



Amines, C₁ – C₂

Analysis of trace amines

Application Note

Environmental

Authors

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Introduction

Amines are difficult to analyze due to their strong basic nature. Capillary columns must be base-modified to elute amines with acceptable recovery. For highly volatile amines, including ammonia, the siloxane-based phases do not provide enough retention. The Agilent PoraPLOT for Amines porous polymer provides a high retention combined with a high inertness for amines.

Volatile amines elute at low levels as shown in this application. Also ammonia elutes as a sharp peak at nanogram levels. If, besides these amines, alcohols and/or water must be measured, a 5 µm film Agilent CP-Sil 5 CB is recommended, operated at temperatures around 30 °C.



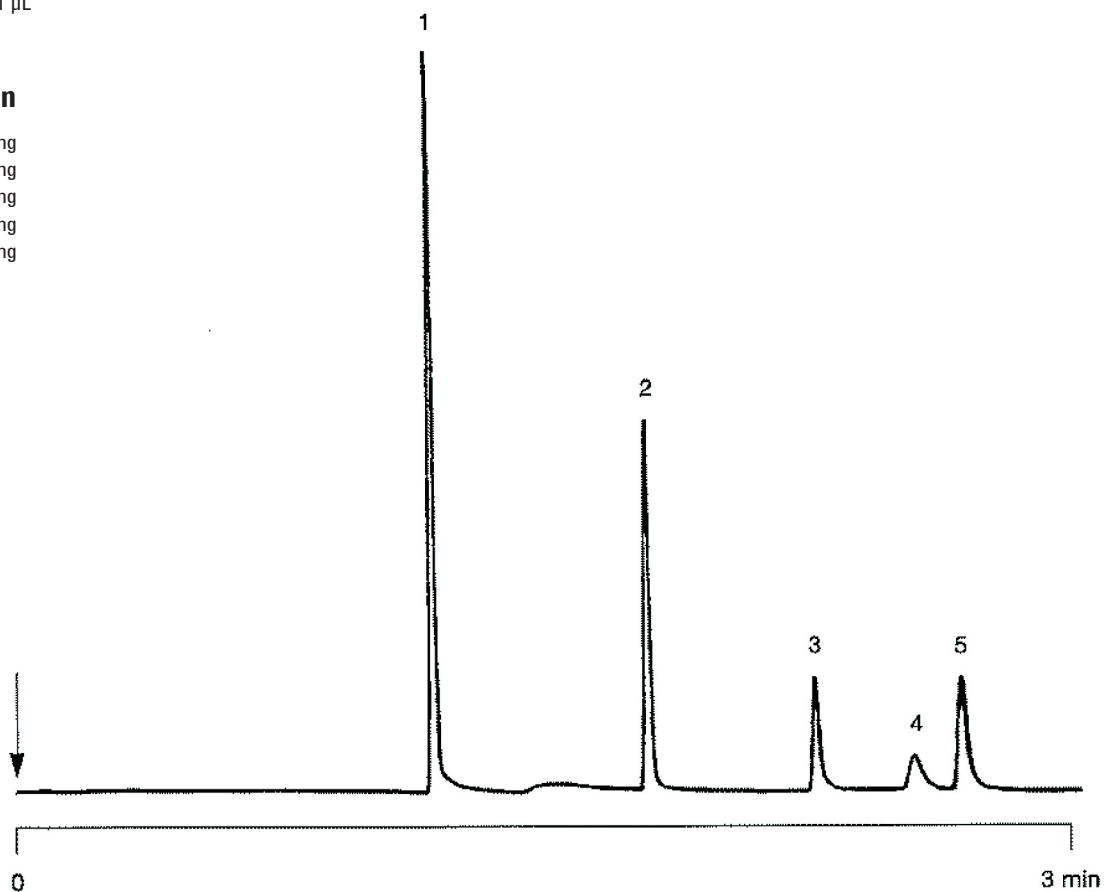
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Conditions

Technique : GC-capillary
Column : Agilent PoraPLOT for Amines, 0.32 mm x 25 m, fused silica PLOT (df = 10 μ m) (Part no. CP7591)
Temperature : 140 °C (2 min) \rightarrow 250 °C, 10 °C/min
Carrier Gas : H₂, 95 kPa (0.95 bar, 13 psi)
Injector : on-column
Detector : ELD
Sample Size : 0.1 μ L

Peak identification

1. ammonia	1.8 ng
2. methylamine	3.4 ng
3. dimethylamine	2.9 ng
4. trimethylamine	2.9 ng
5. ethylamine	3.4 ng



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This information is subject to change without notice.

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