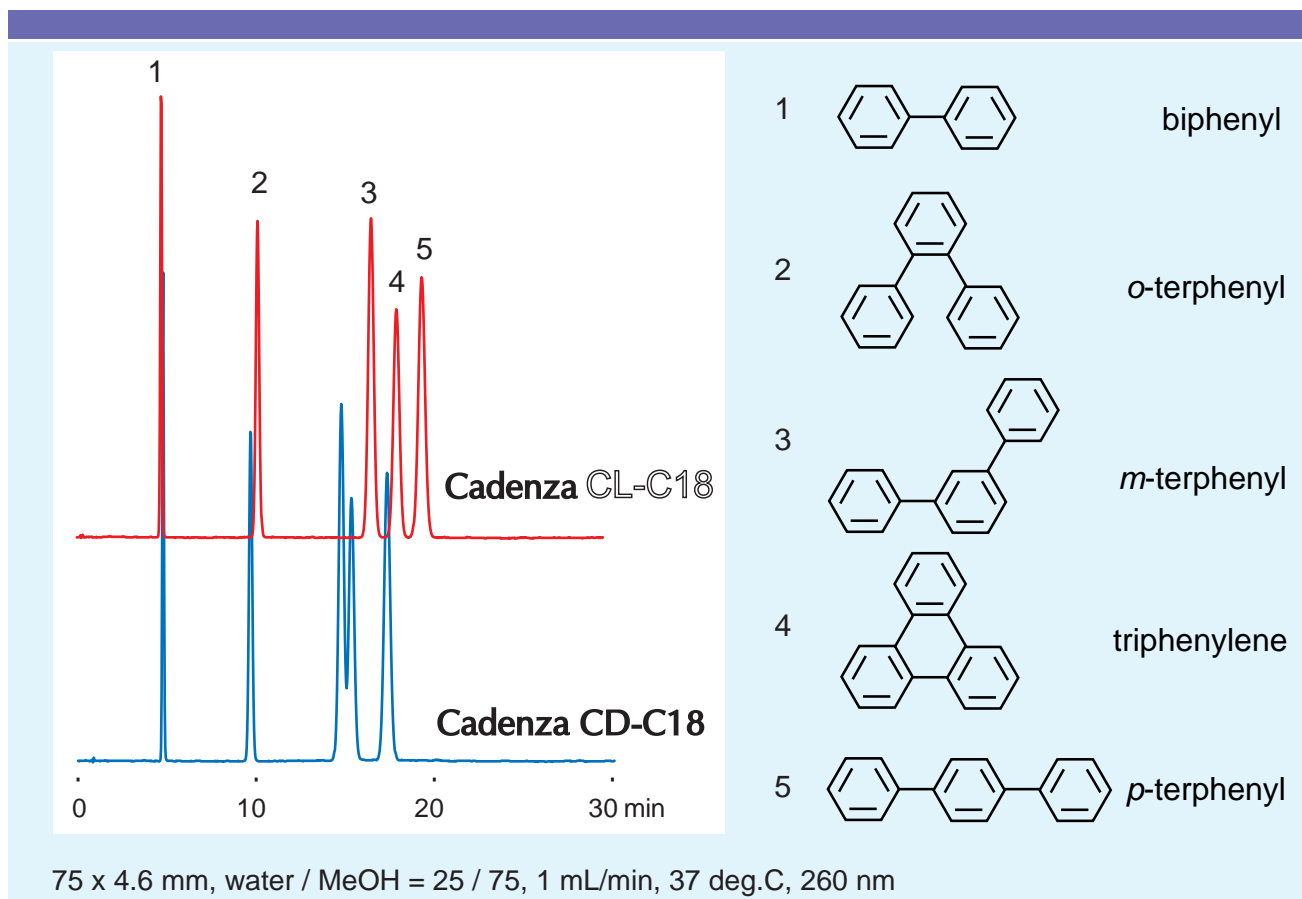


Cadenza CL-C18
Cadenza CD-C18

75 x 4.6 mm

Technical

Separation properties of polycyclic aromatic compounds on CL-C18



In addition to hydrophobic interaction, several secondary interactions occur within an ODS column. For example, silanols or siloxanes from the surface of silica can also interact with certain analytes (electrostatic interaction). Many compounds are affected by this secondary interaction.

In the figure above, the polycyclic aromatic compounds are retained more on CL-C18 than CD-C18. Since the ODS ligand density is the same for both phases, the difference in retention may be reasons other than hydrophobic interaction or steric selectivity.

CL-C18 is designed to have an optimal amount of residual silanols. These silanols (dipole moment) on CL-C18 interact with the poly aromatic structure (pi electrons) by pi-dipole interaction. The pi electrons from poly aromatic structures provides more interaction than pi electrons from mono aromatic compounds.

For these poly cyclic aromatic compounds, better separation was obtained on CL-C18 than CD-C18.