Hydrocarbons, $C_6 - C_9$

Reference method for monitoring systems for analysis of hydrocarbons in environmental air

Application Note

Environmental

Authors
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Introduction
Monitoring VOCs in air is controlled by automated systems, based on thermal desorption techniques. A good separation of a standard mixture is obtained on the Agilent CP-Sil 5 CB column. No compounds of interest show the same retention as cyclohexene, which is used as internal standard.
Conditions

Technique: GC-capillary

Column: Agilent CP-Sil 5 CB, 0.25 mm x 25 m (df = 0.4 μm)

(Part no. CP7709)

Temperature: 35 °C (7.5 min) → 55 °C, 20 °C/min;

55 °C → 80 °C, 12.5 °C/min;

80 °C → 120 °C, 20 °C/min

Carrier Gas: He

Injector: Split,

T = 200 °C

Detector: FID

T = 200 °C

Sample Size: 10 μL

Sample Solvent: CS₂

Courtesy: G. Hackspacher, Umwelttechnik MCZ,

Ober Mörlen, Germany

Peak identification

1. carbon disulfide
2. 1-hexene
3. hexane
4. 2-butanol
5. 1,1,1-trichloroethane
6. benzene
7. butanol
8. cyclohexane
9. cyclohexene (I.S.)
10. 3-methylhexane
11. trichloroethylene
12. heptene
13. heptane
14. methylcyclohexane
15. methyl isobutyl ketone
16. toluene
17. 3-methylheptane
18. cycloheptane
19. octane
20. ethylbenzene
21. m/p-xylene
22. cyclohexanone
23. o-xylene
24. nonane