Acids

Application Note

Materials Testing & Research

Authors

Agilent Technologies, Inc.

Introduction

Agilent PoraBOND U provides excellent inertness for highly polar compounds such as acids. In addition, pure hydrochloric acid elutes from the column, although peak shape is far from ideal. What is unique is that the water peak is well separated from the hydrochloric acid. The PoraBOND U withstands the repeated hydrochloric acid injections very well. The highly pure Agilent PoraBOND U porous polymer is stable up to 300 °C with very low bleed, allowing detection at high sensitivity settings.

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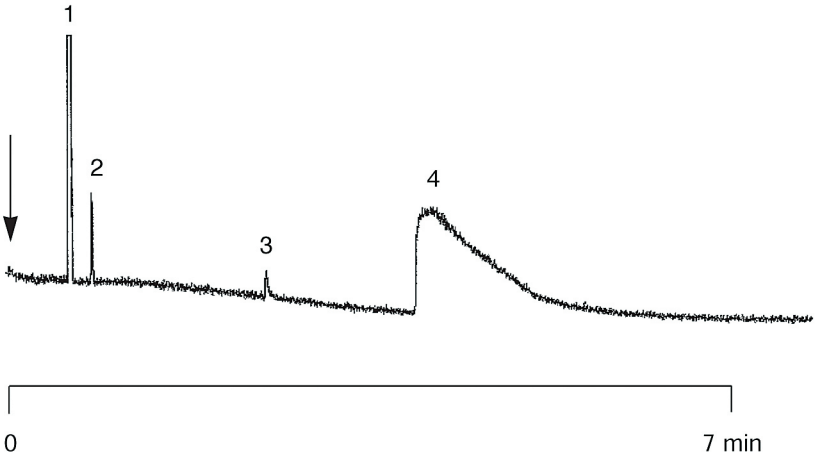
Conditions

Technique	:	GC-capillary
Column	:	Agilent PoraBOND U, 0.32 mm x 25 m fused silica PLOT (df = 7 µm) (Part no. CP7381)
Temperature	:	50 °C (2 min) ⟶ 250 °C, 30 °C/min
Carrier Gas	:	He, 50 kPa (0 .5 bar, 7 psi)
Injector	:	Split. 1:30, T = 250 °C
Detector	:	MSD, T = 250 °C
Sample Size	:	1 mL headspace
Concentration Range	:	anhydrous HCl diluted with air 1:10
Courtesy	:	J. Luong, Dow Chemical Canada

Peak identification

1. air
2. carbon dioxide
3. water
4. hydrochloric acid (HCl)



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