

Phenols

Analysis of phenols on a base-deactivated capillary column

Application Note

Environmental

Authors

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Introduction

The MPD (multi-purpose) deactivation used for the Agilent CP-Sil 8 CB for Amines column delivers a highly neutral surface, making the column applicable for basic and acidic compounds. Phenols elute as sharp peaks and the response is higher than found on similar base-deactivated phases. Phenols are acidic compounds which require an inert capillary to elute. In particular, pentachlorophenol (PCP) is sensitive for residual basic activity.

The temperature stability of 325 °C allows a quick bake out and a wide range of components to be analyzed.



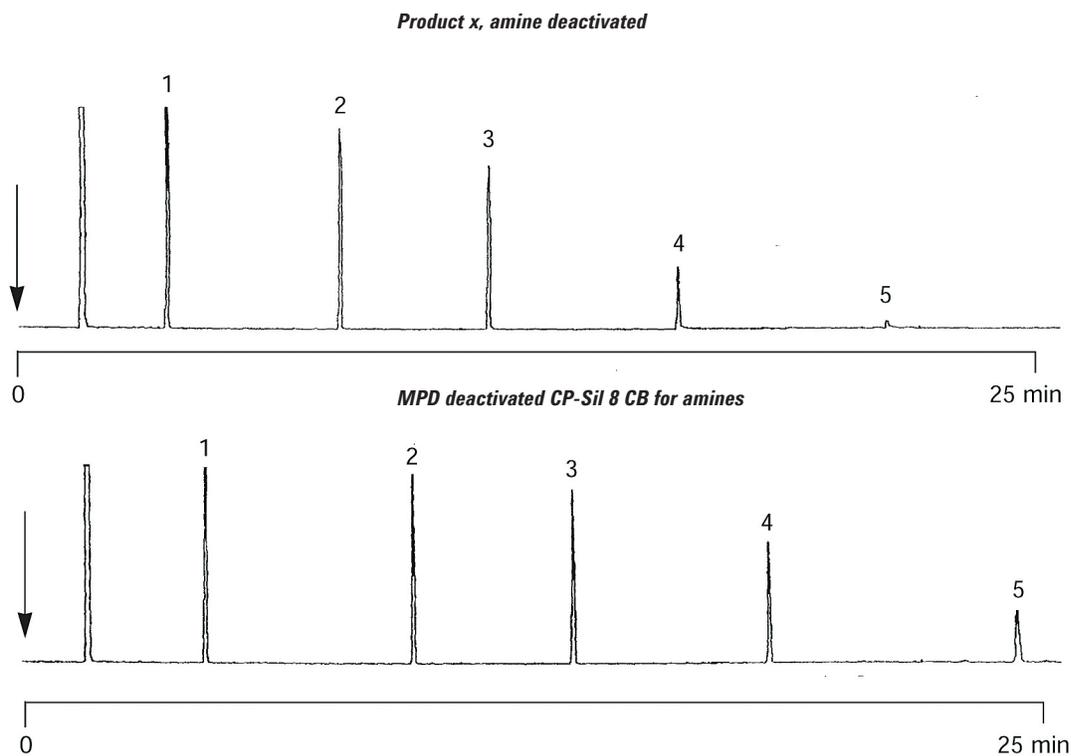
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Conditions

Technique : GC-capillary
Column : Agilent CP-Sil 8 CB for Amines, 0.25 mm x 30 m
fused silica WCOT (df = 0.5 μ m) (Part no.CP7595)
Temperature : 110 °C (2 min) \rightarrow 200 °C, 5 °C/min
Carrier Gas : H₂, 50 kPa (0.5 bar, 7 psi)
Injector : Split
T = 270 °C
Detector : FID
T = 300 °C
Concentration Range : 50 - 100 ng per component on the column
Solvent Sample : methanol

Peak identification

1. phenol
2. 2,6-dichlorophenol
3. 2,4,5-trichlorophenol
4. 2,3,5,6-tetrachlorophenol
5. pentachlorophenol



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