



PCBs/pesticides

Single column separation of pesticides and PCBs

Application Note

Environmental

Authors

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Introduction

The Agilent CP-Sil 5/C18 for PCB column is one of the most apolar phases of standard columns in routine capillary GC. It has a slightly different selectivity than methyl- or methyl/phenyl siloxane phases. Therefore, separation and analysis of all of these compounds in the testmixture is not possible on any other single column.



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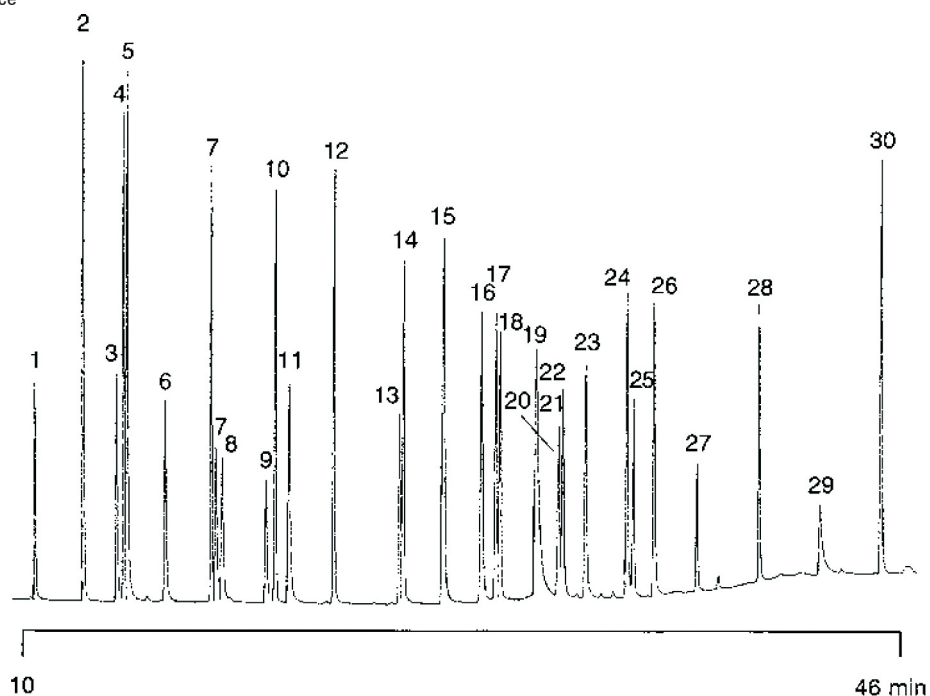
Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 5/C18 for PCB, 0.25 mm x 50 m fused silica WCOT (df = 0.1 µm) (Part no. CP7477) + retention gap
Temperature : 90 °C (3 min) → 170 °C, 20 °C/min; 170 °C (5 min) → 215 °C, 2 °C/min; 215 °C (0 min) → 260 °C (6 min) 5 °C/min
Carrier Gas : He, 1 mL/min, 118 kPa (1.18 bar, 16 psi)
Injector : On-column, T = 90 °C
Detector : ECD T = 275 °C
Sample Size : 4 µL
Concentration Range : 50 µg/L
Solvent Sample : heptane

Courtesy : B. LeBot and R. Seux,
Ecole Nationale de Santé Publique,
L.E.R.E.S, Rennes, France

Peak identification

1. trifluralin
2. α-HCH
3. β-HCH
4. γ-HCH
5. hexachlorobenzene
6. chloroacetone
7. heptachlor
8. PCB 28
9. PCB 31
10. PCB 52
11. aldrin
12. metazachlor
13. heptachlor epoxide
14. DDE, 2,4'
15. endosulfan
16. dieldrin + PCB 101
17. DDE, 4,4'
18. endrin
19. endosulfan
20. noflurazon
21. DDT, 2,4'
22. DDD, 4,4'
23. PCB 118
24. PCB 153
25. DDT, 4,4'
26. PCB 138
27. methoxychlor
28. PCB 180
29. prochloraz
30. PCB 194



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