



Polycyclic aromatic hydrocarbons

Separation of PAHs according to EPA 610

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography using an Agilent CP-Sil 5 CB column separates 17 polycyclic aromatic hydrocarbons according to EPA 610 in 60 minutes.



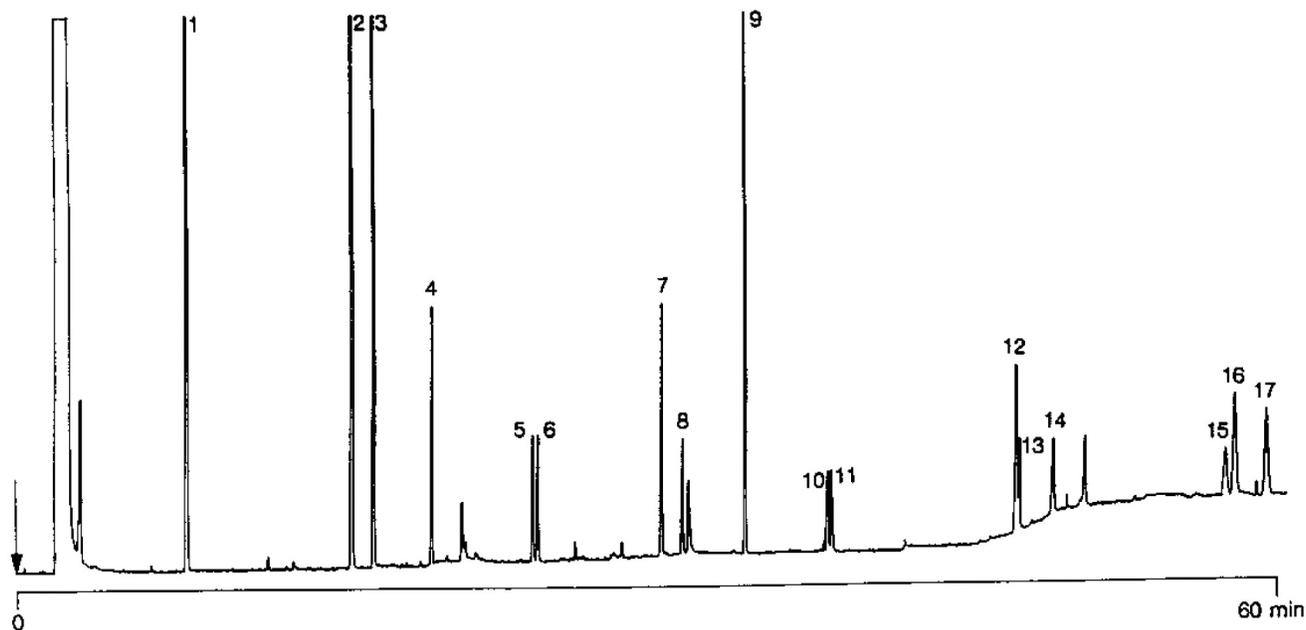
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Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 5 CB, 0.32 mm x 25 m fused silica
WCOT CP-Sil 5 CB (df = 0.25 µm) (Part no. CP7442)
(+ apolar retention gap 0.53 mm x 2.5 m)
Temperature : 90 °C (1 min) → 100 °C, 20 °C/min; 100 °C (5 min)
→ 240 °C, 5 °C/min; 240 °C (10 min) → 275 °C,
10 °C/min; 275 °C (30 min)
Carrier Gas : He, 0.5 bar, 50 kPa, 7.1 psi
Injector : On-column
Detector : FID
T= 275 °C
Sample Size : 0.5 µL
Solvent Sample : cyclohexane

Peak identification

1. naphthalene
2. acenaphthylene
3. acenaphthene
4. fluorene
5. phenanthrene
6. anthracene
7. fluoranthene
8. pyrene
9. docosane (I.S.)
10. benzo(a)anthracene
11. chrysene
12. benzo(b)fluoranthene
13. benzo(k)fluoranthene
14. benzo(a)pyrene
15. indeno(1,2,3,cd)pyrene
16. dibenzo(a,h)anthracene
17. benzo(g,h,i)perylene



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