



Amines and ammonia

Analysis of impurities in amine streams

Application Note

Materials Testing & Research

Authors

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Introduction

For the analysis of polar impurities in amine streams a highly inert and stable column is required the Agilent CP-Volamine shows excellent separation of methanol and ethanol from volatile amines. Also, water and ammonia elute as sharp peaks. Amines can be measured in the presence of water.



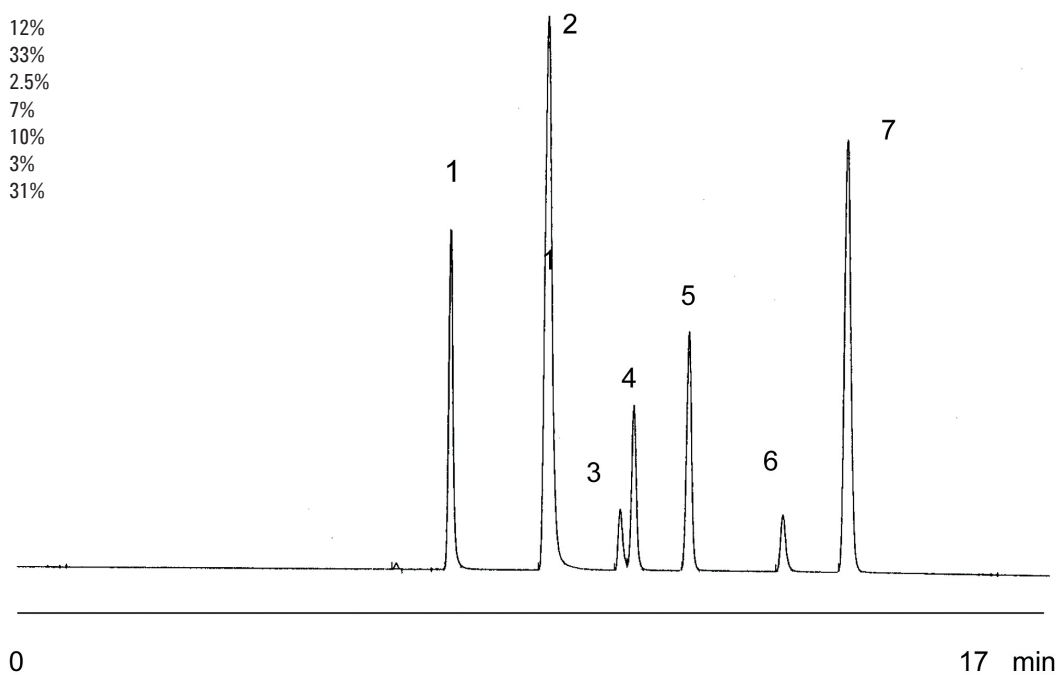
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Conditions

Technique : GC-capillary
Column : Agilent CP-Volamine, 0.32 mm x 60 m fused silica
(df =optimized) (Part no. CP7448)
Temperature : 40 °C, 10 min → 250 °C, 20 °C/min
Carrier Gas : Helium, approx. 68 kPa
Injector : Split 1:50
Detector : TCD
Sample Size : 0.5 µL
Concentration Range : % range

Peak identification

1. NH ₃	12%
2. water	33%
3. MMA monomethylamine	2.5%
4. diethylether	7%
5. methanol	10%
6. DMA dimethylamine	3%
7. TMA trimethylamine	31%



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