Drugs

Analysis of drugs of abuse (underivatized) in ecstasy tablet

Application Note

Forensic Toxicology

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography using an Agilent CP-Sil 8 CB column separates five underivatized drugs of abuse in an ecstasy tablet in 15 minutes.

As a retention gap, a high temperature stable, thin film coated piece of a nonpolar fused silica column was used.

This resulted in a better peak shape for the basic compounds and a longer lifetime of the precolumn under these injection.

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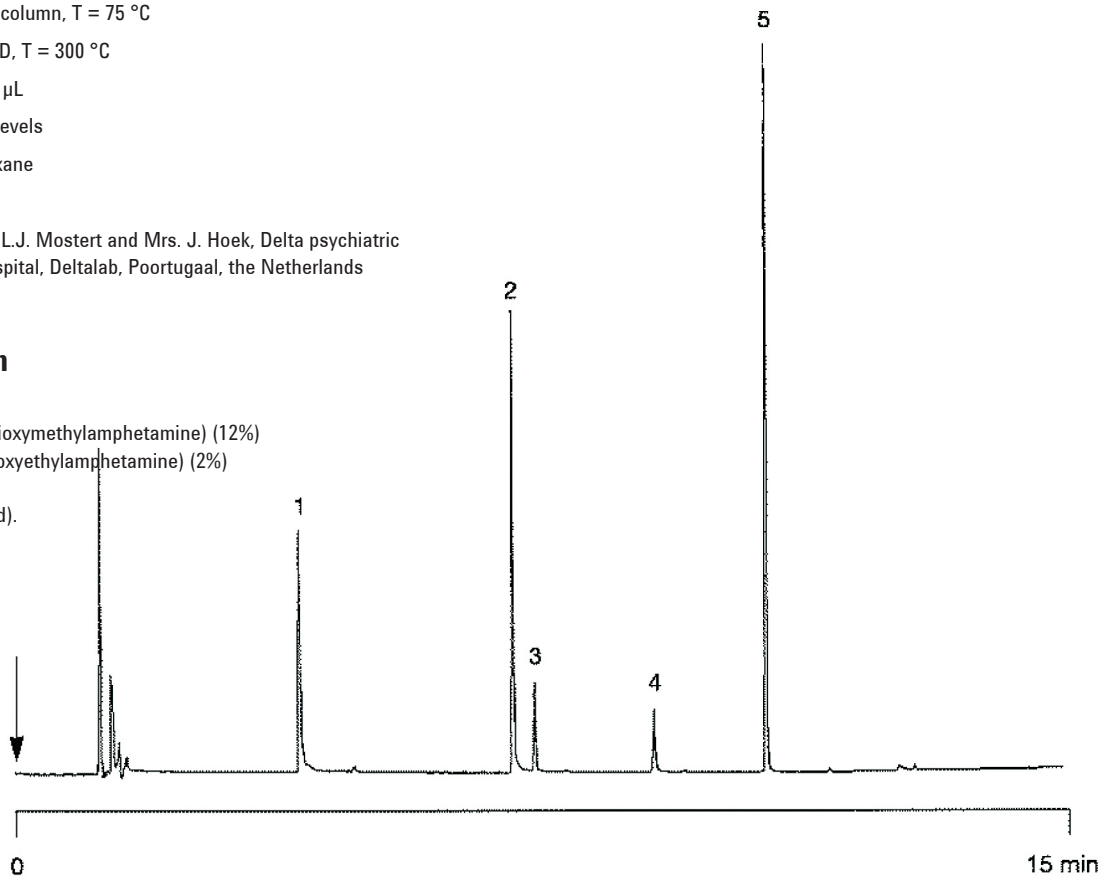
Conditions

Technique	:	GC-capillary
Column	:	Agilent CP-Sil 8 CB, 0.32 mm x 25 m fused silica WCOT (df = 0.25 µm) (Part no. CP7452)
Precolumn	:	Agilent CP-SimDist, 0.53 mm x 2 m, fused silica WCOT (df = 0.1 µm) (Part no. CP7541) (for 10 m column)
Temperature	:	75 °C (1 min) → 200 °C, 20 °C/min; 200 °C → 280 °C. 15 °C/min; 280 °C (3 min)
Carrier Gas	:	He, 80 kPa (0.8 bar, 11 psi)
Injector	:	on-column, T = 75 °C
Detector	:	NPD, T = 300 °C
Sample Size	:	1.0 µL
Concentration Range	:	%-levels
Solvent Sample	:	hexane
Courtesy	:	Dr. L.J. Mostert and Mrs. J. Hoek, Delta psychiatric hospital, Deltalab, Poortugaal, the Netherlands

Peak identification

1. amphetamine (7%)
2. MDMA (3,4-methylenedioxymethylamphetamine) (12%)
3. MDEA (3,4-methylenedioxyethylamphetamine) (2%)
4. caffeine (1 %)
5. chirald (internal standard).



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