

SpeedCore PFP

 New Fused Core technology

- ⊙ Provides high efficiency
- ⊙ Improve Resolution even at high speed
- ⊙ Multi-mode resolution mechanisms
- ⊙ Isomer selectivity

Speedcore® PFP increases efficiency over traditional porous particles. The extra selectivity of the fluorinated phenyl ring structure provides increased resolution of compounds that are closely related.

ORTHOGONAL SELECTIVITY - PFP vs C18

SpeedCore PFP will provide orthogonal selectivity for separations, combined with the SpeedCore particle technology offering high efficiency, high resolution separations.

It can be seen how the overall chromatographic run time can be similar but the selectivity of the peaks 2-5 vary greatly on the SpeedCore PFP stationary phase as opposed to the C18, with more resolution provided.

Columns:

2.6µm Fortis Speedcore® C18 50x3mm

2.6µm Fortis Speedcore® PFP 50x3mm

Mobile Phase:

A: 0.1% TFA

B: 0.1% TFA in MeCN

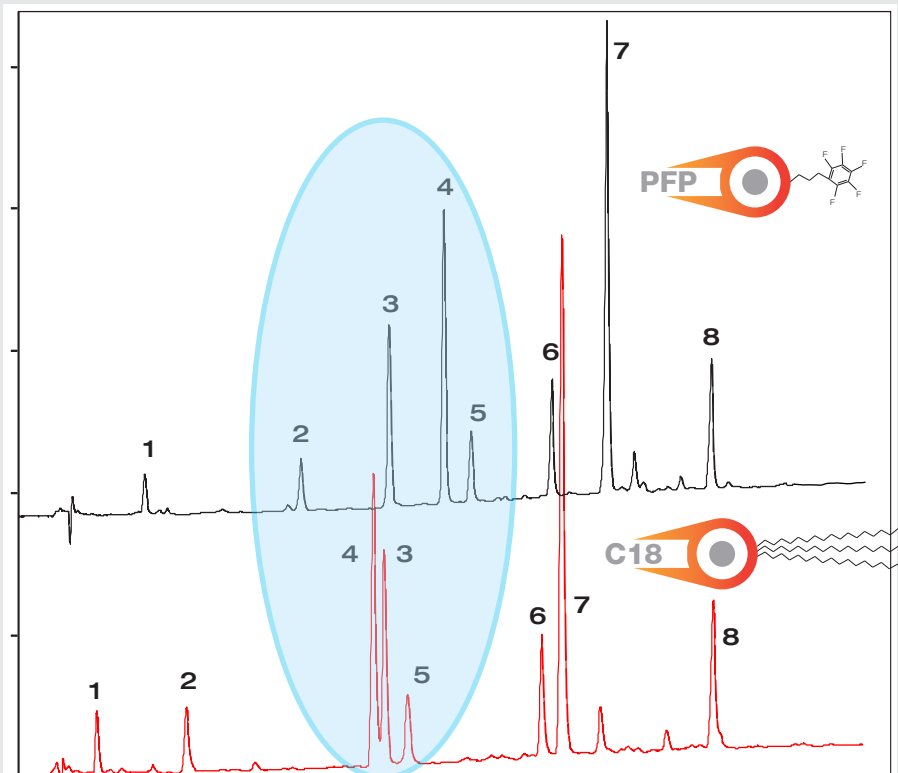
Gradient:

0 - 40% B in 10minutes

Flow Rate: 1.0ml/min

Temp: 25°C

Wavelength: 210nm



SpeedCore PFP columns will provide an alternative selectivity to that of traditional C18 reversed phased chemistries for the separation of basic, acidic and neutral species. PFP columns will retain by ion-exchange and shape selectivity mechanisms as well as both reversed and normal phase interactions. This makes them particularly useful for separation of closely related species such as isomers.

The analyst is able to use buffer concentration as well as organic modifier to control retention factors of these dual mode selectivities.

SELECTIVITY - PHTHALATES

SpeedCore PFP will allow the separation of basic, acidic and neutral compounds.

The separation of phthalates highlights the closely related species that can be optimised by the multiple mechanisms of the PFP stationary phase.

2.6µm Fortis SpeedCore PFP 100x2.1mm

Mobile Phase:

A: Water

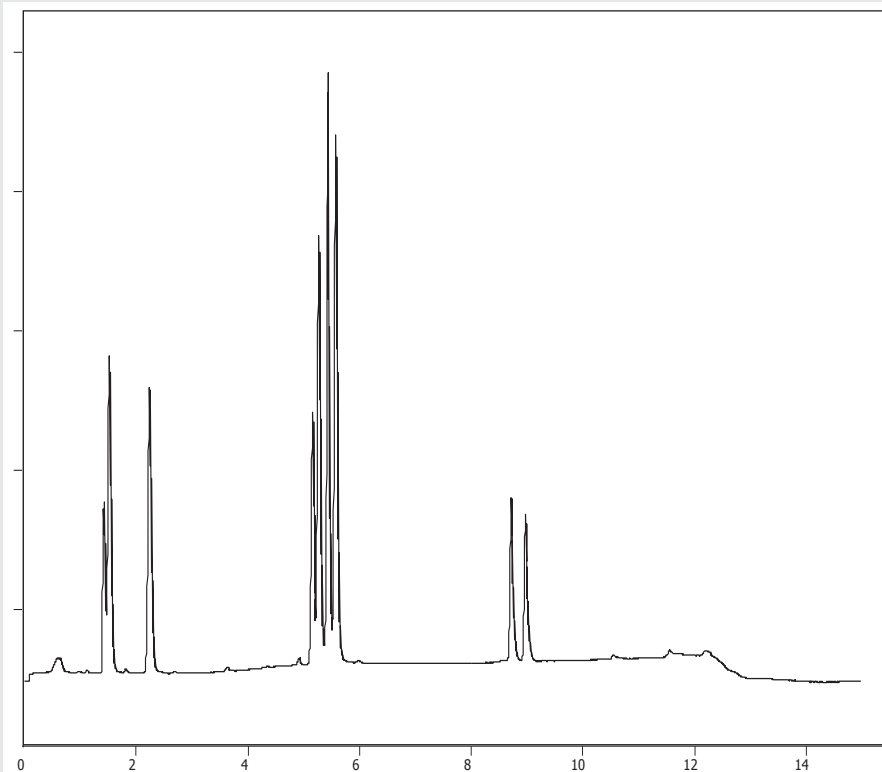
B: ACN

Gradient: 50 - 100 %B in 10mins hold to 15mins

Flow: 0.4ml/min

Wavelength: 210nm

1. bis(2-chloroethyl)ether
2. bis(2-chloroisopropyl)ether
3. Dimethyl phthalate
4. Diethyl phthalate
5. 4-Chlorophenylphenyl ether
6. 4-Bromophenylphenyl ether
7. Di-n-butyl phthalate
8. Di-n-octyl phthalate



SELECTIVITY - PFP VS DIPHENYL

SpeedCore PFP will show alternative selectivity to phenyl or diphenyl columns as the retention mechanisms involved will allow for differing analyte interactions.

Columns:

2.6µm Fortis Speedcore® PFP 50x3mm

2.6µm Fortis Speedcore® Diphenyl 50x3mm

Mobile Phase:

A: 0.1% TFA

B: 0.1% TFA in MeCN

Gradient:

0 - 40% B in 10minutes

Flow Rate: 1.0ml/min

Temp: 25°C

Wavelength: 210nm

