

LSD Analysis in Urine by LC-MS

Application Note

Forensic Toxicology

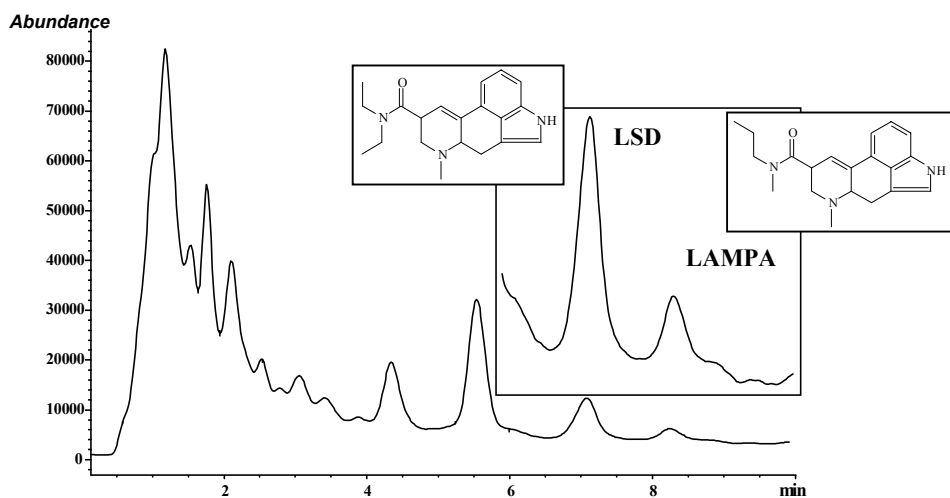
Robert Ricker

The detection of LSD is difficult because of its efficacy at extremely low dosages. The drug is also rapidly excreted, dropping to urine concentrations of < 200 pg/mL after 12 hours. LAMPA (lysergic acid methylpropylamide) has the same molecular weight as LSD and is used as an internal standard. The rapid separation and analysis of these compounds in urine samples is of practical importance.

Highlights

- Spiked LSD and LAMPA are eluted from the ZORBAX Eclipse XDB-C8 column both with good peak shape and separation from each other and other urine components.
- ZORBAX Eclipse XDB columns have extremely good peak shapes over a broad pH range, including intermediate pH.
- LSD is readily detected in urine samples, at concentrations of 200pg/mL or less.

Urine spiked with 200 pg/ml LSD and 50 pg/ml LAMPA



Conditions: Instrument: Agilent 1100 LC/MSD System
Column: ZORBAX Eclipse XDB-C8, 2.1 x 50 mm, 5µm, Agilent P/N: 960967-906
Mobile Phase: 15 : 85, ACN : 10 mM ammonium formate, pH 3.7
F=0.3 mL/min, Inj vol: 30 µl, Temp: 30°C, Det. MS
HP 1100 MSD Conditions: SIM mode, Ions: 324.2, 223.1, 208.1
Fragmentor (dynamically ramped) 100V at 324.2, 148V at 223.1, 170V at 208.1



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