Halogenated hydrocarbons, C_1 - C_2

Analysis of halogenated hydrocarbons in air

Application Note

Environmental

Authors

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Introduction

Gas chromatography with an Agilent CP-Sil 5 CB column separates eight C_1 to C_2 halogenated hydrocarbons in air in 20 minutes.

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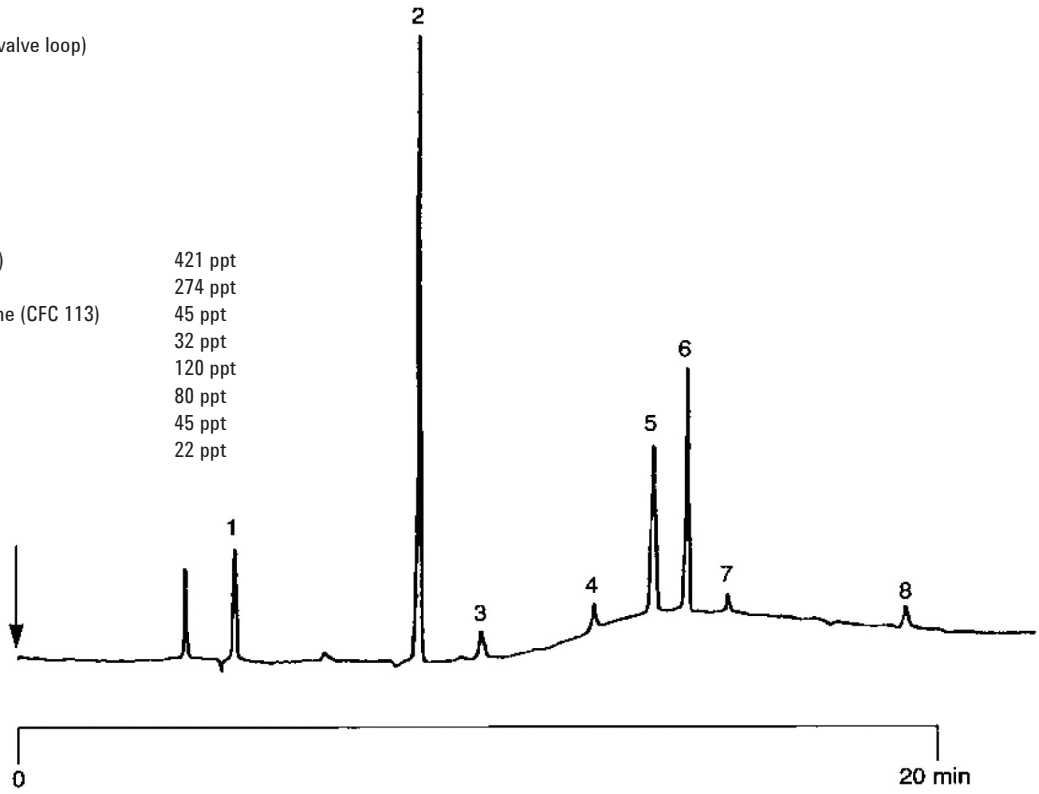
Conditions

Technique	:	GC-TCT
Column	:	Agilent CP-Sil 5 CB, 0.32 mm x 50 m fused silica WCOT CP-Sil 5 CB (df = 5 µm) (Part no. CP7690)
Temperature	:	45 °C (3 min) ⟶ 180 °C, 10 °C/min; 180 °C (30 min)
Carrier Gas	:	He, 1.5 mL/min
Injector	:	TCT
	Cold trap	: Deactivated Fused-Silica 0.53 mm
	Cryofocussing	: -140 °C
	Precool time	: 15 min
	Injection temp.	: 100 °C
	Injection time	: 1 min
	GC-injection block temp.	: 250 °C
Detector	:	ECD T = 250 °C
Sample Size	:	0.5 mL (via valve loop)
Sample Temperature	:	ambient
Concentration Range	:	ppt

Peak identification

1.	dichlorodifluoromethane (CFC 12)	421 ppt
2.	fluorotrichloromethane (CFC 11)	274 ppt
3.	1,1,2-trifluoro-1,2,2-trichloroethane (CFC 113)	45 ppt
4.	trichloromethane	32 ppt
5.	1,1,1-trichloroethane	120 ppt
6.	tetrachloromethane	80 ppt
7.	trichloroethylene	45 ppt
8.	tetrachloroethylene	22 ppt



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