

# Analysis of LSD and Lampa

## Application

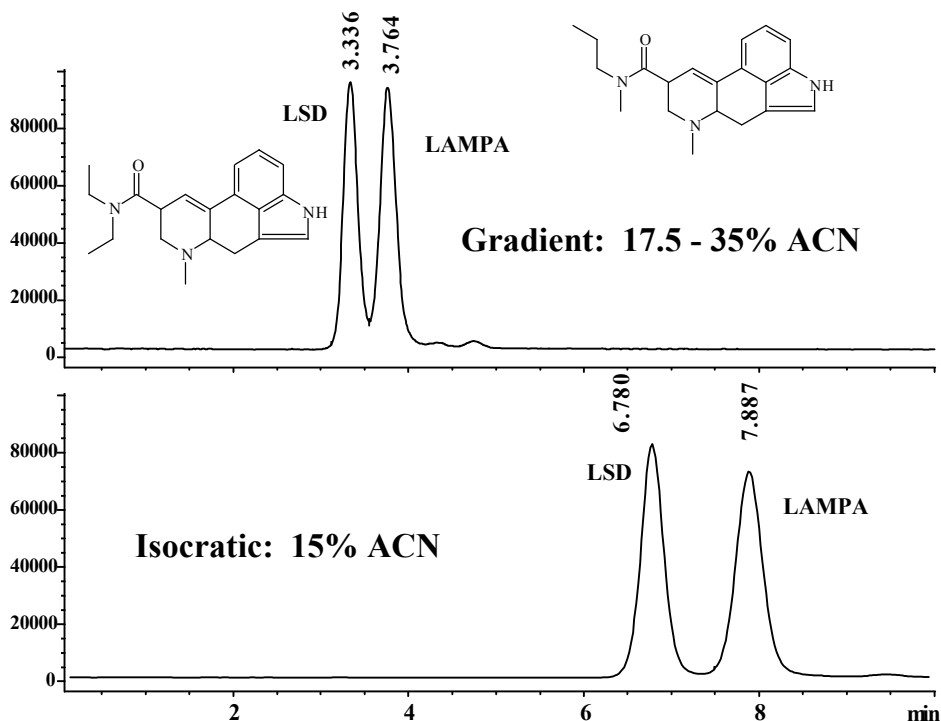
## Pharmaceutical

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There is a resurgence in the abuse of the psychoactive drug LSD. Detection of LSD-abuse 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 of these two compounds is, therefore, of considerable importance.

## Highlights

- LSD and the LAMPA standard are eluted from the ZORBAX Eclipse XDB-C8 column with good peak shape in both the gradient and isocratic modes. Peak volumes are only 150µL for the gradient separation, and 200µL for the isocratic.
- These peak volumes and the volatile mobile phase are suitable for ES-MS detection.
- As expected, peak widths are smaller for the gradient separation; although, this may be due to shorter retention times in the gradient separation. The isocratic separation could be shortened by using a higher ACN concentration.
- ZORBAX Eclipse XDB columns have extremely good peak shapes over a broad pH range, including intermediate pH.



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: as specified above, with % remaining 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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Printed in the USA  
April 25, 2002  
5988-6406EN



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