Cerilliant I-020)
25I-NBMD hydrochloride solution (Cerilliant I-022)
25I-NBOH hydrochloride solution (Cerilliant I-019)
25B-NBOMe hydrochloride solution (Cerilliant B-061)
25B-NBOMe-D_3 hydrochloride solution (Cerilliant B-062)
25C-NBOMe hydrochloride solution (Cerilliant C-131)
25C-NBOMe-D_3 hydrochloride solution (Cerilliant C-132)
25I-NBOMe hydrochloride solution (Cerilliant I-016)
25I-NBOMe-D_3 hydrochloride solution (Cerilliant I-017)