

# Fast Analysis of Alcohol in Urine Using Headspace Injection

## Application Note

Forensic Toxicology

### Introduction

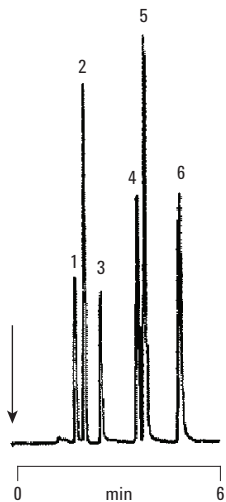
For the accurate analysis of alcohol in urine a fast, reliable, and precise analytical method is required. The Agilent PoraPLOT Q column provides the right selectivity for this method, as the ethanol peak elutes free from other volatile compounds that may interfere in such a matrix. See Application Note 5991-4408EN.

Technique: GC-capillary  
Column: Agilent PoraPLOT Q fused silica PLOT, 10 m × 0.32 mm, 10 μm (p/n CP7550)  
Temperature: 100 °C  
Carrier gas: N<sub>2</sub>, 50 kPa (0.5 bar, 7 psi)  
Injector: Split 1:5, T = 250 °C  
Detector: FID, T = 250 °C  
Sample size: 250 μL headspace  
Courtesy: Christane Leslie Correa and Rosemary Custudio Pedroso  
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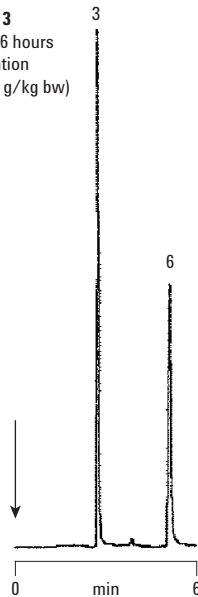
**Chromatogram 1**  
Blank urine spiked  
with components



**Chromatogram 2**  
Blank urine spiked  
with 1-propanol  
as internal standard



**Chromatogram 3**  
Urine collected 6 hours  
after administration  
of ethanol (0.68 g/kg bw)



**Peak identification**

1. Methanol	0.10 g/L
2. Acetaldehyde	0.03 g/L
3. Ethanol	0.10 g/L
4. Acetone	0.08 g/L
5. 2-propanol (isopropanol)	0.08 g/L
6. 1-propanol	0.08 g/L

## For More Information

These data represent typical results. For more information on our products and services, visit our Web site at [www.agilent.com/chem](http://www.agilent.com/chem).

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