Organophosphorus pesticides

Analysis of organophosphorus pesticides with thioether groups

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with an Agilent CP-Sil 13 CB column separates 17 organophosphorus pesticides with thioether groups in 24 minutes.

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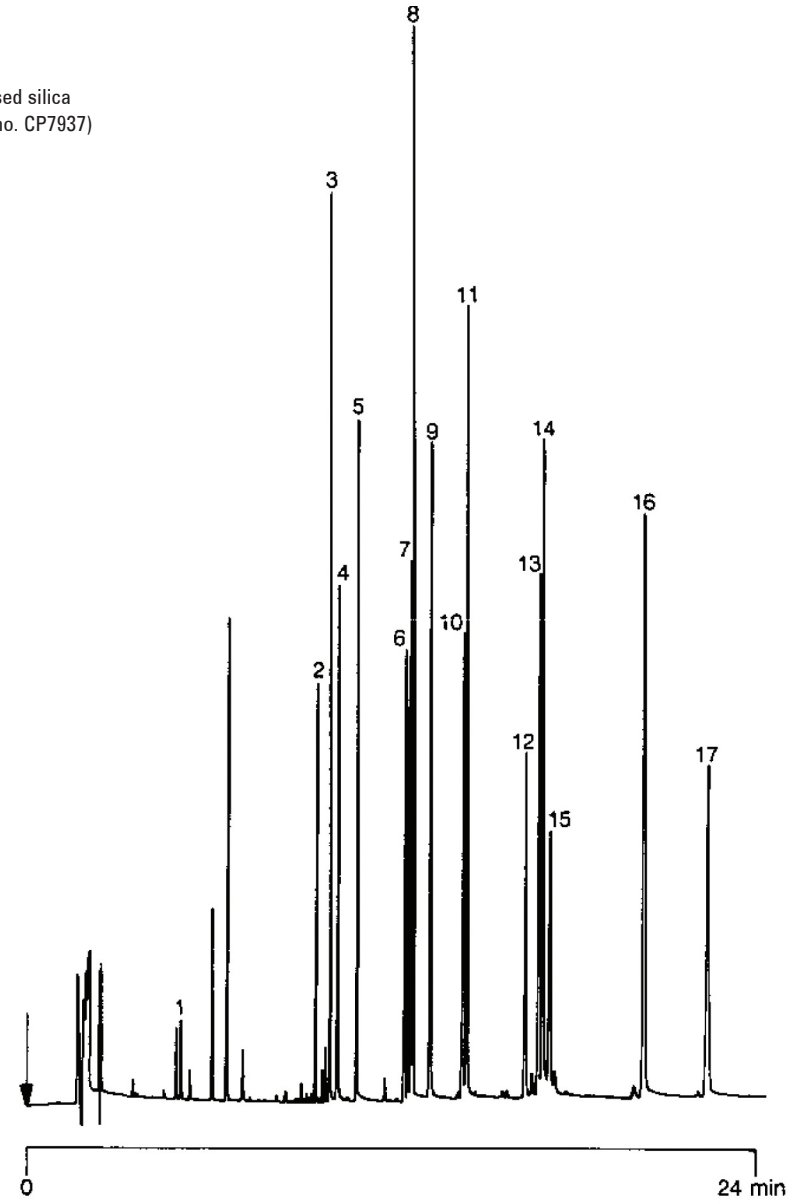
Conditions

Technique	:	GC-capillary
Column	:	Agilent CP-Sil 13 CB, 0.32 mm x 50 m fused silica WCOT CP-Sil 13 CB (df = 0.4 µm) (Part no. CP7937)
Temperature	:	80 °C → 270 °C, 20 °C/min
Carrier Gas	:	H_2, 100 kPa (1.0 bar, 14 psi)
Injector	:	On-column
Detector	:	NPD T = 300 °C
Sample Size	:	1 µL
Concentration Range	:	0.25 - 1 ng/µL
Courtesy	:	Mr Lembacher, Hipp K. G., Pfaffenhofen, Germany

Peak identification

	Concentration range (ng/µL)
1. triethyl phosphate	0.25
2. demeton-S-methyl	0.5
3. phorate	0.5
4. demeton	0.5
5. disulfoton	0.5
6. demeton-S-methylsulfon	1.0
7. fenthion	0.5
8. phorate-sulfon	1.0
9. demeton-sulfon	1.0
10. fenamiphos	0.5
11. disulfoton-sulfon	1.0
12. fensulfothion	0.5
13. fenthion-sulfon	1.0
14. fenamiphos-sulfon	1.0
15. carbophenothion	0.5
16. fensulfothion-sulfon	1.0
17. carbophenothion-sulfon	1.0



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