Gases
Analysis of COS in ethylene

Application Note

Energy & Fuels

Authors
Agilent Technologies, Inc.

Introduction
Gas chromatography with an Agilent CP-SilicaPLOT column separates carbonyl sulfide and ethylene in seven minutes.
**Conditions**

Technique: GC-capillary

Column: Agilent CP-SilicaPLOT, 0.32 mm x 30 m fused silica PLOT CP-SilicaPLOT (df = 4 μm) (Part no. CP8567)

Temperature: 40 °C (5 min) → 200 °C, 10 °C/min

Carrier Gas: He, 30 kPa (0.3 bar, 4.3 psi)

Injector: Split, T = 200 °C

Detector: MSD-TIC

Sample Size: 250 μL

Concentration Range: 500 ppm COS in ethylene

**Peak identification**

1. air
2. ethane
3. carbon dioxide
4. ethylene
5. carbonyl sulfide (500 ppm)
6. propylene

*Note: Separation of:*
- COS from hydrocarbons
- CO₂ from ethylene