



Halogenated hydrocarbons, C₁₂ Chlorobiphenyl standard analysis

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with an Agilent CP-Sil 88 column separates over 50 chlorobiphenyls in 72 minutes.



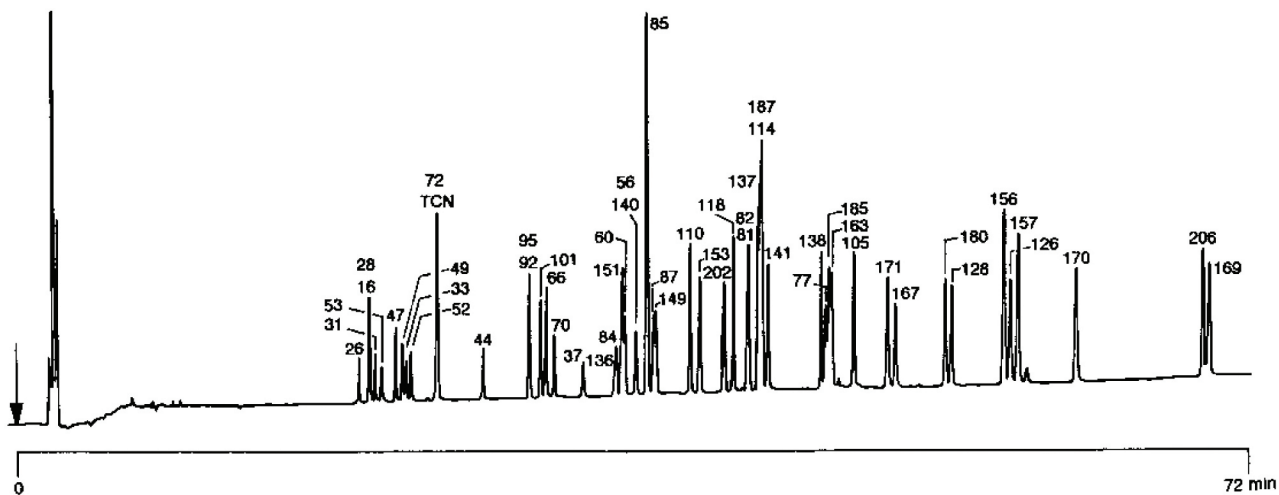
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Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 88 CB, 0.25 mm x 50 m fused silica
WCOT CP-Sil 88 CB (df = 0.20 µm)
(Part no. CP6173)
Temperature : 90 °C (3 min) → 170 °C, 30 °C/min (10 min) →
240 °C, 1 °C/min
Carrier Gas : H₂, 138 kPa (1.38 bar, 20 psi), 47 cm/s
Injector : Splitless, 2 min (splitter closing time), T = 270 °C
Detector : ECD, T = 360 °C
Sample Size : 1 µL
Concentration Range : 40 - 90 ng/mL, except for PCB 85:210 ng/mL
Solvent Sample : iso-octane
Courtesy : J. de Boer, Q. T. Dao and R. van Dortmond,
Institute for fishery investigations, The Netherlands

Peak identification

16. 2,2',3-trichlorobiphenyl	118. 2,3',4,4',5-pentachlorobiphenyl
26. 2,3',5-trichlorobiphenyl	126. 3,3',4,4',6-pentachlorobiphenyl
28. 2,4,4'-trichlorobiphenyl	128. 2,2',3,3',4,4'-hexachlorobiphenyl
31. 2,4',5-trichlorobiphenyl	136. 2,2',3,3',6,6'-hexachlorobiphenyl
33. 2',3,4-trichlorobiphenyl	137. 2,2',3,4,4',5-hexachlorobiphenyl
37. 3,4,4'-trichlorobiphenyl	138. 2,2',3,4,4',5'-hexachlorobiphenyl
44. 2,2',3,5'-tetrachlorobiphenyl	140. 2,2',3,4,4',6'-hexachlorobiphenyl
47. 2,2',4,4'-tetrachlorobiphenyl	141. 2,2',3,4,5,5'-hexachlorobiphenyl
49. 2,2',4,5'-tetrachlorobiphenyl	149. 2,2',3,4',5',6-hexachlorobiphenyl
52. 2,2',5,5'-tetrachlorobiphenyl	151. 2,2',3,5,5',6-hexachlorobiphenyl
53. 2,2',5,6'-tetrachlorobiphenyl	153. 2,2',4,4',5,5'-hexachlorobiphenyl
56. 2,3,3',4'-tetrachlorobiphenyl	156. 2,3,3',4,4',5-hexachlorobiphenyl
60. 2,3,4,4'-tetrachlorobiphenyl	157. 2,3,3',4,4',5'-hexachlorobiphenyl
66. 2,3',4,4'-tetrachlorobiphenyl	163. 2,3,3',4',5,6-hexachlorobiphenyl
70. 2,3',4,5'-tetrachlorobiphenyl	167. 2,3',4,4',5,5'-hexachlorobiphenyl
72. 2,3',5,5'-tetrachlorobiphenyl	169. 3,3',4,4',5,5'-hexachlorobiphenyl
77. 3,3',4,4'-tetrachlorobiphenyl	170. 2,2',3,3',4,4',5-heptachlorobiphenyl
81. 3,4,4',5-tetrachlorobiphenyl	171. 2,2',3,3',4,4',6-heptachlorobiphenyl
82. 2,2',3,3',4-pentachlorobiphenyl	180. 2,2',3,4,4',5,5'-heptachlorobiphenyl
84. 2,2',3,3',6-pentachlorobiphenyl	185. 2,2',3,4,5,5',6-heptachlorobiphenyl
85. 2,2',3,4,4'-pentachlorobiphenyl	187. 2,2',3,4',5,6,6'-heptachlorobiphenyl
87. 2,2',3,4,5'-pentachlorobiphenyl	202. 2,2',3,3',5,5',6,6'-octachlorobiphenyl
92. 2,2',3,5,5'-pentachlorobiphenyl	206. 2,2',3,3',4,4',5,5',6-nonachlorobiphenyl
95. 2,2',3,5',6-pentachlorobiphenyl	Tetrachloronaphthalene (TCN)
101. 2,2',4,5,5'-pentachlorobiphenyl	
105. 2,3,3',4,4'-pentachlorobiphenyl	
110. 2,3,3',4',6-pentachlorobiphenyl	
114. 2,3,4,4',5-pentachlorobiphenyl	



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This information is subject to change without notice.

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