

Hydrocarbons, $C_3 - C_4$

Analysis of impurities in cis-2-butene

Materials Testing & Research

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Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography using an Agilent CP- Al_2O_3/Na_2SO_4 column separates ten C_3 to C_4 impurities in cis-2-butene in 12 minutes.



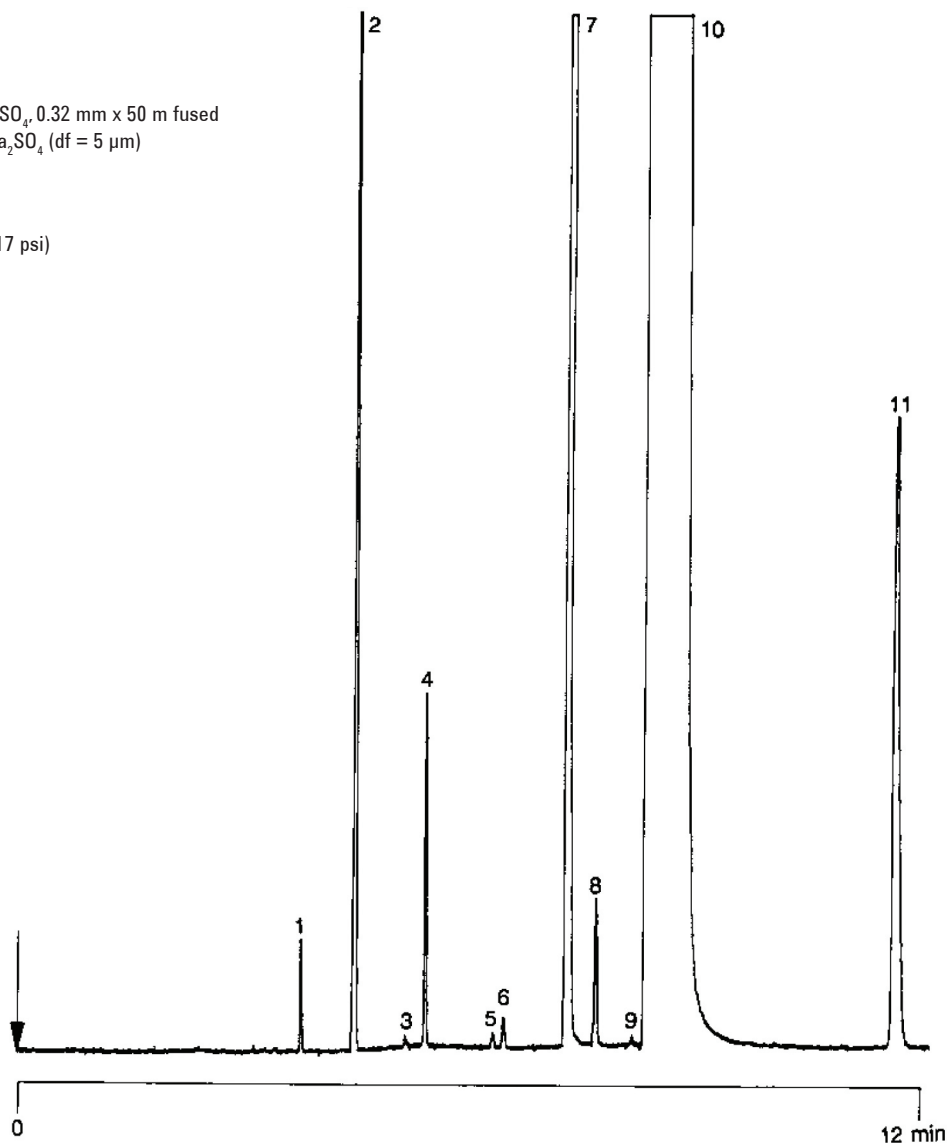
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Conditions

Technique : GC-capillary
Column : Agilent CP-Al₂O₃/Na₂SO₄, 0.32 mm x 50 m fused silica WCOT Al₂O₃/Na₂SO₄ (df = 5 µm) (Part no. CP7565)
Temperature : 110 °C
Carrier Gas : N₂, 120 kPa (1.2 bar, 17 psi)
Injector : Splitter, 20 mL/min
T = 150 °C
Detector : FID, 4 x 10⁻¹² Afs.
T = 200 °C
Sample Size : 100 µL
Concentration Range : 5 - 1000 ppm

Peak identification

1. propane
2. propene (propylene)
3. isobutane
4. n-butane
5. acetylene
6. cyclobutane
7. trans-2-butene
8. 1-butene
9. isobutene
10. cis-2-butene
11. 1,2-butadiene



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