

Application Report 405

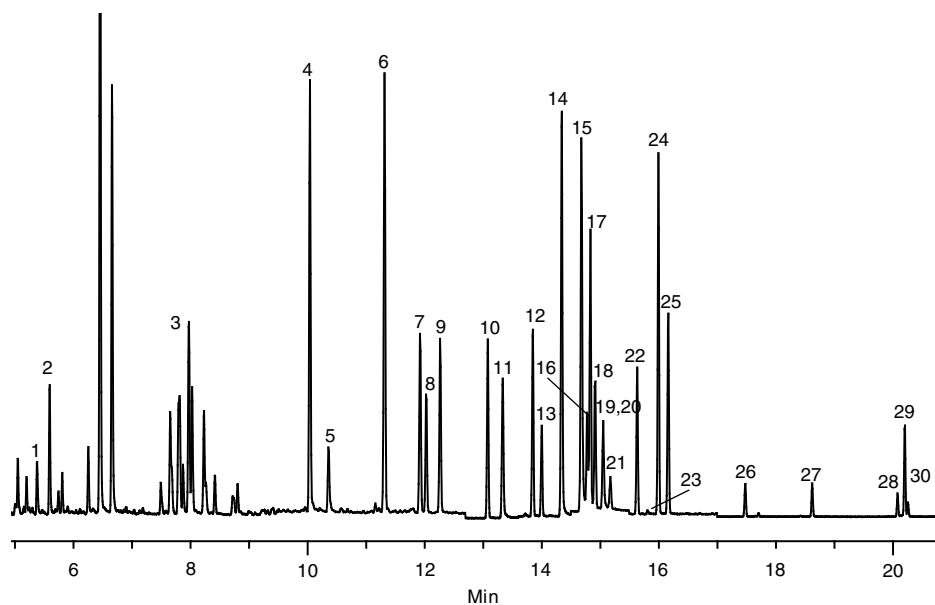
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Acquisition System: 5973 GC-MS
Notebook Reference: 1569-037

GC-MS Analysis Agricultural Pesticides on the SLB-5ms

This application illustrates the analysis of 29 different agricultural pesticides of different classifications and functionalities. The analysis was done by GC-MS using selected ion monitoring (SIM) to allow detection of all compounds at 100 µg/L. The standard solution was made in toluene to increase its stability and enhance response of some of the pesticides. The extra peaks in the first portion of the run are due to interferences from the solvent.

Key Words

chlorinated pesticides, organophosphorus pesticides, carbamate pesticides, agricultural pesticides, SLB-5ms, 28471-U



G003595

Conditions

column: SLB-5ms, 30 m x 0.25 mm I.D., 0.25 µm (28471-U)
oven: 100 °C (1 min.), 10 °C/min. to 300 °C (5 min.)
inj.: 250 °C
MSD interface: 300 °C
scan range: selected ion monitoring (SIM)
carrier gas: helium, 1 mL/min. constant flow
injection: 1 µL, pulsed (20 psi until 0.20 min.), splitless (1.0 min.)
liner: 4 mm I.D., single taper
sample: 100 ppb pesticide mixture in toluene

Peak IDs

1. Methamidophos	16. Pencyanazole
2. Dichlorvos	17. Tolyfluanid
3. Acephate	18. Heptachlor epoxide
4. Propoxur	19. Captan
5. Ethoprophos (I.S.)	20. Thiabendazole
6. Hexachlorobenzene	21. Folpet
7. γ-BHC	22. cis-Chlordane
8. Diazinon	23. Imazalil
9. Chlorothalonil	24. 4,4'-DDE
10. Chlorpyrifos-methyl	25. Dieldrin
11. Carbaryl	26. Endosulfan sulfate
12. Dichlofluanid	27. Dicofof
13. Chlorpyrifos	28. cis-Permethrin
14. p-Dichlorobenzophenone	29. trans-Permethrin
15. Cyprodinil	30. Coumaphos