



Pesticides

Analysis of organophosphates in lemon oil

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with an Agilent CP-Sil 8 CB column separates three organophosphate pesticides in lemon oil in 16 minutes.



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Conditions

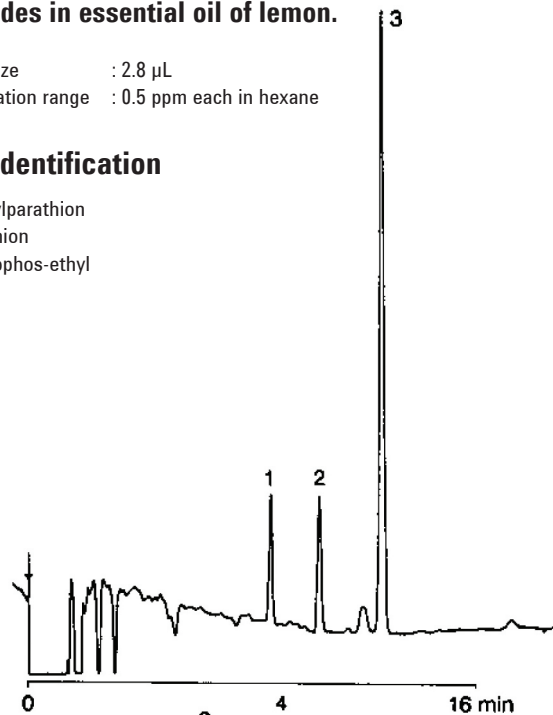
Technique	: GC-capillary
Column	: Agilent CP-Sil 8 CB, 0.53 mm x 10 m fused silica WCOT CP-Sil 8 CB (5.0 μ m) (Part no. CP7646)
Temperature	: 180 °C $\rightarrow$ 240 °C, 6 °C/min
Carrier Gas	: He, 40 kPa (0.4 bar, 5.8 psi)
Injector	: director, T = 275 °C
Detector	: PFTD (Parallel Flame Thermoionic Detector, FID and TD parallel in a single unit. Signals of the two detectors amplified separately and recorded on a single channel recorder. M. Riva and A. Carrisano, J. Chrom. 269 - 275 1968)
Upside	: All compounds with N or P atoms; 100 x 10 ⁻¹² Afs
Downside	: Standard FID; 16 x 10 ⁻¹² Afs
Courtesy:	: Prof. M. Riva, Laboratories of Research, Star Spa, Agrate Brianza (mi), Italy

Pesticides in essential oil of lemon.

Sample size	: 2.8 μ L
Concentration range	: 0.5 ppm each in hexane

Peak identification

1. methylparathion
2. parathion
3. bromophos-ethyl

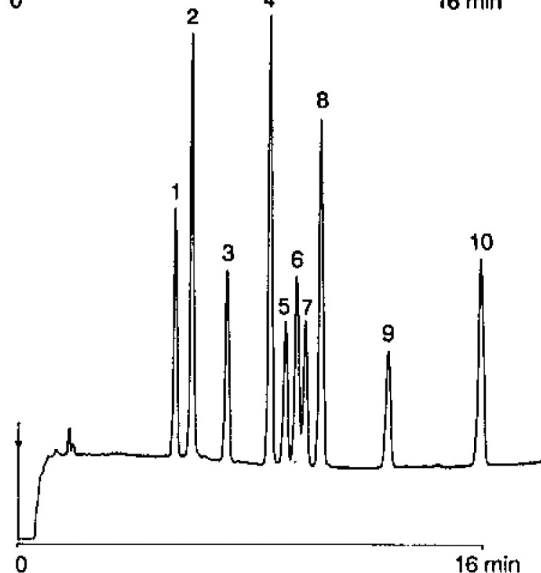


Standard mixture pesticides

Sample size	: 0.4 μ L
Concentration range	: 1 = 2.8 ppm 2 = 1.8 ppm 3 = 19 ppm

Peak identification

1. thimet
2. dimethoate
3. disulphoton
4. methyl-parathion
5. ronnel
6. pirimiphos-methyl
7. malathion
8. parathion
9. bromophos-ethyl
10. ethion



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This information is subject to change without notice.

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