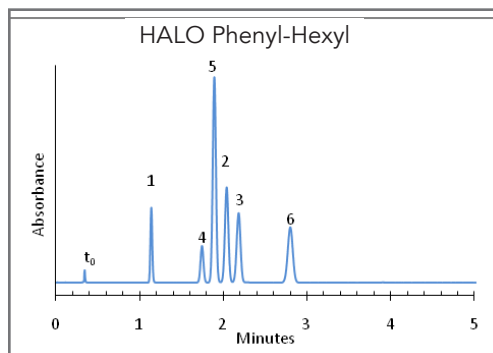
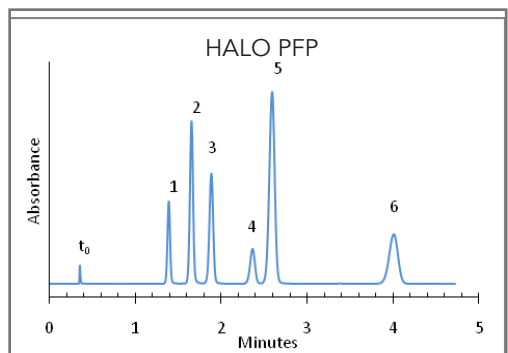




## Separation of Aromatic Nitro Compounds on HALO® PFP and Phenyl-Hexyl

Application Note 26-P



### PEAK IDENTITIES:

1. Nitrobenzene
2. 1-Chloro-4-Nitrobenzene
3. 2,6-Dinitrotoluene
4. 4-Nitrotoluene
5. 3-Nitrotoluene
6. 4-Chloro-3-Nitroanisole

Differences in the interaction of the phenyl rings 3-Nitrotoluene on the bonded phases with the pi electron systems of the nitro aromatic compounds result in significantly different selectivities that can be used to optimize these separations.

### TEST CONDITIONS:

#### Columns:

1) HALO 90 Å PFP, 2.7  $\mu\text{m}$ , 4.6 x 50 mm

**Part Number:** 92814-409

2) HALO 90 Å Phenyl-Hexyl, 2.7  $\mu\text{m}$ , 4.6 x 50 mm

**Part Number:** 92814-406

**Mobile Phase:** 45/55 - A/B

A: Water

B: Methanol

**Flow Rate:** 1.5 mL/min

**Pressure:** ~200 bar

**Temperature:** 40 °C

**Detection:** UV 254 nm, VWD

**Injection Volume:** 0.5  $\mu\text{L}$

**Sample Solvent:** ~20/80 water/methanol

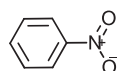
**Response Time:** 0.02 sec

**Flow Cell:** 2.5  $\mu\text{L}$  semi-micro

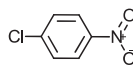
**LC System:** Shimadzu Prominence UFLC XR

**Extra Column Volume:** ~14  $\mu\text{L}$

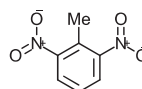
### STRUCTURES:



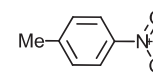
Nitrobenzene



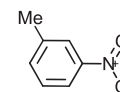
1-Chloro-4-Nitrobenzene



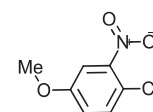
2, 6-Dinitrotoluene



4-Nitrotoluene



3-Nitrotoluene



4-Chloro-3-Nitroanisole

