Introduction

COS and H₂S can be quantified down to ppb levels because these components are separated from the hydrocarbon matrix by the unique selectivity of the Agilent CP-SilicaPLOT column. With selective detection there is no quenching effect, which results in higher sensitivity and reproducibility.
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: 50 °C (1 min) → 120 °C, 10 °C/min
Carrier Gas: He, 50 kPa (0.5 bar, 7 psi)
Injector: Valve
  T = 100 °C
Detector: Sulfur selective GC detector, Antek
Sample Size: 0.375 mL
Concentration Range: sulfur compounds: 1 ppb level

Courtesy: J.F. Borny, Antek Instruments Inc.

Peak identification
1. carbonyl sulfide (COS) 34 ppb
2. hydrogen sulfide (H₂S) 108 ppb