



Pesticides

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with an Agilent CP-Sil 13 CB column separate 58 organophosphorus pesticides in 26 minutes.

There are many different types of organophosphorous pesticides. The CP-Sil 13 CB phase provides an excellent selectivity for separating most of these pesticides at nanogram level. Here, a 0.32 mm capillary was chosen because the sample was injected via on-column injection. No bleed was observed with the NPD, which is due to the composition and stability of the stationary phase. The CP-Sil 13 CB does not contain cyano, which results in low bleed and high reproducibility.



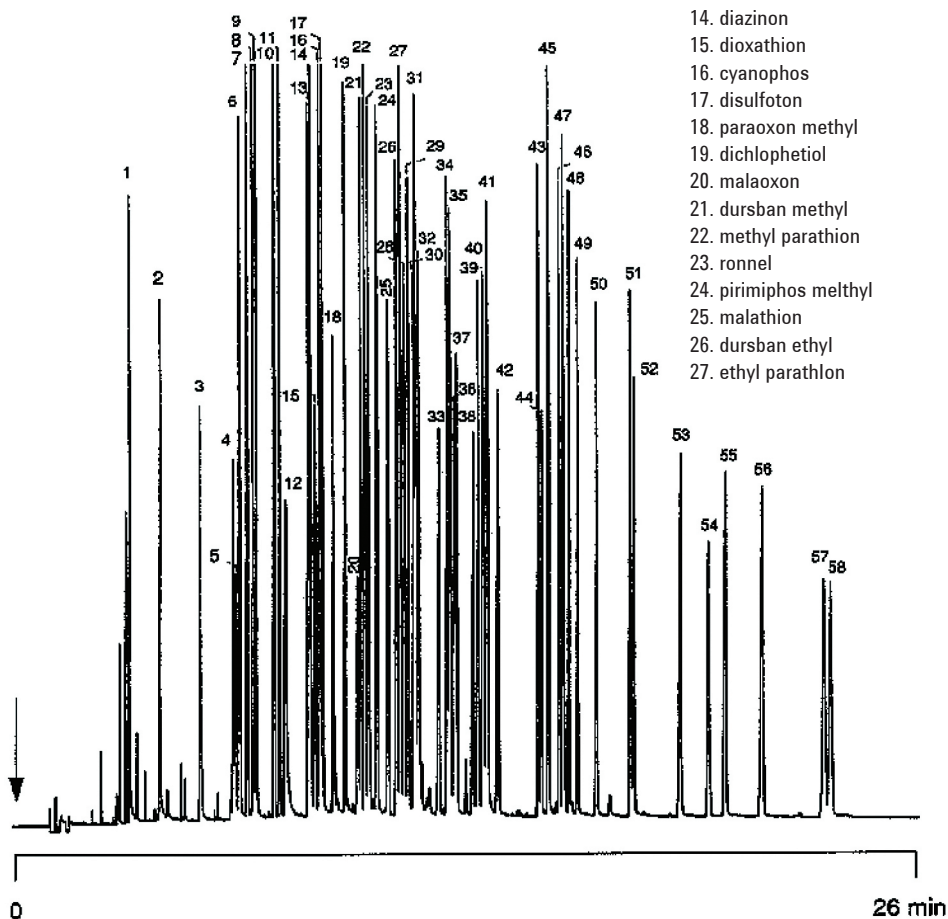
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Conditions

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. 7937)
Temperature : 80 °C → 270 °C, 20 °C/min
Carrier Gas : H₂, 100 kPa (1.0 bar, 14.3 psi)
Injector : on-column
Detector : NPD
Sample Size : 1.0 µL
Concentration Range : 1 ng /compound

Peak identification

- | | |
|-----------------------|----------------------------|
| 1. triethyl phosphate | 28. trichloronate |
| 2. dichlorvos (DDVP) | 29. pirimiphos ethyl |
| 3. mevinphos | 30. cruformate |
| 4. tinox | 31. chlorthion |
| 5. TCPP | 32. bromophos methyl |
| 6. heptenophos | 33. chlorfenvinphos |
| 7. tributyl phosphate | 34. quinalphos |
| 8. phorate oxon | 35. phenthoate |
| 9. ethoprop | 36. bromophos ethyl |
| 10. sulfotep | 37. prophaphos |
| 11. phorate | 38. tetrachlorvinphos |
| 12. monocrotophos | 39. methiciathion |
| 13. dimethoate | 40. fenamiphos |
| 14. diazinon | 41. bromfenvinphos |
| 15. dioxathion | 42. profenvos |
| 16. cyanophos | 43. ethion |
| 17. disulfoton | 44. fensulfothion |
| 18. paraoxon methyl | 45. triaminphos |
| 19. dichlophetiol | 46. triazophos |
| 20. malaoxon | 47. carbophenothion |
| 21. dursban methyl | 48. famphur |
| 22. methyl parathion | 49. edifenphos |
| 23. ronnel | 50. tripoonyl phosphate |
| 24. pirimiphos methyl | 51. EPN |
| 25. malathion | 52. CMP (phenkapton) |
| 26. dursban ethyl | 53. phosalon |
| 27. ethyl parathion | 54. azinphos methyl |
| | 55. pyrazophos |
| | 56. azinphos ethyl |
| | 57. coumaphos |
| | 58. tri-p-cresyl phosphate |



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This information is subject to change without notice.

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