

## Sulfur compounds

# Separation of sulfur compounds in exhaust gases

## Application Note

Environmental

### Authors

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### Introduction

The Agilent CP-Sil 5 CB for Sulfur column provides a very good peak shape and resolution for sulfur compounds. For this reason this column is recommended for trace sulfur applications and can be used with sensitive detectors such as SCD, FPD and as shown here also with POD.

Detection limits of 0.2 ppm for  $\text{SO}_2$  and 3 ppm for  $\text{CS}_2$  are shown in chromatogram A. Using cryogenic preconcentration a larger amount can be injected while keeping a perfect peak shape. Using this technique the detection limits are 10 ppb for  $\text{CO}_2$  and 0.6 ppm for  $\text{CS}_2$ .



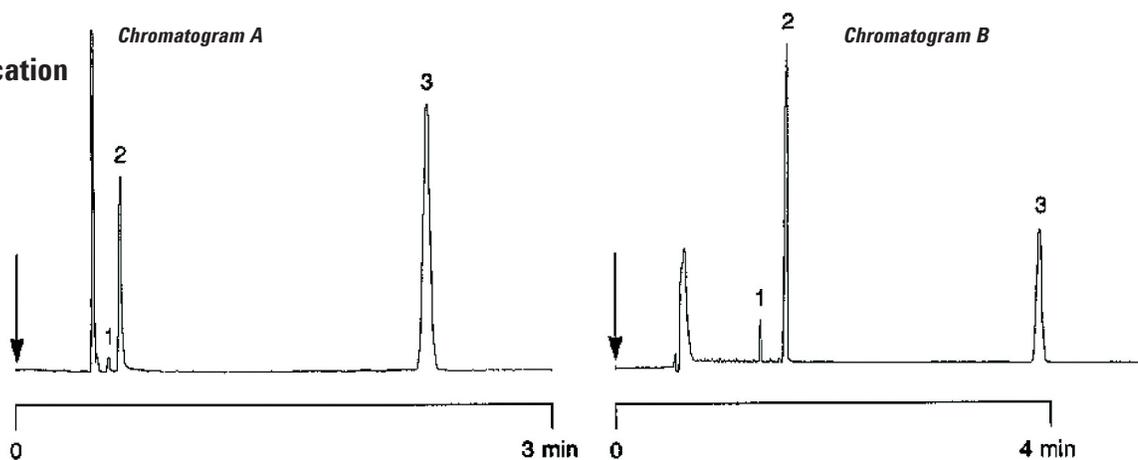
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## Conditions

Technique	: GC-capillary
Column	: Agilent CP-Sil 5 CB for Sulfur, 0.32 mm x 30 m, fused silica WCOT CP-Sil 5 CB for Sulfur (df = 4.0 µm) (Part no. CP7529)
Temperature	: 30 °C
Carrier Gas	: He = 1 00 kPa (1.0 bar, 14 psi),
Injector	: Direct T = 250 °C
Detector	: POD, VICI Valco instruments, model PD-C, T = 250 °C
Sample Size	: Chromatogram A: 25 µL Chromatogram B: 200 µL using cryogenic preconcentration with liquid nitrogen
Concentration Range	: 35-840 ppm in air
Courtesy	: T. H. Jelink and A. C. van Asten, AKZO Nobel, the Netherlands

### Peak identification

1. hydrogen sulfide
2. sulfur dioxide
3. carbon disulfide



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This information is subject to change without notice.

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