Phenols and cresols

Separation of isomers and aromatic alcohols on a chiral capillary column

Application Note

Environmental

Authors

Agilent Technologies, Inc.

Introduction

The Agilent CP-Chirasil-Dex CB column is not only suited for the separation of optical isomers, but has also a unique selectivity for different types of positional isomers, as shown here for phenols and cresols.

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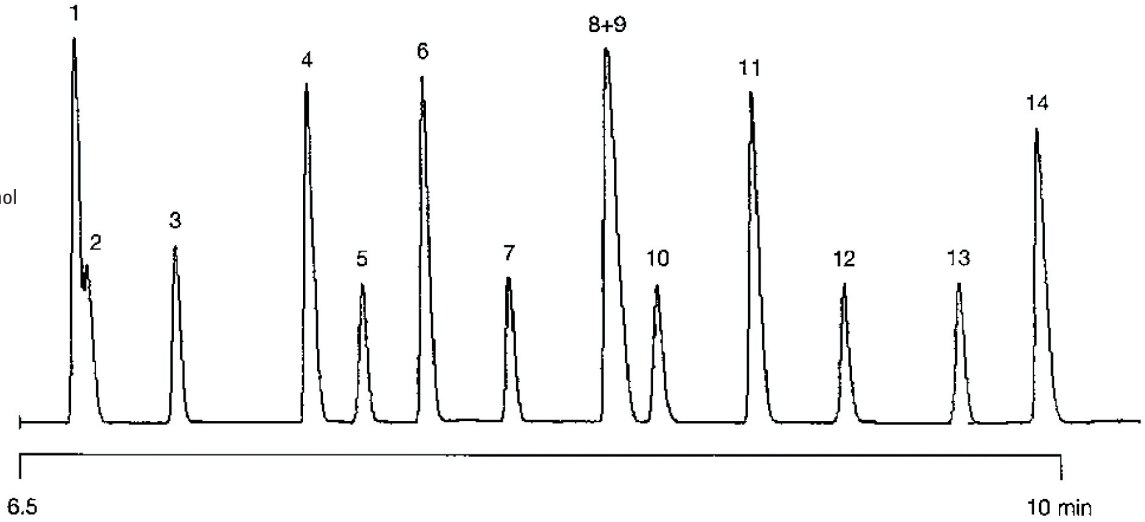
Conditions

Technique	:	GC-capillary
Column	:	Agilent CP-Chirasil-Dex CB, 0.25 mm x 25 m fused silica WCOT (df = 0.25 µm) (Part no. CP7502)
Temperature	:	80 °C → 140 °C, 10 °C/min; 140 °C → 200 °C, 5 °C/min
Carrier Gas	:	He, 200 kPa (2 bar, 28 psi)
Injector	:	Split, 100 mL/min T = 250 °C
Detector	:	FID T = 250 °C
Sample Size	:	0.2 µL
Concentration Range	:	5 mg/mL
Solvent Sample	:	dichloromethane
Courtesy	:	A. Kellerhals, Schenectady Pratteln AG, Pratteln, Switzerland

Peak identification

1. 2,6-dimethylphenol
2. phenol
3. o-cresol
4. p-cresol
5. m-cresol
6. 2,4-dimethylphenol
7. 2,4,6-trimethylphenol
8. 2,5-dimethylphenol
9. o-ethylphenol
10. 2,3-dimethylphenol
11. p-ethylphenol
12. 3,5-dimethylphenol
13. 3,4-dimethylphenol
14. m-ethylphenol



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