



Chemicals

Analysis of chemical warfare agents

Application Note

Homeland Security

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography using an Agilent CP-Sil 8 CB column separates chemical warfare agents in 24 minutes.



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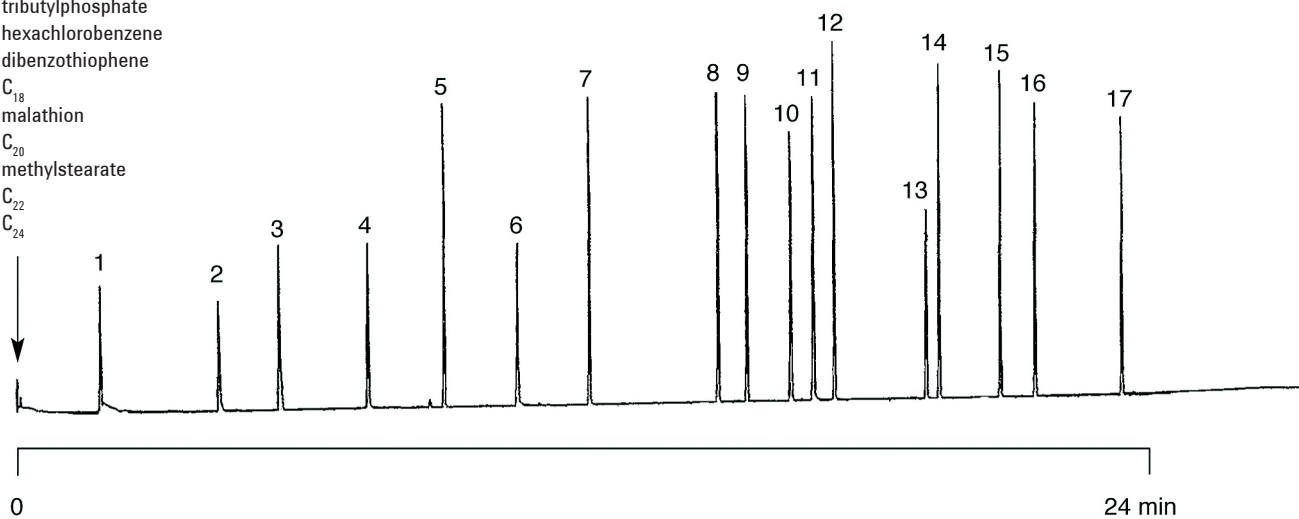
Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 8 CB, 0.25 mm x 30 m fused silica
WCOT (df = 0.25 μ m) (Part no. CP8751)
Temperature : 40 °C (2 min) \rightarrow 280 °C, 10 °C/min
Carrier Gas : He, 39cm/s, 128 kPa (1.28 bar, 18.6 psi)
Injector : Splitless
T = 250 °C
Detector : FID
T = 300 °C
Sample Size : 2 μ L
Concentration Range : 10 ppm

Courtesy : M. S. Sokolwski, Organization for the prohibition of
Chemical Weapons

Peak identification

1. C₈
2. trimethyl phosphate
3. C₁₀
4. 2,6-dimethylphenol
5. C₁₂
6. 5-chloro 2-methyl aniline
7. C₁₄
8. C₁₆
9. tributylphosphate
10. hexachlorobenzene
11. dibenzothiophene
12. C₁₈
13. malathion
14. C₂₀
15. methylstearate
16. C₂₂
17. C₂₄



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