



Hydrocarbons, $C_1 - C_8$

Analysis of air sample

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography using an Agilent CP-Al₂O₃/KCl column separates 38 C₁ to C₈ hydrocarbons in 350 mL of air at Bilthoven, The Netherlands, on 6 December 1990, in 28 minutes.



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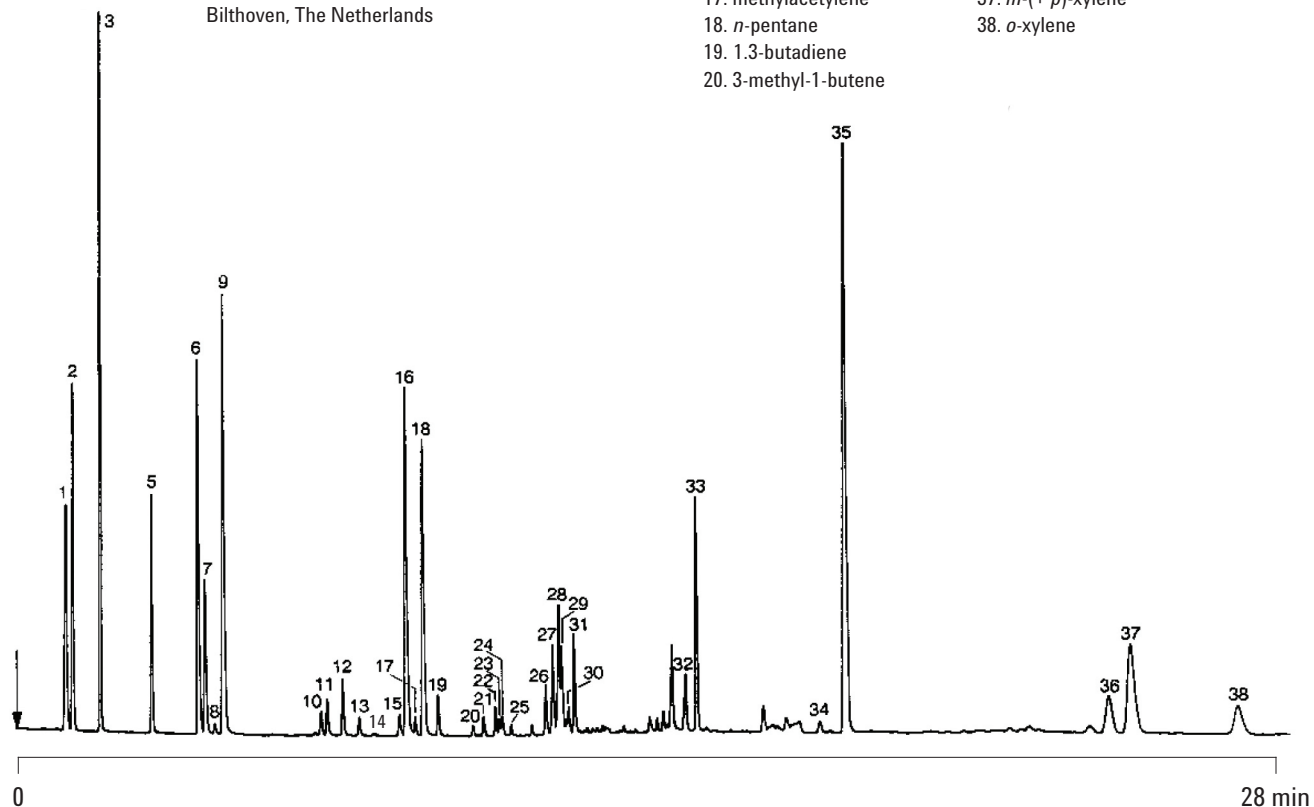
Conditions

Technique : GC-capillary
Column : Agilent CP-Al₂O₃/KCl, 0.53 mm x 25 m fused silica
PLOT CP-Al₂O₃/KCl (df = 10 µm) (Part no. CP7516)
Temperature : 50 °C → 75 °C, 5 °C/min → 125 °C, 10 °C/min →
200 °C, 15 °C/min (30 min)
Carrier Gas : He, 40 kPa (0.4 bar, 5.7 psi)
Injector : VOC-Air
Detector : FID
T = 275 °C
Sample Size : 350 mL
Concentration Range : from 0.02 µg/m³ to 14 µg/m³ for toluene

Courtesy : H. Bos, RIVM,
Bilthoven, The Netherlands

Peak identification

- | | |
|----------------------------|------------------------------------|
| 1. ethane | 21. <i>trans</i> -2-pentene |
| 2. ethene | 22. 2-methyl-2-butene |
| 3. propane | 23. pentene |
| 4. cyclopropane | 24. 2-methyl-1-butene |
| 5. propene | 25. <i>cis</i> -2-pentene |
| 6. acetylene | 26. methylcyclopentane |
| 7. <i>i</i> -butane | 27. cyclohexane |
| 8. propadiene | 28. 2-methylpentane |
| 9. <i>n</i> -butane | 29. 3-methylpentane |
| 10. <i>trans</i> -2-butene | 30. isoprene |
| 11. 1-butene | 31. <i>n</i> -hexane |
| 12. <i>i</i> -butene | 32. <i>n</i> -heptane |
| 13. <i>cis</i> -2-butene | 33. benzene |
| 14. neopentane | 34. <i>n</i> -octane |
| 15. cyclopentane | 35. toluene |
| 16. 2-methylbutane | 36. ethylbenzene |
| 17. methylacetylene | 37. <i>m</i> -(+ <i>p</i>)-xylene |
| 18. <i>n</i> -pentane | 38. <i>o</i> -xylene |
| 19. 1,3-butadiene | |
| 20. 3-methyl-1-butene | |



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This information is subject to change without notice.

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