Alcohols
Analysis of impurities in potable ethanol

Application Note

Food Testing & Agriculture

Introduction
The Agilent CP-Wax 57 CB column is highly selective and inert for volatile compounds that have to be analyzed in an alcohol/water matrix. Compounds eluting before the ethanol peak are well separated. The CP-Wax 57 CB phase can withstand repeated aqueous injections and is therefore the best phase for alcoholic beverage analysis. Detection limit of this analysis is 5 ppm.
**Conditions**

Technique : GC-capillary

Column : Agilent CP-Wax 57 CB, 0.25 mm x 50 m, 0.2 μm
(p/n CP97723)

Temperature : 40 °C (10 min) → 180 °C, 10 °C/min;
              180 °C (5 min) → 200 °C, 20 °C/min

Carrier Gas : He, 160 kPa (1.6 bar, 23.5 psi)

Injector : Split, 100 mL/min
          T = 250 °C

Detector : FID
          T = 275 °C

Sample Size : 0.5 μL

Concentration Range : 50 ppm per compound

Solvent Sample : Ethanol

Courtesy : Frank Hagardom and Ibrahim Iskandar,
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**Peak identification**

1. Acetaldehyde
2. Ethyl acetate
3. Acetal
4. Methanol
5. Benzene
6. Ethanol
7. 1-Propanol
8. Isobutanol
9. 3-Methyl-1-butanol
   (isoamyl alcohol)
10. Furfuryl alcohol