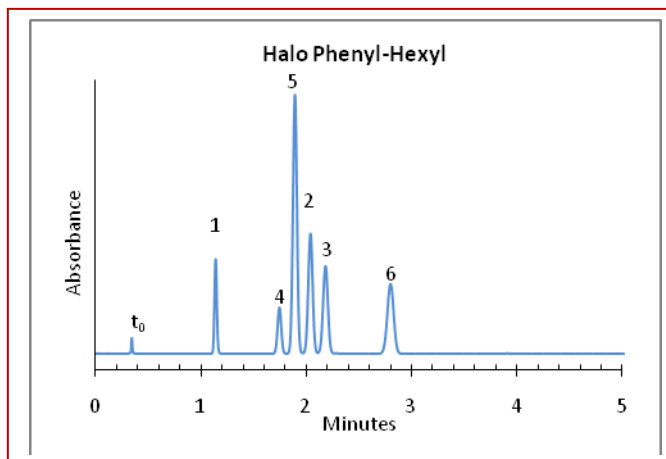
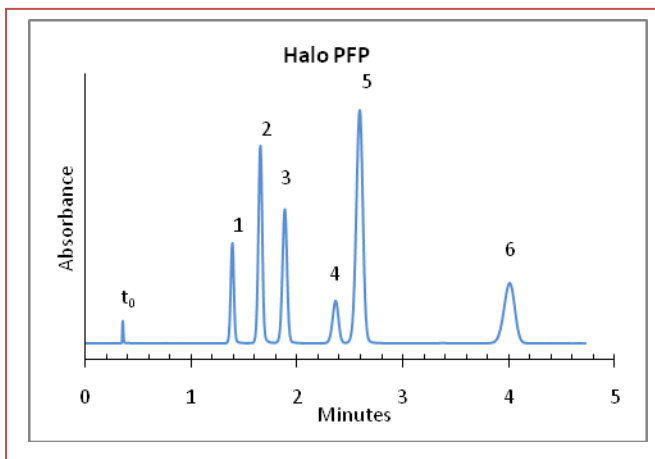


Application Note: 26-P

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



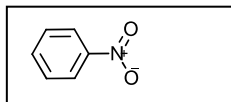
### TEST CONDITIONS:

Column: 4.6 x 50 mm, HALO PFP, Phenyl-Hexyl  
Part Numbers: 92814-409, -406, resp.  
Mobile Phase: 45/55-water/methanol  
Flow Rate: 1.5 mL/min.  
Pressure: approximately 200 Bar  
Temperature: 40 °C  
Detection: UV 254 nm, VWD  
Injection Volume: 0.5 µL  
Sample Solvent: ~20/80-water/methanol  
Response Time: 0.02 sec.  
Flow Cell: 2.5 µL semi-micro  
LC System: Shimadzu Prominence UFLC XR  
Extra column volume: ~14 µL

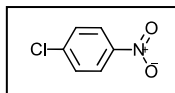
### PEAK IDENTITIES:

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

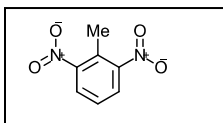
### STRUCTURES:



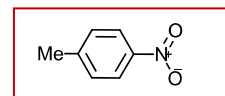
Nitrobenzene



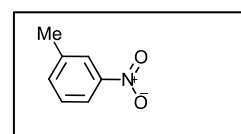
1-Chloro-4-Nitrobenzene



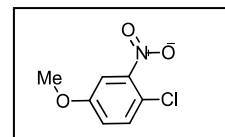
2, 6-Dinitrotoluene



4-Nitrotoluene



3-Nitrotoluene



4-Chloro-3-Nitroanisole

Differences in the interaction of the phenyl rings 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.