Amino alcohols

Analysis of ethanol amines

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

Ethanol amines are highly polar compounds and are difficult to elute from a standard capillary column. Only with very thick film is an acceptable peak obtained. However, elution temperatures are high and bleed will cause detection problems at low level.

The Agilent CP-Sil 8 CB for Amines phase elutes the ethanol amines at nanogram level with good peak shape at lower temperatures. The temperature stability of 325 °C allows a quick bake out and a wide range of components to be analyzed.

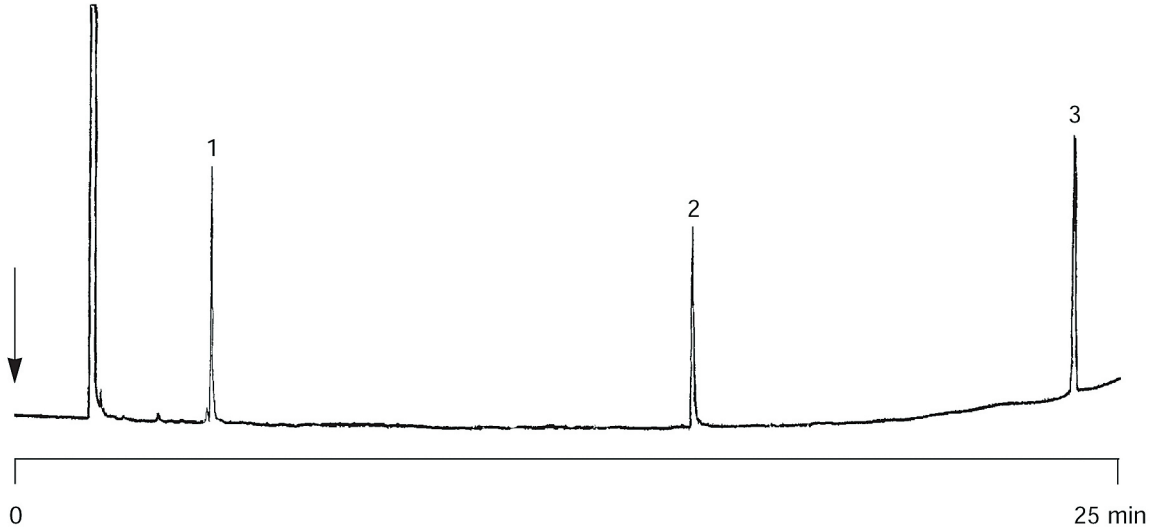
Agilent Technologies

Conditions

Technique	: GC-capillary
Column	: Agilent CP-Sil 8 CB for Amines, 0.32 mm x 30 m fused silica WCOT (df = 1.0 µm) (Part no. CP7596)
Temperature	: 60 °C (5 min) ⟶ 220 °C, 6 °C/min
Carrier Gas	: H_2, 50 kPa (0 .5 bar, 7 psi)
Injector	: Split, T = 270 °C
Detector	: FID T = 300 °C
Concentration Range	: 5-10 ng per component on the column
Solvent Sample	: methanol

Peak identification

1. MEA (mono-ethanol amine)
2. DEA (di-ethanolamine)
3. TEA (tri-ethanolamine)



www.agilent.com/chem

This information is subject to change without notice.
© Agilent Technologies, Inc. 2011
Printed in the USA
31 October, 2011
First published prior to 11 May, 2010
A01538

Agilent Technologies