

Flame retardants

Analysis of brominated diphenylethers (flame retardants)

Application Note

Materials Testing & Research

Authors

Agilent Technologies, Inc.

Introduction

Analysis of brominated diphenyl ethers (flame retardants) via isotope dilution and GC/MS with an Agilent VF-Xms GC column.



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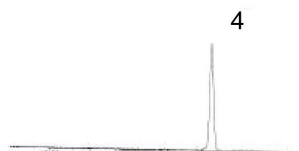
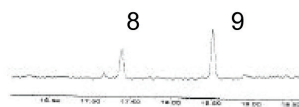
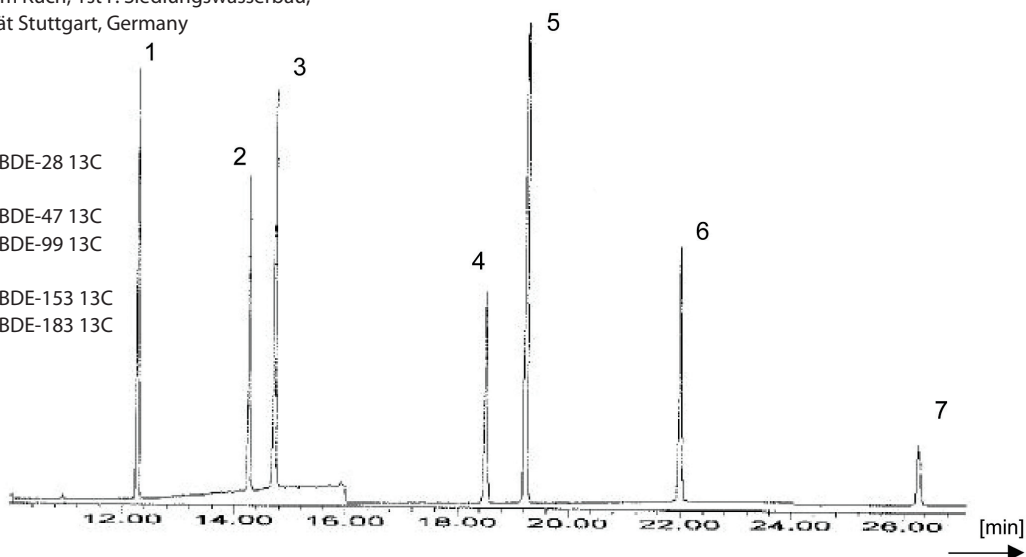
Conditions

Technique : GC-capillary
Column : Agilent VF-Xms, 0.25 mm x 30 m fused silica (df = 0.25 µm) (Part no. CP8806)
Temperature : 130 °C (2 min) to 210 °C, 20 °C/min (1 min) to 270 °C, 10 °C/min (5 min) to 300 °C (12 min)
Carrier Gas : He 5.0, 155 kPa, constant pressure
Injector : Splitless, 270 °C
Detector : MS, EI mode, 280 °C
Sample Size : 1 µL
Solvent : Toluene

Courtesy : Dr. Bertram Kuch, 1st F. Siedlungswasserbau, Universität Stuttgart, Germany

Peak identification

- | | |
|----------------------------|-------------|
| 1. tribromodiphenylether | BDE-28 13C |
| 2. PCB-101 13C IS | |
| 3. tetrabromodiphenylether | BDE-47 13C |
| 4. pentabromodiphenylether | BDE-99 13C |
| 5. PCB-209 13C IS | |
| 6. hexabromodiphenylether | BDE-153 13C |
| 7. heptabromodiphenylether | BDE-183 13C |
| 8. BDE-100 | |
| 9. BDE-99 | |



[min] →

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