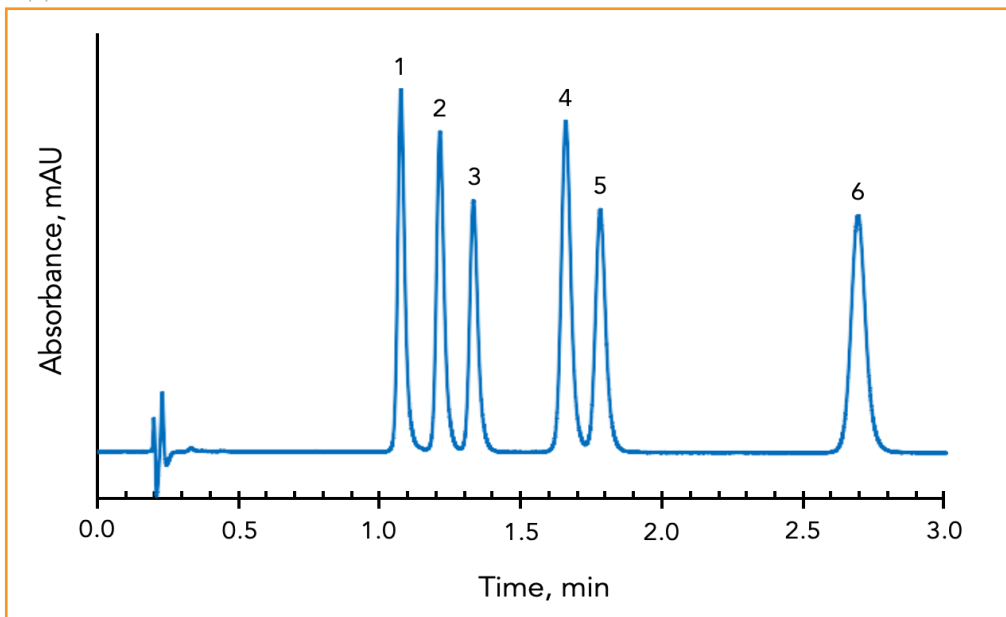




## Benzodiazepines Separation on HALO 90 Å Phenyl-Hexyl, 2.0 μm

Application Note 129-BZ



### PEAK IDENTITIES:

1. Lorazepam
2. Alprazolam
3. Clonazepam
4. Temazepam
5. Flunitrazepam
6. Diazepam

These six benzodiazepines are baseline resolved on a HALO® 2.0 μm Phenyl-Hexyl column. The π-π interactions between the Phenyl-Hexyl phase and these anti-anxiety drugs help to enhance the separation.

### TEST CONDITIONS:

**Column:** HALO 90 Å Phenyl-Hexyl, 2.0 μm,  
2.1 x 50 mm

**Part Number:** 91812-406

**Mobile Phase:** 62.5/37.5 - A/B

A: Water with 0.1% formic acid/0.01 M ammonium formate, pH 3.3

B: 80/20 acetonitrile/water with 0.1% formic acid/0.01 M ammonium formate

**Flow Rate:** 0.55 mL/min

**Pressure:** 311 bar

**Temperature:** 35 °C

**Detection:** UV 254 nm, PDA

**Injection Volume:** 0.5 μL

**Sample Solvent:** 30/70 water/acetonitrile

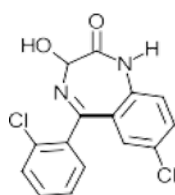
**Data Rate:** 80 Hz

**Response Time:** 0.02 sec

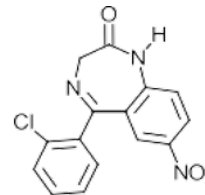
**Flow Cell:** 2.0 μL semi-micro

**LC System:** Agilent 1200 SL

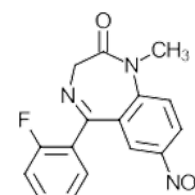
### STRUCTURES:



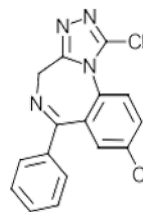
Lorazepam



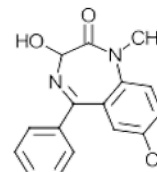
Clonazepam



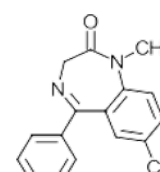
Flunitrazepam



Alprazolam



Temazepam



Diazepam

