

HPLC Separation of Aromatic Compounds (PAH) on Mixed-Mode and Reverse Phase Columns

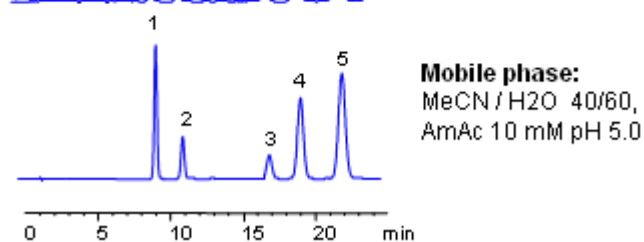
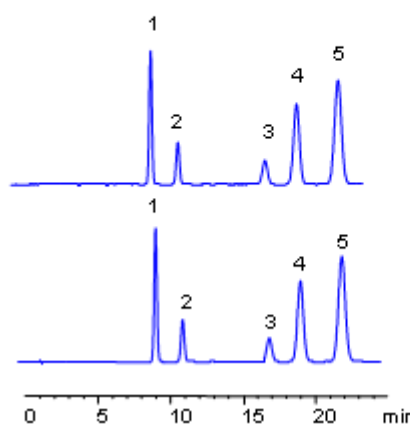
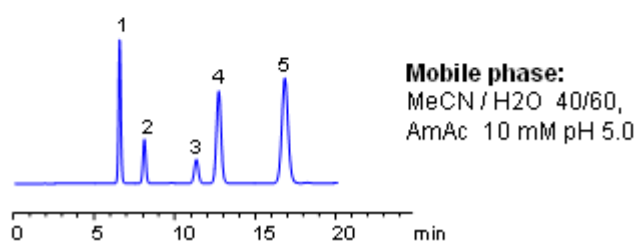
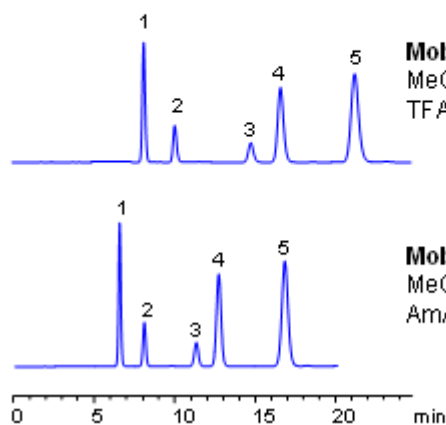
<https://sielc.com/Application-HPLC-Separation-of-Aromatic-Compounds-PAH-on-Mixed-Mode-and-Reverse-Phase-Columns>

Chromatogram

Column: Obelisc R
Column size: 150 x 4.6 mm
Flow: 1.0 mL/min
Detection: UV 250 nm

1. Indene
2. Naphthalene
3. Acenaphthene
4. Fluorene
5. Phenanthrene

Column: Zorbax SB-AQ
Column size: 150 x 4.6 mm
Flow: 1.0 mL/min
Detection: UV 250 nm



Description

Aromatic hydrocarbons are hydrophobic compounds which are well retained on any reverse column. Retention time is adjusted by the amount of ACN. Change in buffer concentration or buffer pH does not affect retention time. Method on Obelisc mixed-mode column shows retention and separation of PAHs by reverse phase mechanism. Change of pH is changing conformation and ionization of stationary phase on Obelisc R column, making it more or less hydrophobic. This changes interaction on the column and selectivity of separation. This method can be used for analysis of hydrophobic compounds and isomers by reverse phase mechanism, when fine tuning is required to achieve desired degree of separation.