



## Sulfur gases

# Analysis of sulfur compounds in carbon dioxide

## Application Note

Materials Testing & Research

### Authors

Agilent Technologies, Inc.

### Introduction

Trace contaminants in beverage grade CO<sub>2</sub> can be analyzed nicely by GC. Detection limit required is 50 ppb. The Agilent PFPD in combination with an Agilent CP-Sil 5 CB thick-film column makes this determination possible. Starting temperature must be -20 °C, to separate SO<sub>2</sub> from COS.



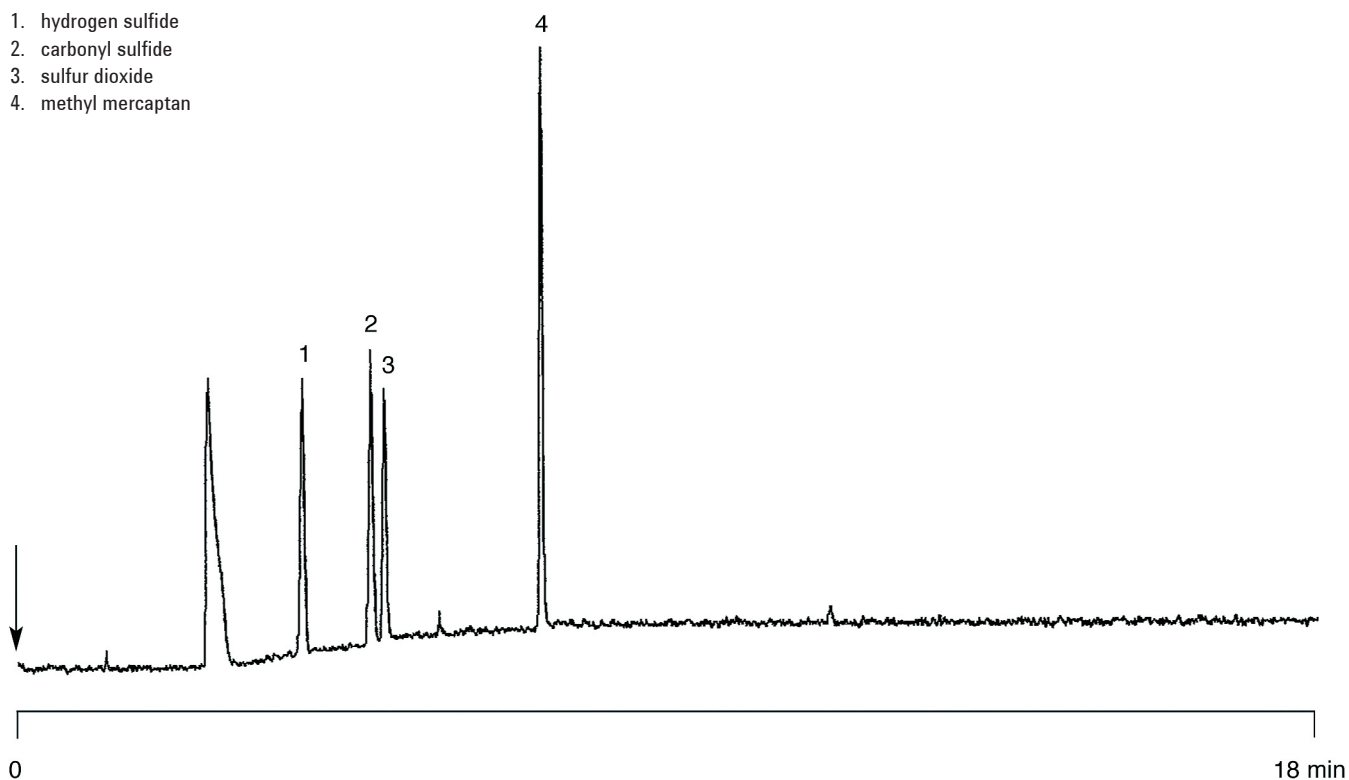
**Agilent Technologies**

## Conditions

Technique : GC-capillary  
Column : Agilent CP-Sil 5 CB, 0.32 mm x 50 m fused silica  
WCOT (df = 5.0  $\mu\text{m}$ ) (Part no. CP7690)  
Temperature : -20 °C (2 min)  $\rightarrow$  200 °C, 100 °C/min  
Carrier Gas : He, 60 kPa (0.6 bar, 8 psi)  
Injector : Gas sampling valve  
Detector : PFPD  
T = 250 °C  
Sample Size : 250  $\mu\text{L}$

## Peak identification

1. hydrogen sulfide
2. carbonyl sulfide
3. sulfur dioxide
4. methyl mercaptan



[www.agilent.com/chem](http://www.agilent.com/chem)

This information is subject to change without notice.

© Agilent Technologies, Inc. 2011

Printed in the USA

31 October, 2011

First published prior to 11 May, 2010

A01626



**Agilent Technologies**