



## Drugs

# Analysis of drugs of abuse (underivatized) in “brown powder” sample

## Application Note

Forensic Toxicology

### Authors

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### Introduction

Gas chromatography using an Agilent CP-Sil 8 CB column separates five underivatized drugs of abuse in a “brown powder” sample 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 conditions.



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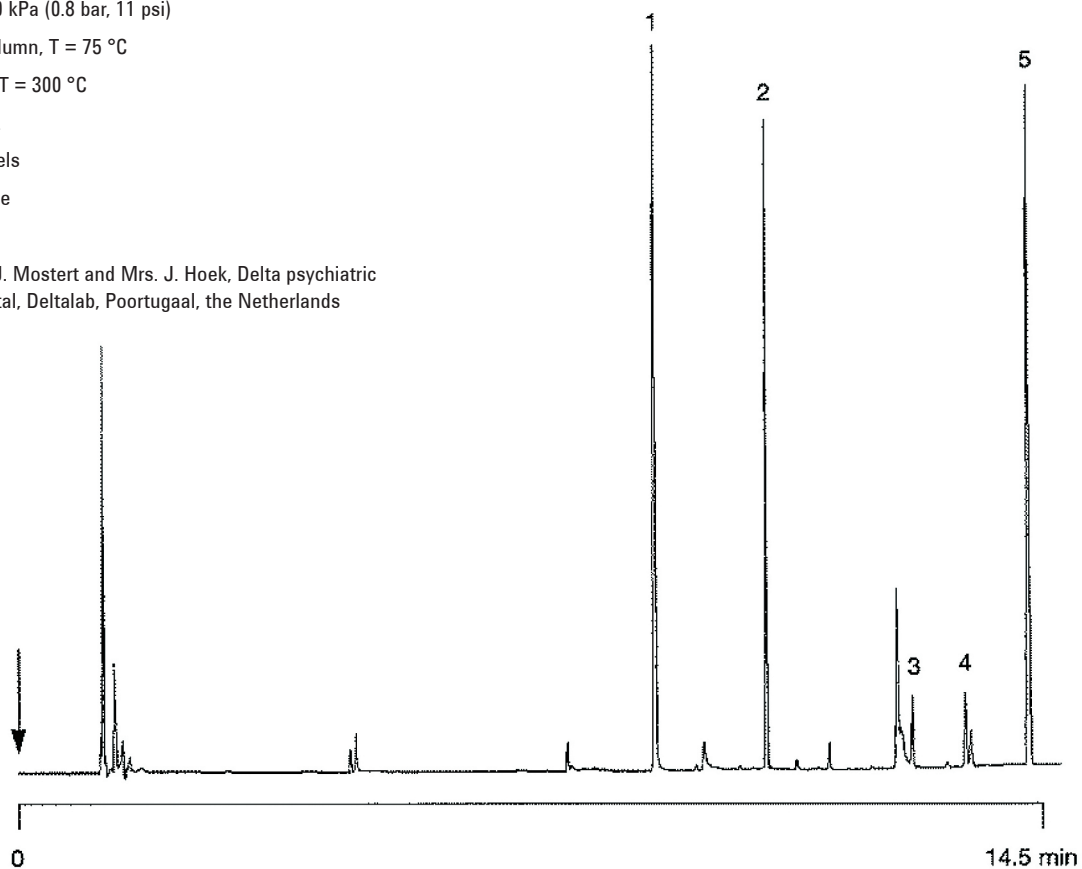
## Conditions

Technique : GC-capillary  
Column : Agilent CP-Sil 8 CB, 0.32 mm x 25 m fused silica WCOT (df = 0.25  $\mu$ m) (Part no. CP7452)  
Precolumn : Agilent CP-SimDist, 0.53 mm x 2 m, fused silica WCOT (df = 0.1  $\mu$ m) (Part no. CP7541) (for 10 m column)  
Temperature : 75 °C (1 min)  $\rightarrow$  200 °C, 20 °C/min;  
200 °C  $\rightarrow$  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  $\mu$ L  
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. caffeine (8%)
2. chirald (internal standard)
3. codeine
4. artefacts
5. heroin (39%)



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