Oxygenated compounds, C₅ – C₈

Application Note

Energy & Fuels

Authors
Agilent Technologies, Inc.

Introduction
Gas chromatography with an Agilent CP-Sil 8 CB column separates 12 C₅ to C₈ alcohols in 25 minutes.
**Conditions**

Technique: GC-capillary

Column: Agilent CP-Sil 8 CB, 0.32 mm x 50 m fused silica

WCOT CP-Sil 8 CB (df = 5 μm) (Part no. CP7891)

Temperature: 35 °C (1 min) → 220 °C, 8 °C/min: 220 °C (10 min)

Carrier Gas: H₂

Pressure program:
- initial pressure: 20 kPa (0.2 bar, 2.9 psi), 0.1 min
- gradient: 680 kPa/min (6.8 bar/min, 98 psi/min)
- final pressure: 70 kPa (0.7 bar, 10 psi)

Injector: On-column

Detector: FID

T = 280 °C

Sample Size: 1 μL

Concentration Range: 3 μg/L, injected amount

30 ng per component.

**Peak identification**

1. benzene
2. n-heptane
3. 3-methyl-3-buten-1-ol
4. 4-penten-1-ol
5. 3-methyl-2-buten-1-ol
6. hexanal
7. cis-3-hexen-1-ol
8. 2-heptanone
9. n-nonane
10. heptanal
11. n-decane
12. octanal

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