

Application Note

## CNS Depressants

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Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

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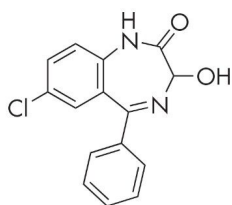
### Abstract

This application brief highlights the analysis of CNS depressants.

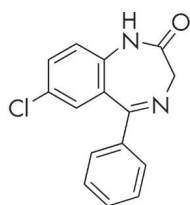
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## Introduction

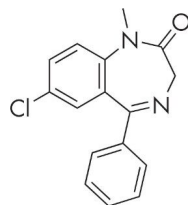
Compounds studied in this application brief are shown below.



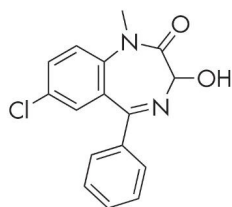
Oxazepam



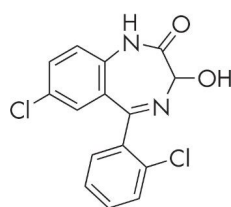
Desmethyldiazepam



Diazepam



Temazepam



Lorazepam

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## Experimental

### Compounds

Column:	SunFire C <sub>18</sub> 4.6 x 150 mm, 5.0 μm (p/n: 186002559)
Mobile phase A:	Water
Mobile phase B:	Acetonitrile
Mobile phase C:	2% CH <sub>3</sub> COOH in water
Flow rate:	1 mL/min

Injection volume: 10 µL

Isocratic Mobile Phase Conditions: 55% A, 35% B, 10% C

Sample concentration: 10 µg/mL in water

Temperature: 30 °C

Detection: UV @ 254 nm

Instrument: Alliance 2695 with 2996 PDA

Compounds	USP tailing
1. Oxazepam	1.08
2. Lorazepam	1.06
3. Desmethyldiazepam	1.05
4. Temazepam	1.07
5. Diazepam (Valium)	1.04

## Compounds

Column: SunFire C<sub>8</sub> 4.6 x 150 mm, 5.0 µm (p/n: 186002737)

Mobile phase A: Water

Mobile phase B: Acetonitrile

Mobile phase C: 2% Acetic acid in water

Flow rate: 1 mL/min

Injection volume: 10 µL

Isocratic Mobile Phase Conditions: 55% A, 35% B, 10% C

Sample concentration: 10 µg/mL in water

Temperature: 30 °C

Detection: UV @ 254 nm

Instrument: Alliance 2695 with 2996 PDA

Compounds	USP tailing
1. Oxazepam	1.02
2. Lorazepam	0.95
3. Desmethyldiazepam	1.00
4. Temazepam	1.00
5. Diazepam (Valium)	0.99

## Compounds

Column: SunFire C<sub>8</sub> 4.6 x 100 mm, 5.0 µm (p/n: 186002731)

Mobile phase A: Water

Mobile phase B: Acetonitrile

Mobile phase C: 2% Acetic acid in water

Flow rate: 1 mL/min

Injection volume: 10  $\mu$ L

Isocratic Mobile Phase Conditions: 55% A, 35% B, 10% C

Sample concentration: 10  $\mu$ g/mL in water

Temperature: 30  $^{\circ}$ C

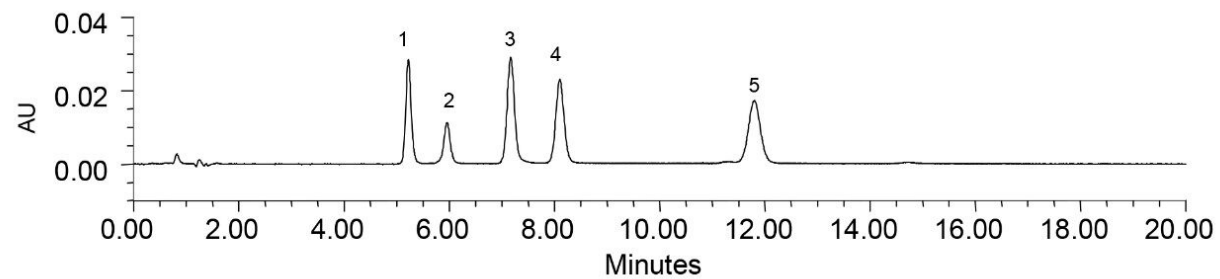
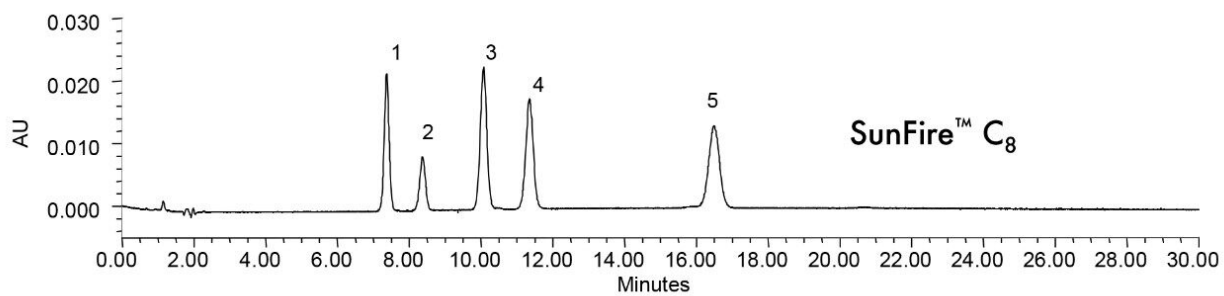
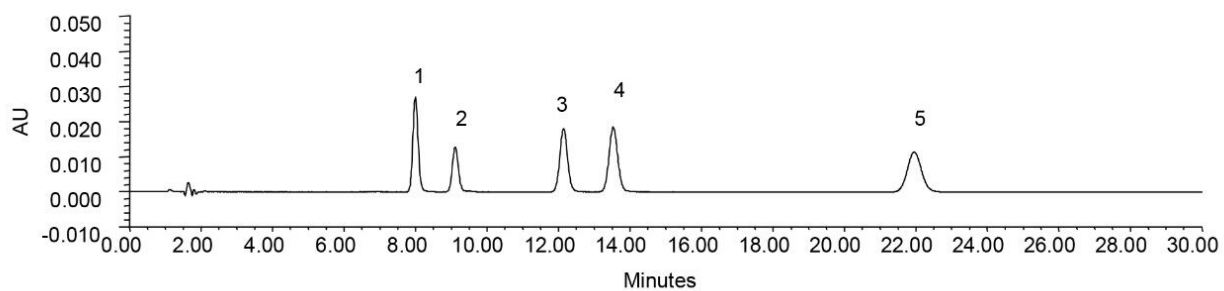
Detection: UV @ 254 nm

Instrument: Alliance 2695 with 2996 PDA

Compounds	USP tailing
1. Oxazepam	1.09
2. Lorazepam	0.96
3. Desmethyldiazepam	1.02
4. Temazepam	1.06
5. Diazepam (Valium)	1.06

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## Results and Discussion



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## Featured Products

Alliance HPLC <<https://www.waters.com/514248>>

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