Residual solvents

Fast separation of commonly used residual solvents

Application Note

BioPharma

Authors

Agilent Technologies, Inc.

Introduction

In addition to an Agilent CP-Select 624 CB column (see Application notes 1282 - 1286), which phase is prescribed in the USP for the analysis of residual solvents in pharmaceutical products, a second column often is used for confirmation or special solvents analysis. In many cases this column is a PLOT column. The Agilent PoraBOND Q column, with a bonded layer of the very hydrophobic styrene-divinylbenzene copolymer phase, is an improved version of this type of column.

The PoraBOND Q column provides a good selectivity, peakshape, signal/noise ratio and stable baseline, even at high flow rates, due to the bonded character of the stationary phase.

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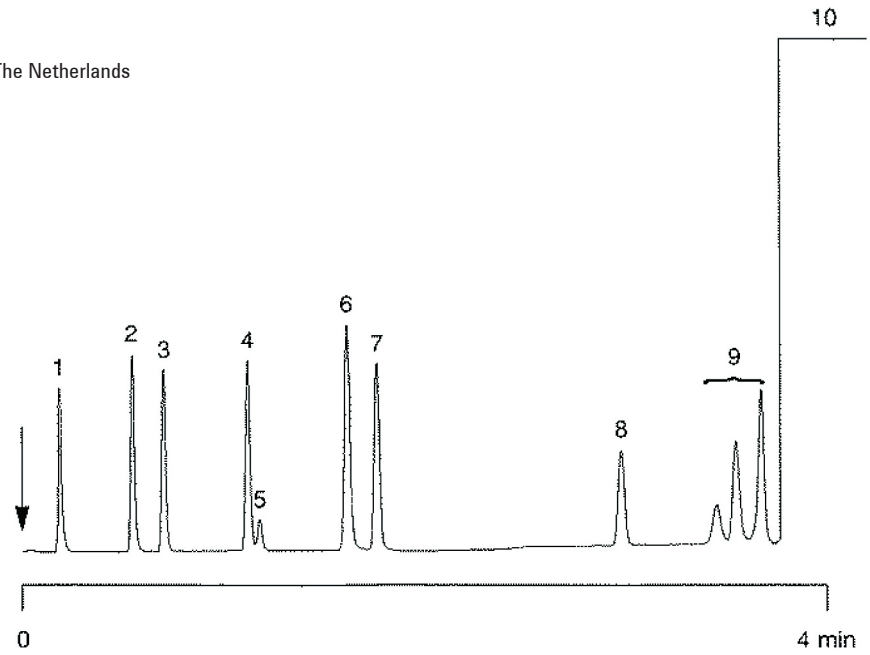
Conditions

Technique	:	GC-capillary
Column	:	Agilent PoraBOND Q, 0.32 mm x 10 m fused silica PLOT (df = 5 µm) (Part no. CP7350)
Temperature	:	150 °C → 220 °C, 10 °C/min; 220 °C (5 min)
Carrier Gas	:	N_2, 1 mL/min
Injector	:	Split, 20 mL/min T = 150 °C
Detector	:	FID T = 280 °C
Sample Size	:	1.0 µL
Concentration Range	:	0.05 mg/mL
Solvent Sample	:	pyridine
Courtesy	:	Mr. J. Violet, Organon, Oss, The Netherlands

Peak identification

1. methanol
2. ethanol
3. acetonitrile
4. acetone
5. dichloromethane
6. diethyl ether
7. 1,2-dichloroethane (Internal Standard)
8. ethyl acetate
9. hydrocarbons C_6
10. pyridine (sample solvent)



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