

# Application Report 515

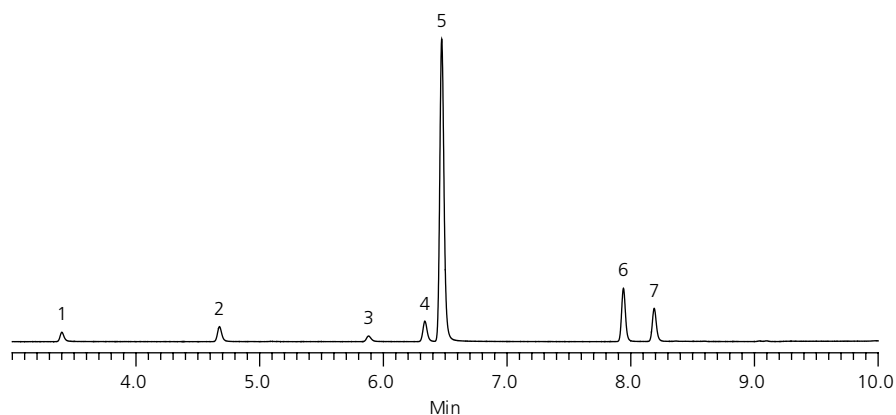
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## Extraction and Analysis of Blood Alcohols by SPME

This application illustrates the extraction and analysis of blood alcohols from human plasma using solid phase microextraction (SPME). The plasma was spiked with a standard containing ethanol at a concentration matching the legal limit for intoxication in many US states. The additional compounds represent other alcohols and metabolites which could be present in a typical blood alcohol analysis. Because of the high sensitivity of SPME, a split injection was necessary to avoid overloading the column.

### Key Words

blood alcohols, SUPELCOWAX™, SPME, 57354-U, 24284



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### Conditions

sample/matrix: blood alcohols at concentrations indicated in human plasma  
SPME fiber: Carbowax®, 60 µm (57354-U)  
extraction: headspace, 50 °C (5 min.)  
desorption temp.: 220 °C for 2 min.  
column: SUPELCOWAX 10, 30 m x 0.25 mm I.D., 0.50 µm (24284)  
oven: 35 °C (2 min.), 10 °C/min. to 125 °C (1 min.)  
det.: FID, 200 °C  
carrier gas: helium, 1.0 mL/min. constant  
injection: 10:1 split  
liner: 0.75 mm I.D. SPME liner

### Peak IDs

1. Acetaldehyde, .003%
2. Acetone, .003%
3. Methanol, .003%
4. 2-propanol, .003%
5. Ethanol, .08%
6. 2-butanol (internal std.), .006%
7. n-propanol, .003%