

Application Report 27

US EPA Method 8081 Chlorinated Pesticides on Equity-1701

US EPA method 8081 describes the GC/ECD analysis of organochlorine pesticides and requires the use of a primary and confirmation column. In this application, 20 compounds listed in method 8081, plus two surrogates, were analyzed on the Equity-1701 column. These same run conditions will separate all 22 compounds on an Equity-5 column of similar dimensions. The elution order is different between the two columns, making the Equity-1701 a suitable choice as a confirmation column to the Equity-5. If the Equity-1701 is used in its own injection port as part of a dual column setup, the linear velocity can be adjusted to resolve endosulfan sulfate and methoxychlor (peaks 18 and 21.)

Key Words

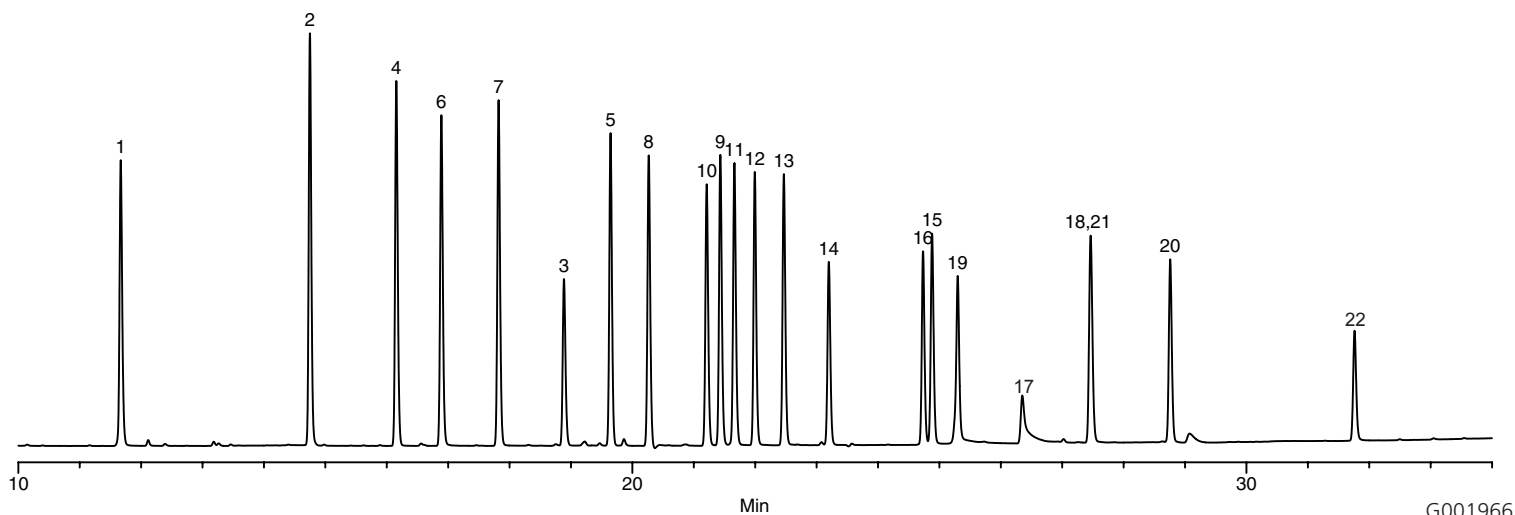
Chlorinated pesticides, method 8081, Equity, 28372-U, 46845-U

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Raw Data File Name:

1701\211BC015.D

Acquisition System: GC 1777



G001966

Conditions

Column: Equity-1701, 30m x 0.25mm ID, 0.25 μ m
Cat. No.: 28372-U
Oven: 100°C (2 min) to 160°C @ 15°C/min to 280°C @ 5°C/min (10 min)
Inj.: 225°C
Det.: ECD, 310°C
Flow: Helium, constant flow, 30cm/sec @ 100°C
Injection: 2 μ L, splitless (0.5 min)
Liner: 4mm ID double taper
Sample: 50ppb each of a 22 component chlorinated pesticide standard (Cat. No. 46845-U)

Peak IDs

1. 2,4,5,6-Tetrachloro-m-xylene (surr.)
2. α -BHC
3. β -BHC
4. γ -BHC
5. δ -BHC
6. Heptachlor
7. Aldrin
8. Heptachlor epoxide
9. γ -Chlordane
10. Endosulfan I
11. α -Chlordane
12. 4,4'-DDE
13. Dieldrin
14. Endrin
15. Endosulfan II
16. 4,4'-DDD
17. Endrin aldehyde
18. Endosulfan sulfate
19. 4,4'-DDT
20. Endrin ketone
21. Methoxychlor
22. Decachlorobiphenyl (surr.)