Hydrocarbons, C₁-C₃
Analysis of trace cyclopropane in propylene

Application Note

Energy & Fuels

Authors
Agilent Technologies, Inc.

Introduction
The Agilent CP-SilicaPLOT has a unique selectivity, as it’s the only capillary that elutes cyclopropane in front of propylene, with such high resolution that low ppm levels of cyclopropane can be measured in a matrix of propylene.
**Conditions**

- **Technique**: GC
- **Column**: Agilent CP-SilicaPLOT, 0.32 mm x 30 m fused silica (df = 4 μm) (Part no. CP8567)
- **Temperature**: 50 °C (5 min) → 100 °C, 5 °C/min → 200 °C, 20 °C/min
- **Carrier Gas**: Helium, 124 kPa
- **Injector**: Valve injector, outlet connected to splitter, 1:10, T = 250 °C
- **Detector**: FID, T = 250 °C
- **Sample Size**: 250 μL
- **Concentration Range**: ppm
- **Matrix Sample**: propylene

**Peak identification**

1. methane
2. ethane
3. ethylene
4. acetylene
5. propane
6. cyclo propane
7. propylene
8. C4-hydrocarbons