

Application Note

CNS Depressants

Waters Corporation



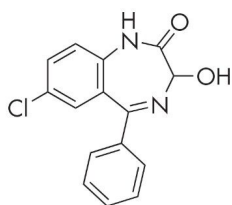
This is an Application Brief and does not contain a detailed Experimental section.

Abstract

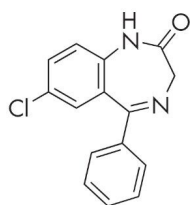
This application brief highlights the analysis of CNS depressants.

Introduction

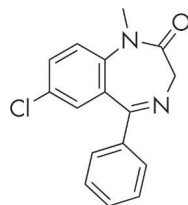
Compounds studied in this application brief are shown below.



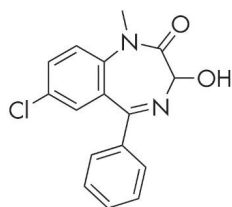
Oxazepam



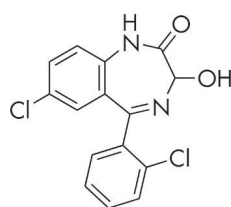
Desmethyldiazepam



Diazepam



Temazepam



Lorazepam

Experimental

Compounds

Column:	SunFire C ₁₈ 4.6 x 150 mm, 5.0 μm (p/n: 186002559)
Mobile phase A:	Water
Mobile phase B:	Acetonitrile
Mobile phase C:	2% CH ₃ 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 C₈ 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 C₈ 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 μ L

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

Sample concentration: 10 μ g/mL in water

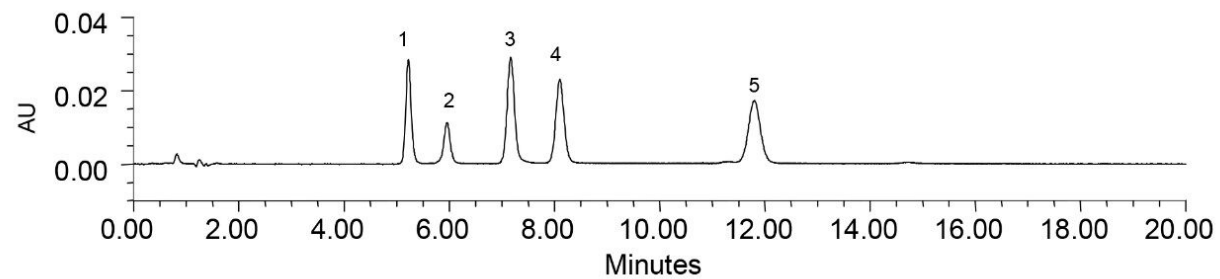
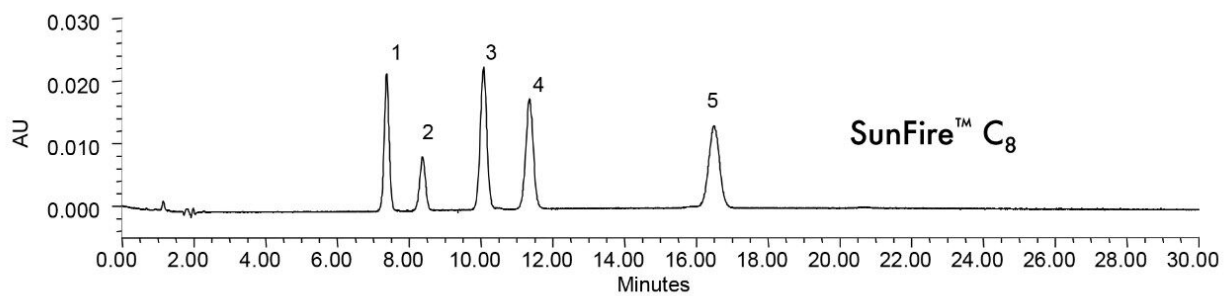
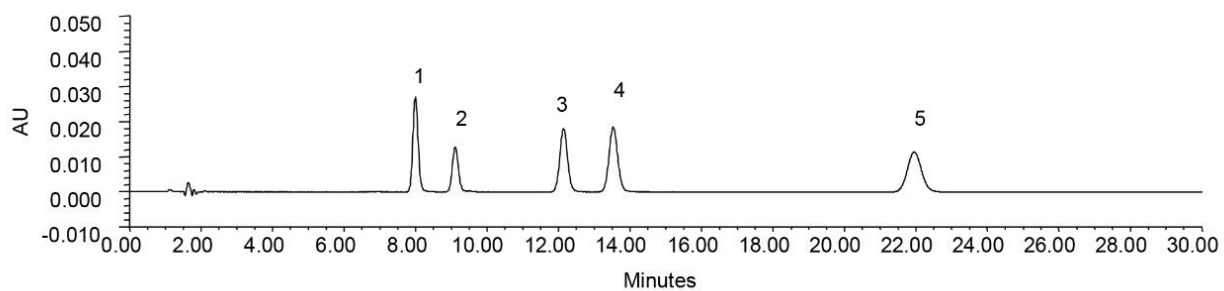
Temperature: 30 $^{\circ}$ C

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

Results and Discussion



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

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