Hydrocarbons, C_1 – C_3, oxygenated hydrocarbons, C_2

Analysis of ethylene oxide

Application Note

Energy & Fuels

Authors

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Introduction

Gas chromatography with an Agilent PoraPLOT U column analyzes ethylene oxide spiked with light hydrocarbons, vinyl chloride and acetaldehyde in 15 minutes.

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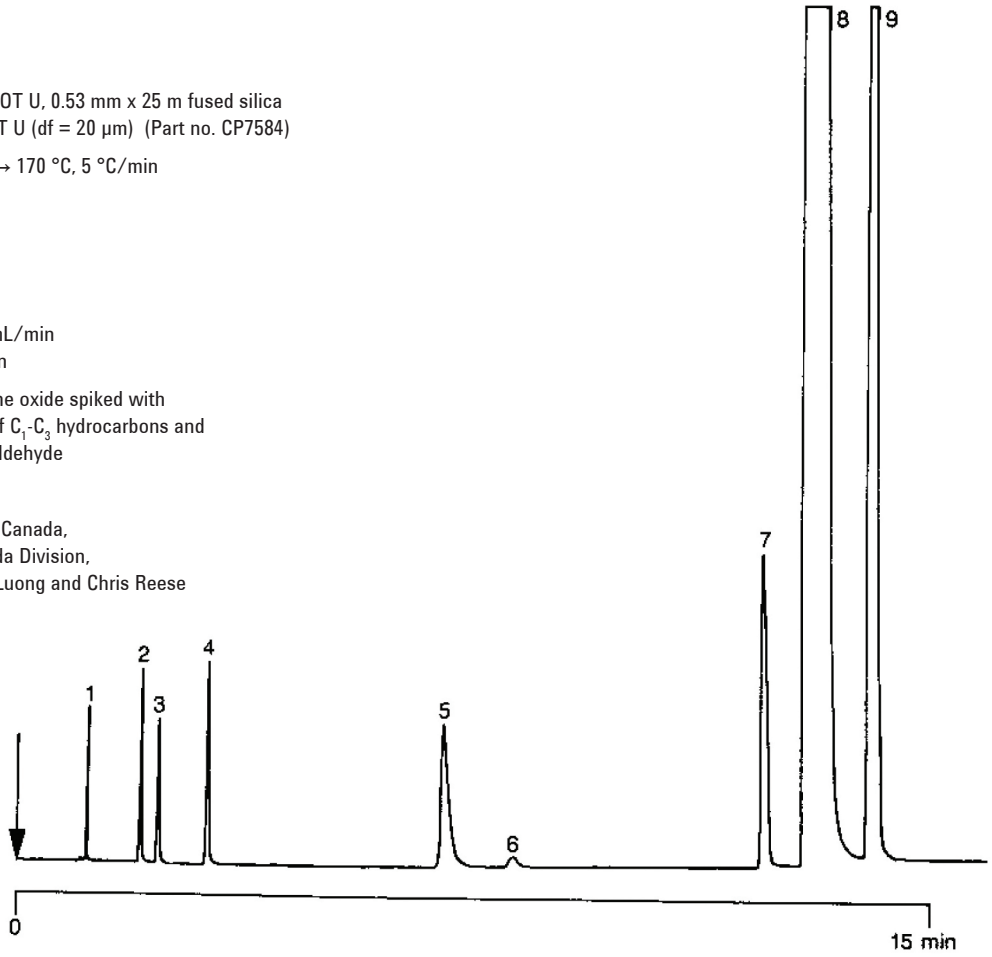
Conditions

Technique	:	GC-capillary
Column	:	Agilent PoraPLOT U, 0.53 mm x 25 m fused silica PLOT PoraPLOT U (df = 20 µm) (Part no. CP7584)
Temperature	:	40 °C (2 min) ⟶ 170 °C, 5 °C/min
Carrier Gas	:	He, 25 mL/min
Injector	:	Splitless T = 200 °C
Detector	:	FID hydrogen, 30 mL/min air, 400 mL/min
Sample	:	1 mL of ethylene oxide spiked with 50 ppm (v/v) of C_1-C_3 hydrocarbons and 1% (v/v) acetaldehyde
Courtesy	:	Dow Chemical Canada, Western Canada Division, R&D Lab, Jim Luong and Chris Reese

Peak identification

1. methane
2. ethylene
3. ethane
4. acetylene
5. propylene/propane
6. cyclopropane
7. vinylchloride
8. ethylene oxide
9. acetaldehyde



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