Hydrocarbons, $C_1 – C_{8,}$ halogenated hydrocarbons, $C_1 – C_2$

Separation of VOCs

Application Note

Environmental

Authors

Agilent Technologies, Inc.

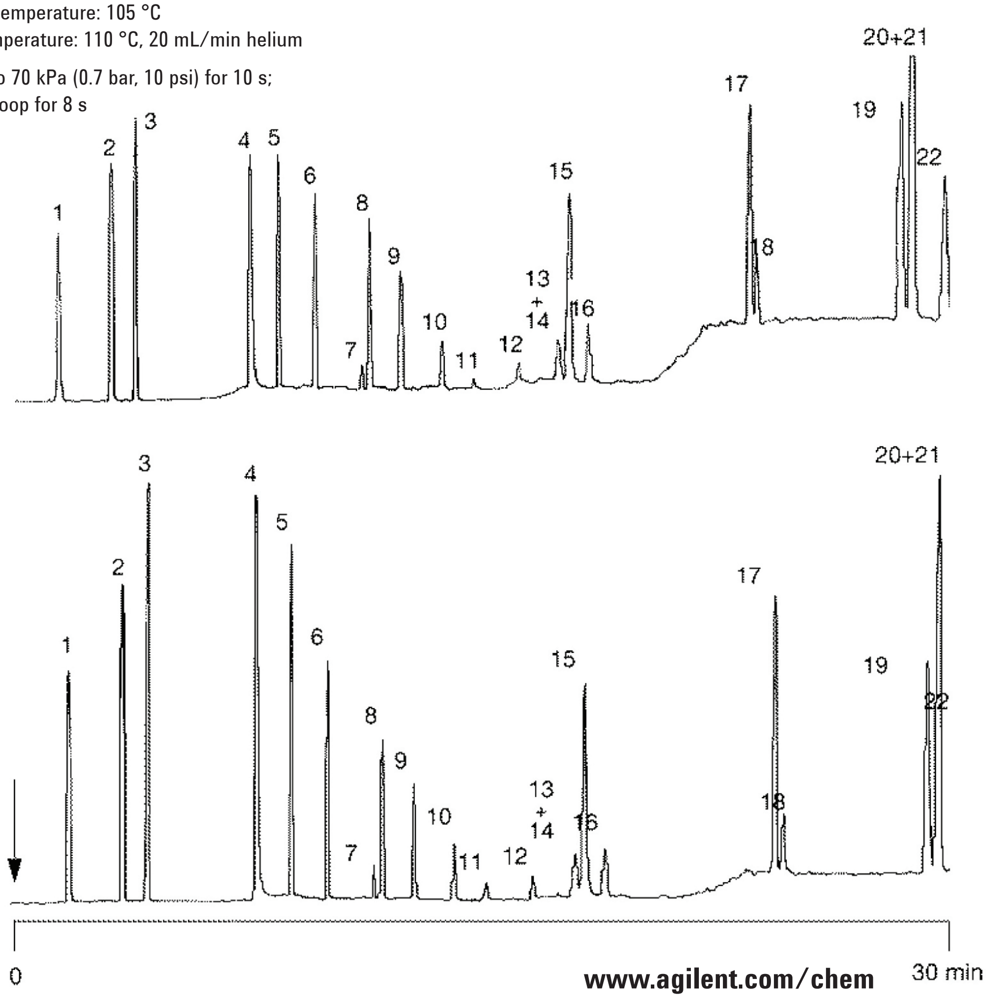
Introduction

Gas chromatography using Agilent PoraPLOT Q and PoraPLOT Q-HT columns separate 22 C_1 to C_8 hydrocarbons and C_1 to C_2 halogenated hydrocarbons in 30 minutes.

Conditions

Technique	:	GC-wide-bore
Column	:	Agilent PoraPLOT Q-HT, 0.53 mm x 25 m fused silica WCOT PoraPLOT Q-HT (df = 20 µm) (Part no. CP7559)
Temperature	:	45 °C (3.5 min) → 180 °C, 30 °C/min; 180 °C (8 min) → 195 °C, 25 °C/min; 195 °C (4 min) → 250 °C, 25 °C/min; 250 °C (10 min)
Carrier Gas	:	H_2, 35 kPa (0.35 bar, 5 psi)
Headspace sampler	:	Oven temperature: 85 °C Sample loop: 3 mL, 105 °C; Sampling valve temperature: 105 °C Transfer line temperature: 110 °C, 20 mL/min helium
Valve sequence	:	Pressurize vial to 70 kPa (0.7 bar, 10 psi) for 10 s; Vent to sample loop for 8 s Inject for 90 s
Injector	:	Spilt, 10:1
Detector	:	FID
Courtesy	:	Robert J. West, DOW Chemical

Note: Excellent peak shapes for all components



Peak identification

1. methane
2. ethylene
3. ethane
4. methanol
5. vinylchloride
6. chloroethane
7. dichloromethane
8. 1,1-dichloroethylene
9. trans-1,2-dichloroethylene
10. cis-1,2-dichloroethylene
11. trichloromethane
12. 1,2-dichloroethane
13. tetrachloromethane
14. 1,1,1-trichloroethane
15. benzene
16. trichloroethylene
17. toluene
18. tetrachloroethylene
19. ethylbenzene
20. m-xylene
21. p-xylene
22. o-xylene

www.agilent.com/chem

Printed in the USA

31 October, 2011

First published prior to 11 May, 2010

A01268

Agilent Technologies