



Hydrocarbons, $C_2 - C_3$, alcohols, C_1

Analysis of low ppm levels of ethylene, propylene and methanol in water

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

The process unit requires the analyses of the cooling water samples for ethylene and propylene every week to check for leaks in the cooling towers. The polyethylene unit injects methanol into one of the hydrocarbon streams, which is removed by water. The methanol level of this water has to be analyzed daily before it can be put into the drainage system.



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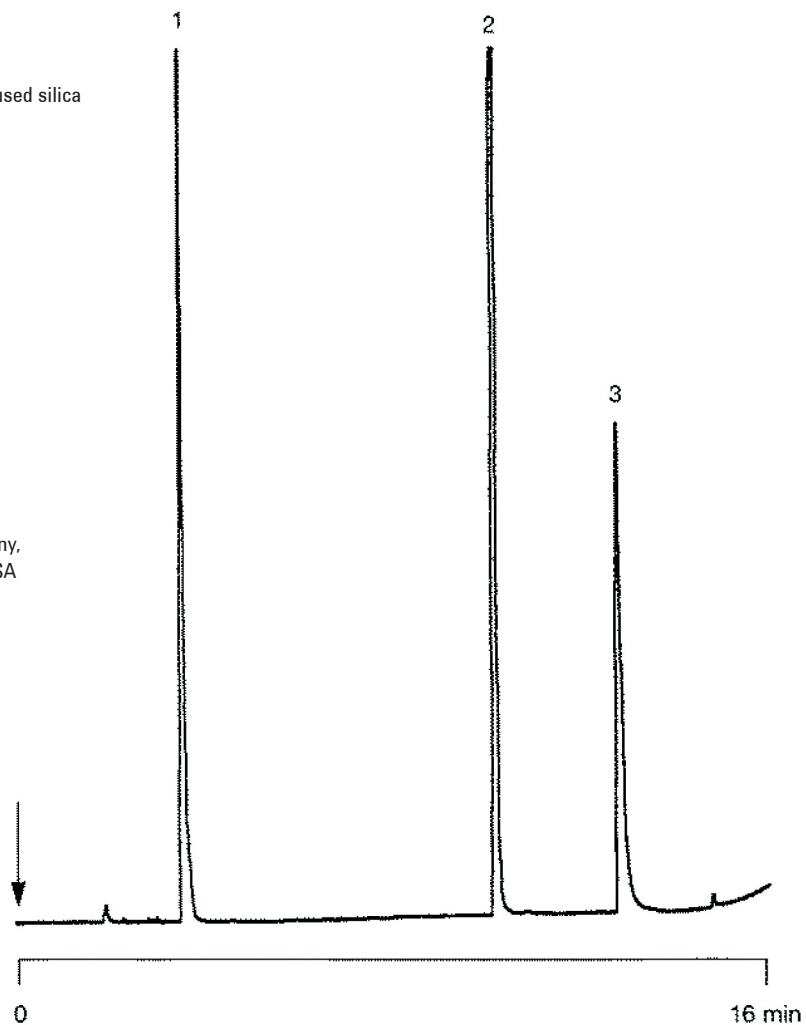
Conditions

Technique : GC-wide-bore
Column : Agilent PoraPLOT Q, 0.53 mm x 25 m fused silica PLOT (df = 20 μ m) (Part no. CP7554)
Temperature : 35 °C (5 min) \rightarrow 75 °C, 10 °C/min;
75 °C \rightarrow 200 °C, 25 °C/min
Carrier Gas : He, 7 mL/min
Injector : Direct
T = 100 °C
Detector : FID
T = 250 °C
Sample Size : 0.3 μ L, plunger in needle syringe
Concentration Range : 8 - 27 ppm
Solvent Sample : water

Courtesy : Laura Mejia, Chevron Chemical Company,
Cedar Bayou Plant, Baytown, Texas, USA

Peak identification

1. ethylene	8.8 ppm
2. propylene	5.4 ppm
3. methanol	27.1 ppm



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This information is subject to change without notice.

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