



Hydrocarbons, $C_2 - C_4$

Analysis of $C_1 + C_2$ impurities in ethylene

Application Note

Energy & Fuels

Authors

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Introduction

Gas chromatography with an Agilent CP- Al_2O_3/Na_2SO_4 column separates impurities in light hydrocarbon streams such as ethylene in eight minutes. Complete separation is possible at column temperatures far above ambient.



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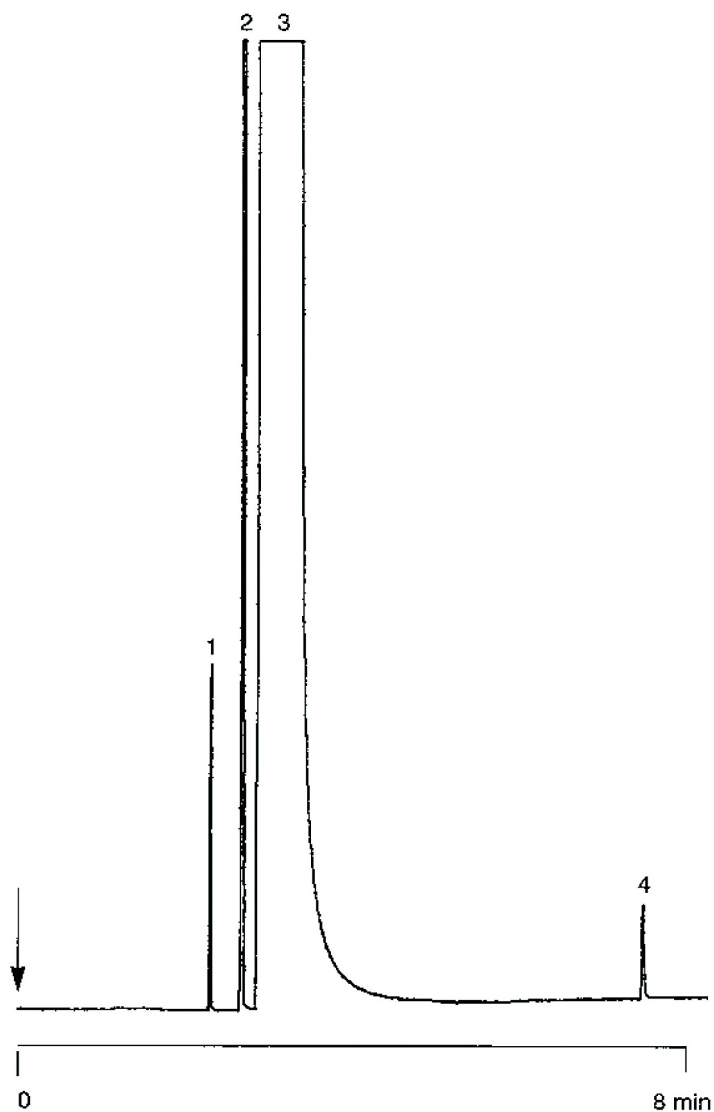
Conditions

Technique : GC-wide-bore
Column : Agilent CP-Al₂O₃/Na₂SO₄ PLOT UltiMetal,
0.53 mm x 50 m (df = 10 µm) (Part no. CP6968)
Temperature : 70 °C (5 min) → 170 °C, 10 °C/min
Carrier Gas : N₂, 5 mL/min, 10 kPa (0.1 bar, 1.4 psi)
Injector : Split,
T = 150 °C
Detector : FID
T = 250 °C
Sample Size : 2000 µL
Concentration Range : 10 ppm - balance
Solvent Sample : gas

Courtesy : A. Katzir, Carmel Olefins Ltd.,
Haifa, Israel

Peak identification

1. methane (20 ppm)
2. ethane (300 ppm)
3. ethylene (balance)
4. acetylene (10 ppm)



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This information is subject to change without notice.

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