Solvents, hydrocarbons, C_1-C_3

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

The Agilent PoraBOND Q column has a very high resistance to water, which makes it possible to use the splitless injection technique for trace water analysis (ppm level) instead of using headspace analysis.

The peakshape of all eluting compounds, including alcohols, is very good. The high purity of the PoraBOND Q porous polymer also results in a maximum temperature of 320 °C making quick bake-out and short analysis times possible. There are no particles present in the PoraBOND Q as the porous layer is chemically bonded, allowing direct valve injections or switching applications.

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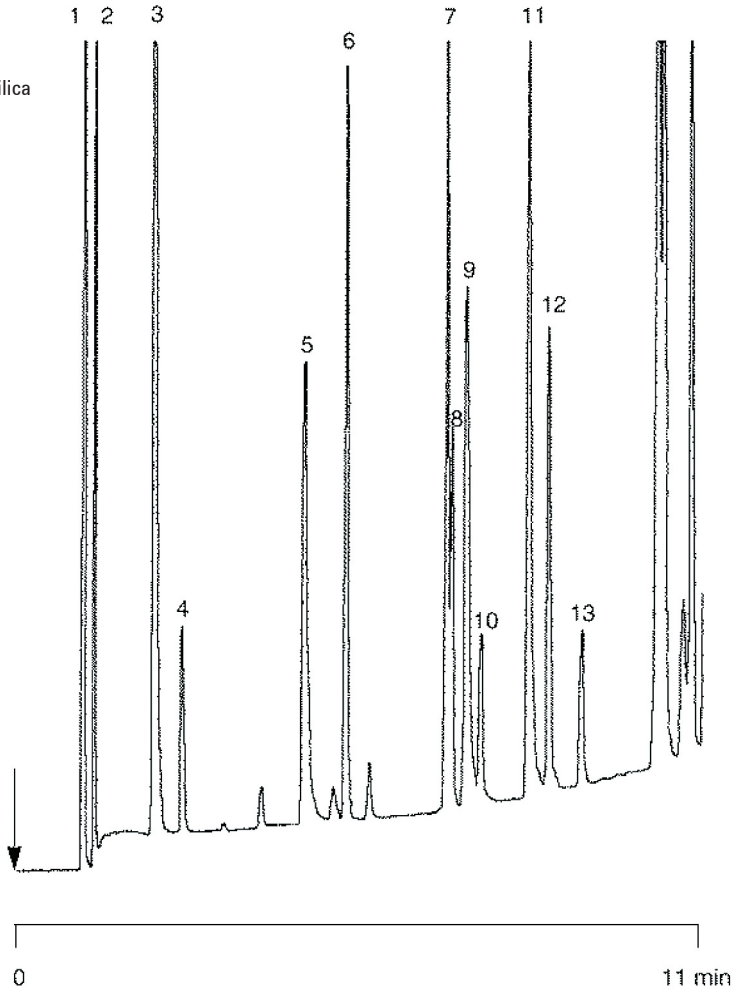
Conditions

Technique	:	GC-wide-bore
Column	:	Agilent PoraBOND Q, 0.53 mm x 25 m, fused silica PLOT (df =10 µm) (Part no. CP7354)
Temperature	:	85 °C (2 min) ⟶ 200 °C, 10 °C/min
Carrier Gas	:	He, 25 kPa (0.25 bar. 3.5 psi)
Injector	:	Splitless T = 250 °C
Detector	:	FID T = 250 °C
Sample Size	:	0.5 µL
Concentration Range	:	10 ppm per compound
Solvent Sample	:	drinking water



Peak identification

1. methane
2. ethane
3. methanol
4. propane
5. ethanol
6. acetonitrile
7. acetone
8. dichloromethane (methylene chloride)
9. 2-propanol (isopropanol)
10. dimethyl sulfide
11. 1-propanol
12. diethyl ether
13. pentane

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