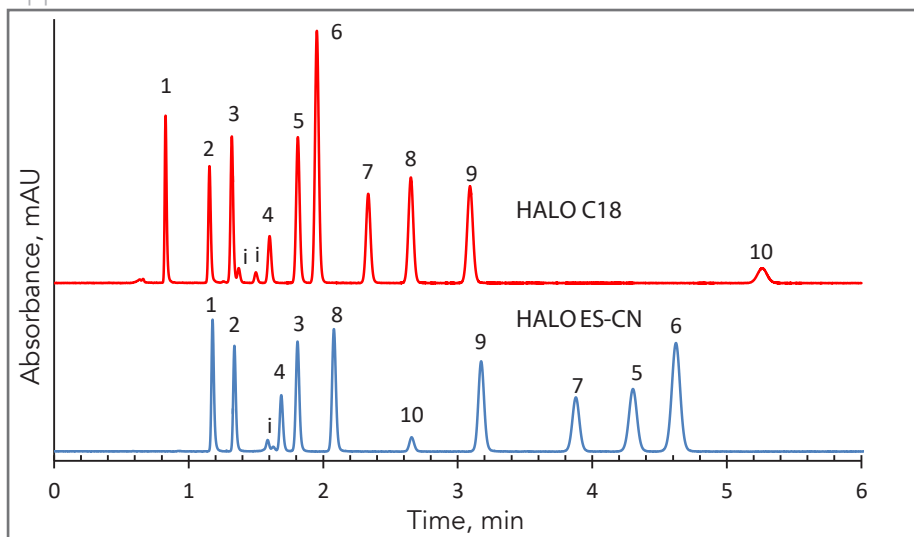




Separation of Mixed Polarity Compounds on HALO® C18 and ES-CN

Application Note 53-G



PEAK IDENTITIES:

1. Resorcinol
 2. Benzyl alcohol
 3. Phenylacetonitrile
 4. 1-Indanol
 5. 3,4-DNT
 6. 2,3-DNT
 7. 2,4-DNT
 8. Anisole
 9. 1-Chloro-4-nitrobenzene
 10. Toluene
- DNT = dinitrotoluene
i = impurity

These separations of polar and non-polar compounds show significant differences in selectivity between HALO® C18 and ES-CN stationary phases. Note the increased retention of nitro compounds and reduced retention of non-polar compounds on the HALO® ES-CN phase.

TEST CONDITIONS:

Columns:

- 1) HALO 90 Å C18, 2.7 μm , 4.6 x 100 mm
Part Number: 92814-402
- 2) HALO 90 Å ES-CN, 2.7 μm , 4.6 x 100 mm
Part Number: 92814-404

Mobile Phase: 40/60 - A/B for C18
50/50 - A/B for ES-CN

A: Water
B: Methanol

Flow Rate: 1.25 mL/min

Pressure: ~300 bar

Temperature: 30 °C

Detection: UV 254 nm, VWD

Injection Volume: 1.0 μL

Sample Solvent: Water/methanol

Response Time: 0.02 sec

Flow Cell: 2.5 μL semi-micro

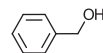
LC System: Shimadzu Prominence UFLC XR

Extra Column Volume: ~14 μL

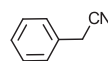
STRUCTURES:



Resorcinol



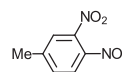
Benzyl alcohol



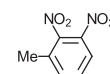
Phenylacetonitrile



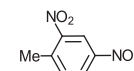
1-Indanol



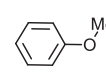
3,4-DNT



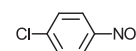
2,3-DNT



2,4-DNT



Anisole



1-Chloro-4-nitrobenzene



Toluene

