

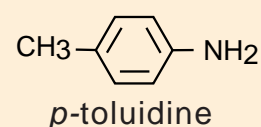
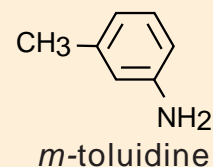
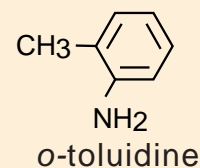
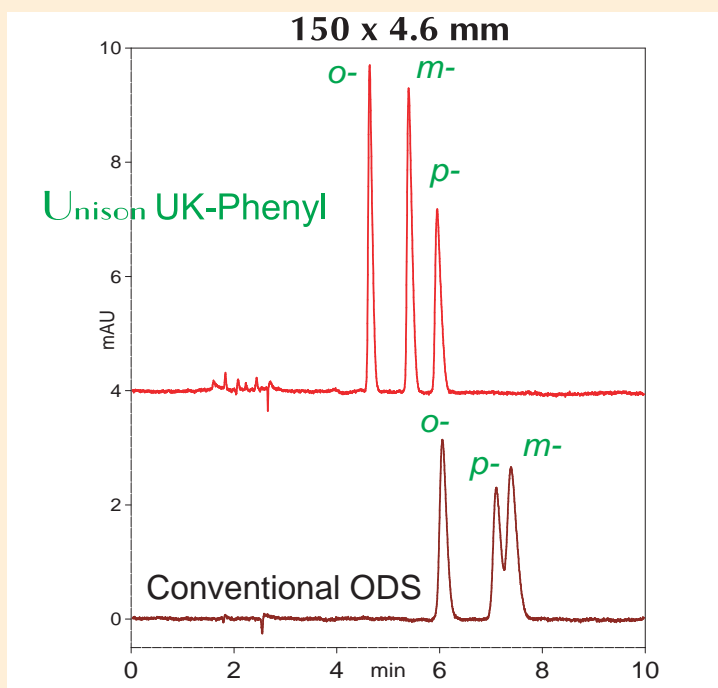
Unison UK-Phenyl

150 x 4.6 mm

Technical

## Benefits of a phenyl column

### Distinct selectivity from an ODS column



water / methanol / 70% HClO<sub>4</sub> = 90 / 10 / 0.05, 1.0 mL/min, 37 deg.C, 260 nm

The phenyl stationary phase has a different bonding style depending on the brand. As for shared structures, there is the interaction between the phenyl base bonding and pi electron in the functional group that are working between the solute.

The above chromatogram compares ODS and UK-Phenyl results for toluidine, a regioisomer. Phenyl columns show the same level of hydrophobicity and retention activity as a C<sub>4</sub> column but the pi-pi interaction that occurs between the phenyl stationary phase and solute containing pi electrons causes a similar retention power to an ODS column in the mobile phase. Moreover, the influence of the solute pi electron localization (especially, p-isomers) allows an exceptional separation of m- and p-isomers by UK-Phenyl, something which the ODS column could not accomplish.

Chemical compound structures are becoming increasingly complex in today's chemistry and there are growing needs for separations by interactions other than hydrophobicity. When ODS cannot answer your separation problems, UK-Phenyl can play a productive role in opening new possibilities in the world of separation.

Conventional phenyl columns suffer from many problems. UK-Phenyl offers a solution: an acid-proof, alkali-proof, 3µm particle technology that offers the highest in resolution for your separation needs.