



Determination of dioxins and dibenzofurans using GC/MS

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Use Agilent FactorFour VF-5ms GC columns to separate dioxins and dibenzofurans.



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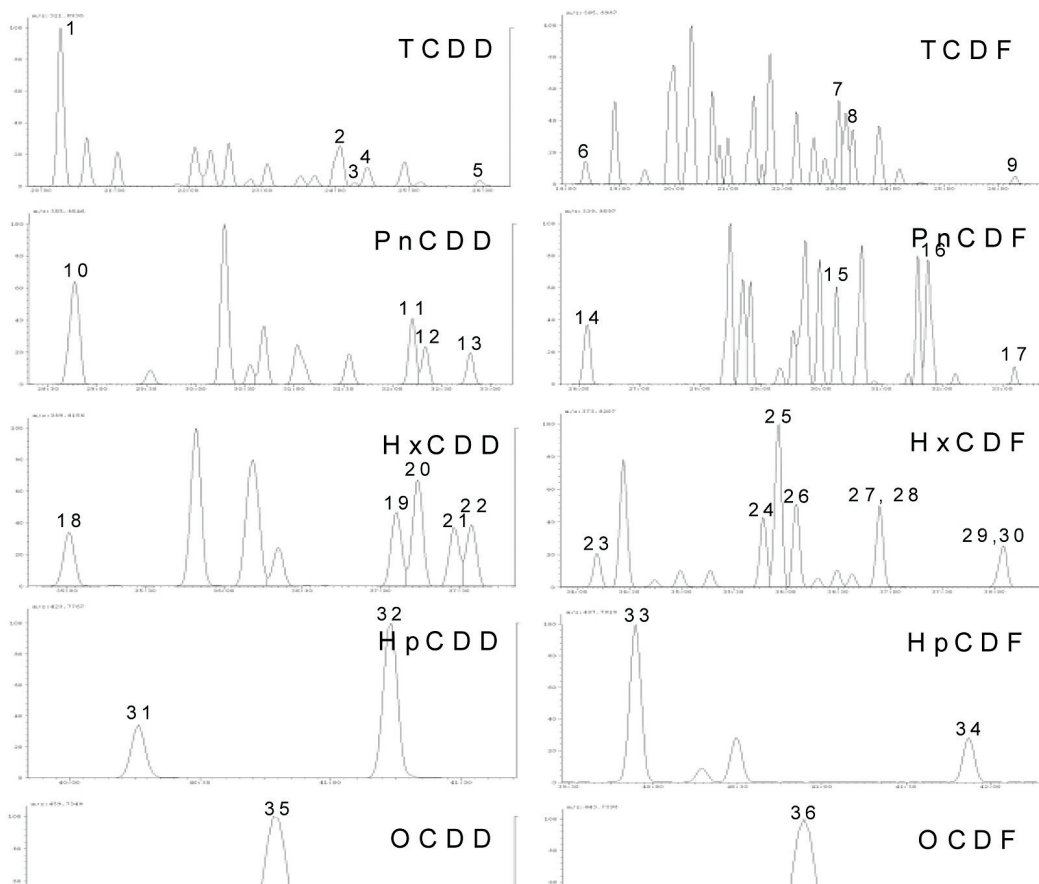
Conditions

Technique : GC/MS
 Column : Agilent FactorFour VF-5ms, 0.25 mm x 60 m fused silica (df = 0.25 µm) (Part no. CP8960)
 Temperature : 160 °C for 1 minute, 160 - 220° C at 30 °C/min and hold for 16 min, 220 - 230 °C at 5 °C/min and hold for 5 min, 230 - 310 °C at 5 °C/min and hold for 5 min
 Carrier Gas : Helium, constant pressure at 290 kPa
 Injector : Splitless, Temp: 260 °C
 Detector : High Resolution Magnetic Sector MS
 Interface temp : 260 °C

Courtesy : Mass Chromatograms are courtesy of V.N. Fishman, G.D. Martin and L.L. Lamparski, The Dow Chemical Company, Midland, Michigan, USA

Peak identification

1. 1,3,6,8-TCDD
2. 1,2,3,7/1,2,3,8-TCDD
3. 1,2,3,9-TCDD
4. 2,3,7,8-TCDD
5. 1,2,8,9-TCDD
6. 1,3,6,8-TCDF
7. 2,3,4,7-TCDF
8. 2,3,7,8-TCDF
9. 1,2,8,9-TCDF
10. 1,2,4,6,8/1,2,4,7,9-PnCDD
11. 1,2,3,7,8-PnCDD
12. 1,2,3,6,7-PnCDD
13. 1,2,3,8,9-PnCDD
14. 1,3,4,6,8/1,2,4,6,8-PnCDF
15. 1,2,3,7,8-PnCDF
16. 2,3,4,7,8-PnCDF
17. 1,2,3,8,9-PnCDF
18. 1,2,4,6,7,9/1,2,4,6,8,9-HxCDD
19. 1,2,3,4,7,8-HxCDD
20. 1,2,3,6,7,8-HxCDD
21. 1,2,3,4,6,7-HxCDD
22. 1,2,3,7,8,9-HxCDD
23. 1,2,3,4,6,8-HxCDF
24. 1,2,3,4,6,7-HxCDF
25. 1,2,3,4,7,8-HxCDF
26. 1,2,3,6,7,8-HxCDF
27. 1,2,3,6,8,9-HxCDF
28. 2,3,4,6,7,8-HxCDF
29. 1,2,3,7,8,9-HxCDF
30. 1,2,3,4,8,9-HxCDF
31. 1,2,3,4,6,7,9-HpCDD
32. 1,2,3,4,6,7,8-HpCDD
33. 1,2,3,4,6,7,8-HpCDF
34. 1,2,3,4,7,8,9-HpCDF
35. OCDD
36. OCDF



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This information is subject to change without notice.

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