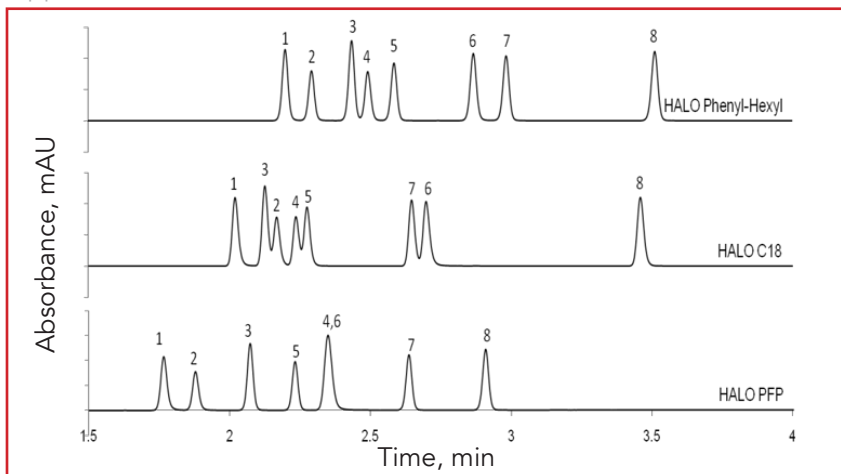




Separation of Benzodiazepines on HALO® Phenyl-Hexyl, C18, and PFP Phases

Application Note 51-BZ



PEAK IDENTITIES:

1. Oxazepam
2. Lorazepam
3. Nitrazepam
4. Alprazolam
5. Clonazepam
6. Temazepam
7. Flunitrazepam
8. Diazepam

These separations of benzodiazepines on three different HALO® Fused-Core® HPLC stationary phases show the utility of having a variety of phases to optimize selectivity and/or to shorten analysis time.

TEST CONDITIONS:

Columns:

- 1) HALO 90 Å Phenyl-Hexyl, 2.7 µm, 4.6 x 50 mm
Part Number: 92814-406
- 2) HALO 90 Å C18, 2.7 µm, 4.6 x 50 mm
Part Number: 92814-402
- 3) HALO 90 Å PFP, 2.7 µm, 4.6 x 50 mm
Part Number: 92814-409

Mobile Phase:

- A: 25 mM Ammonium acetate in water, pH 5.8 (not adjusted)
B: Acetonitrile

Gradient: 34-63% B in 3.5 min

Gradient Dwell Volume: 0.88 mL

Flow Rate: 1.5 mL/min

Pressure: 200 bar

Temperature: 35 °C

Detection: UV 254 nm, VWD

Injection Volume: 1.0 µL

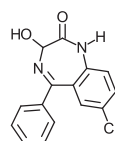
Sample Solvent: Standard diluted with acetonitrile and buffer

Response Time: < 0.12 sec

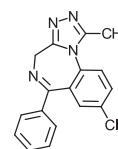
Flow Cell: 5.0 µL semi-micro

LC System: Agilent 1100

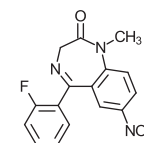
STRUCTURES:



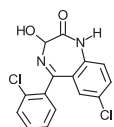
Oxazepam



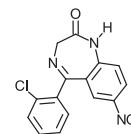
Alprazolam



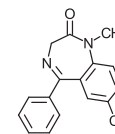
Flunitrazepam



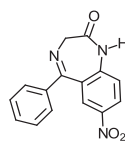
Lorazepam



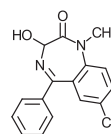
Clonazepam



Diazepam



Nitrazepam



Temazepam

