Hydrocarbons, C_1 – C_7

Analysis of hydrocarbons in natural gas

Application Note

Energy & Fuels

Authors

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Introduction

Gas chromatography using an Agilent CP-Al_2O_3/KCl column separates 23 C_1 to C_7 hydrocarbons in natural gas in 50 minutes.

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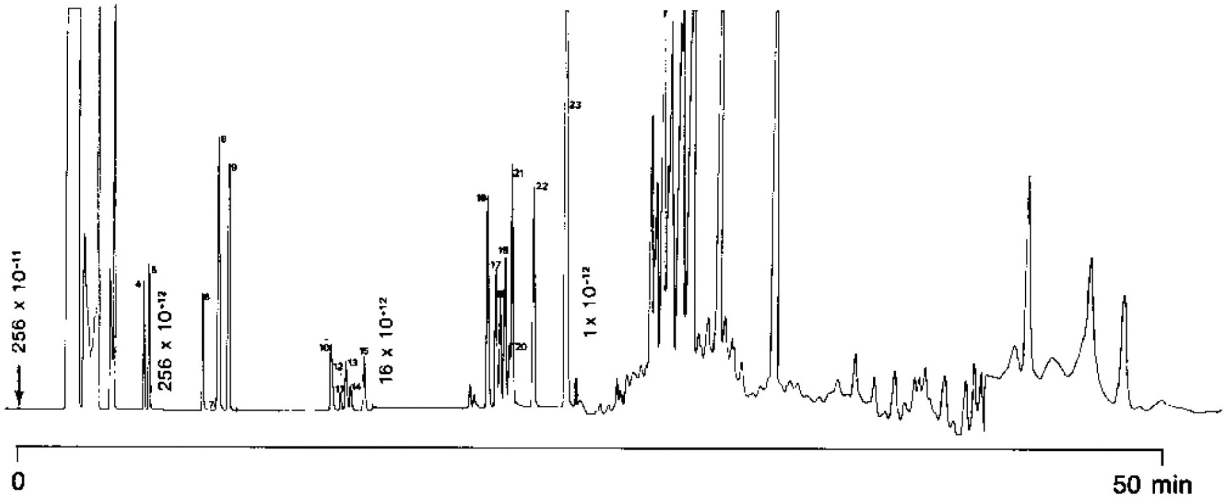
Conditions

Technique	:	GC-capillary
Column	:	Agilent CP-Al_2O_3/KCl, 0.32 mm x 50 m fused silica PLOT Al_2O_3/KCl (Part no. CP7515)
Temperature	:	100 °C ⟶ 200 °C (3 °C/min)
Carrier Gas	:	N_2, 120 kPa (1.2 bar, 17 psi)
Injector	:	Splitless (30 s), sample trapped at injector side at -196 °C
Detector	:	FID 256 x 10^{-11} Afs 256 x 10^{-12} Afs after 5.5 min 16 x 10^{-12} Afs after 14 min 1 x 10^{-12} Afs after 24 min

Peak identification

1. methane
2. ethane
3. propane
4. isobutane
5. butane
6. 2,2-dimethylpropane
7. cyclopentane
8. 2-methylbutane
9. pentane
10. 2,2-dimethylbutane
11. cyclohexane
12. 2,3-dimethylbutane
13. 2-methylbutane
14. 3-methylpentane
15. hexane
16. 2,2-dimethylpentane and 2,4-dimethylpentane
17. methylcyclohexane
18. 2,2,3-trimethylbutane
19. 3,3-dimethylpentane
20. 2,3-dimethylpentane
21. 2-methylhexane, 3-methylhexane and 3-ethylpentane
22. heptane
23. benzene



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