Hydrocarbons, $C_1 - C_4$

Application Note

Energy & Fuels

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Introduction
Gas chromatography with an Agilent PoraPLOT Q column separates 14 $C_1$ to $C_4$ hydrocarbons in 12 minutes.
**Conditions**

- **Technique**: GC-capillary
- **Column**: Agilent PoraPLOT Q, 0.53 mm x 25 m fused silica
  PoraPLOT Q (df = 20 µm) (Part no. CP7554)
- **Temperature**: 35 °C (2 min) → 150 °C, 10 °C/min
- **Carrier Gas**: H₂, 15 mL/min
- **Injector**: Direct
- **Detector**: FID, 512 x 10⁻¹² Afs
- **Sample Size**: 20 µL
- **Concentration Range**: 1% in N₂

**Peak identification**

1. methane
2. ethene
3. ethyne
4. ethane
5. propene
6. propane
7. propadiene
8. propyne
9. isobutane
10. 1,3-butadiene + 1-butene
11. isobutene
12. n-butane
13. cis-2-butene
14. trans-2-butene

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