



Amines, C₂ – C₇

Analysis of volatile amines on medium- and wide-bore columns

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Gas chromatography with Agilent CP-Wax for Volatile Amines and Diamines medium-bore and wide-bore columns separate 18 volatile amines in 25 and ten minutes, respectively.



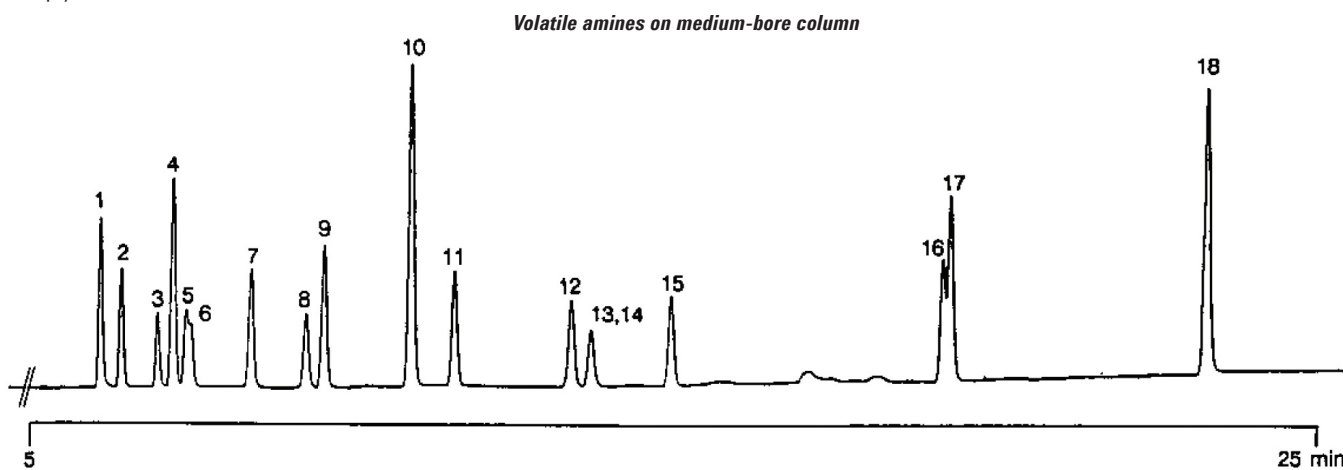
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Conditions

Technique : GC-capillary
Column : Agilent CP-Wax for volatile amines and diamines,
0.32 mm x 25 m fused silica WCOT CP-Wax
($df = 1.2\ \mu\text{m}$) (Part no. CP7422)
Temperature : 60 °C (2 min) $\rightarrow$ 100 °C, 5 °C/min
Carrier Gas : N_2 , 20 kPa (0.2 bar, 2.9 psi)
Injector : Split, 50 mL/min
Detector : FID, 4×10^{-12} Afs
Sample Size : 0.1 μL
Concentration Range : 0.05%
Solvent Sample : H_2O

Peak identification

1. ethylamine
2. tert. butylamine
3. diethylamine
4. dichloromethane
5. diisopropylamine
6. triethylamine
7. sec. butylamine
8. isobutylamine
9. allylamine
10. n-butylamine
11. dipropylamine
12. isoamylamine
13. tripropylamine
14. diisobutylamine
15. amylamine
16. dibutylamine
17. n-hexylamine
18. n-heptylamine

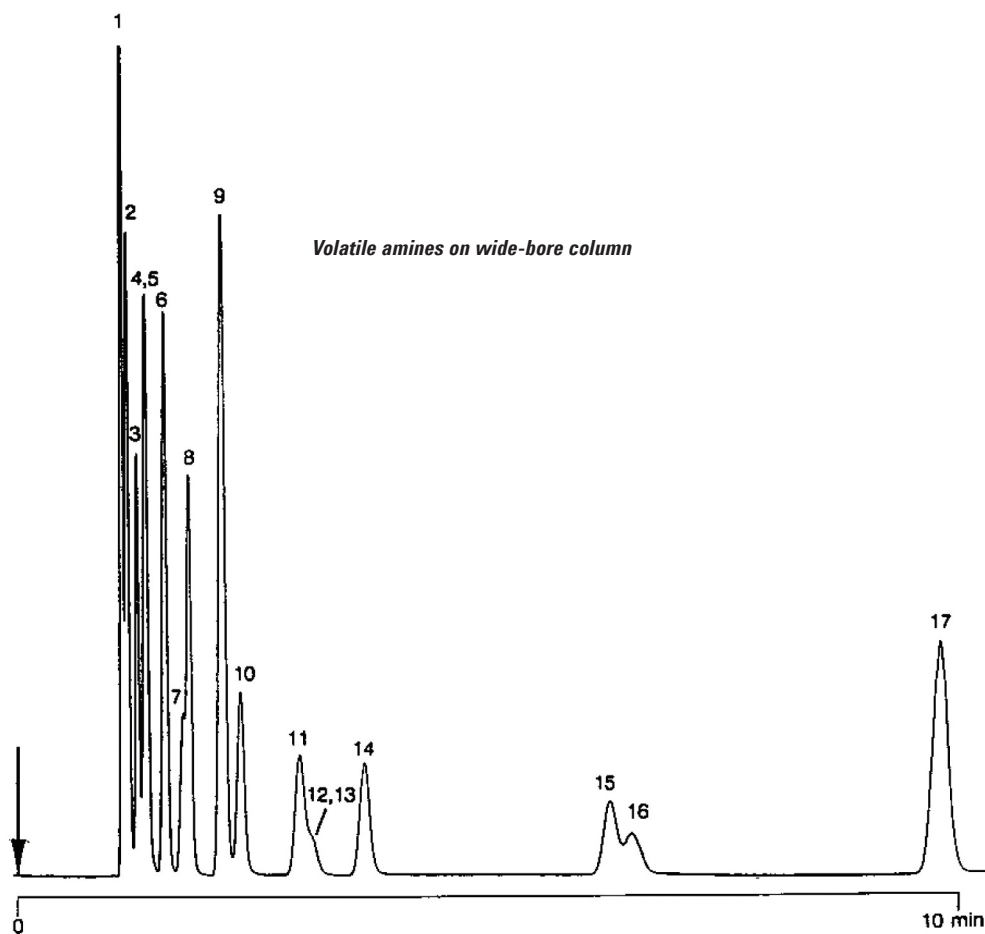


Conditions

Technique : GC-wide-bore
Column : Agilent CP-Wax for volatile amines and diamines,
0.53 mm x 25 m fused silica WCOT CP-Wax
(df = 2 μ m) (Part no. CP7424)
Temperature : 60 °C (2 min) $\rightarrow$ 100 °C, 5 °C/min
Carrier Gas : N₂, 10 mL/min
Injector : Split,
Detector : FID, 512 x 10⁻¹² Afs
Sample Size : 0.1 μ L
Concentration Range : 0.1%
Solvent Sample : H₂O

Peak identification

1. ethylamine
2. tert. butylamine
3. diethylamine
4. diisopropylamine
5. triethylamine
6. sec. butylamine
7. isobutylamine
8. allylamine
9. n-butylamine
10. dipropylamine
11. isoamylamine
12. tripropylamine
13. diisobutylamine
14. amylamine
15. dibutylamine
16. n-hexylamine
17. n-heptylamine



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This information is subject to change without notice.

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