

APPLICATIONS

Chiral Separation of Lorazepam using a Lux[®] 5 μm i-Amylose-1 Column

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Overview

Lorazepam is in a class of drugs called benzodiazepines and is also a medication sold under the brand name Ativan. It initially went on sale in the United States in 1977, and is on the World Health Organization's (WHO) List of Essential Medicines. Because of this medication's worldwide significance, it is important to have an enantioselective form of analysis to aid in the detection of dosage and impurities. A simple and robust method was developed for the separation between each Lorazepam enantiomer using a Lux i-Amylose-1 chiral column.

Figure 1.
Chemical structure of Lorazepam.

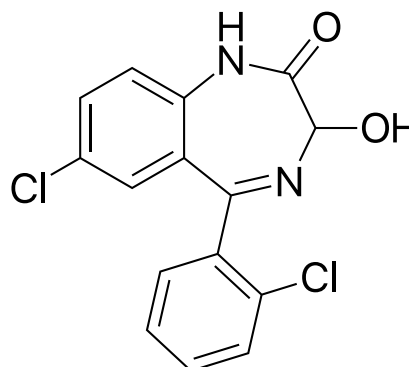
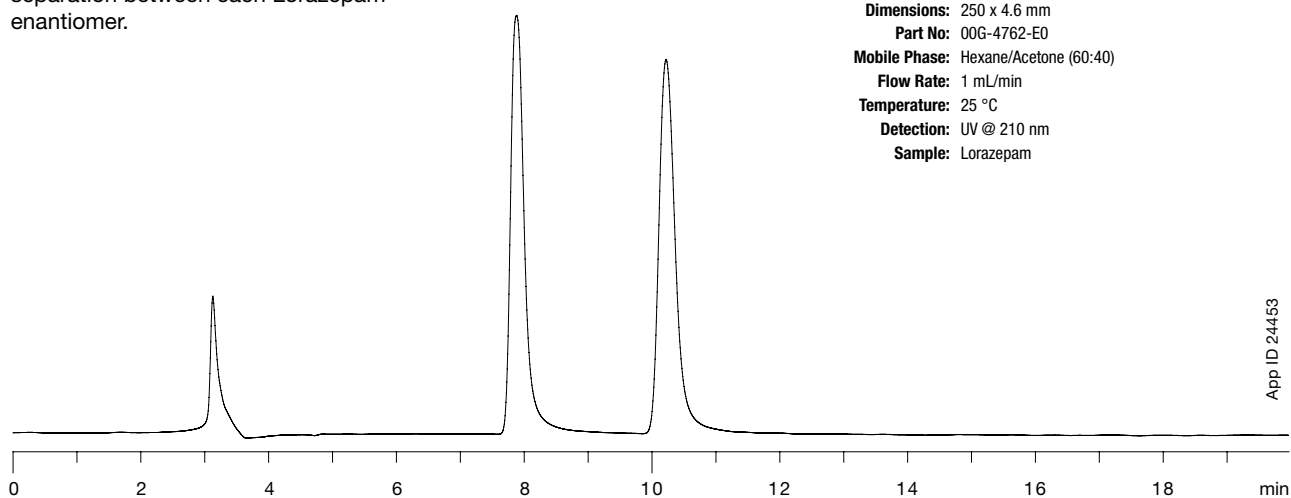


Figure 2.
Representative chromatogram displaying separation between each Lorazepam enantiomer.



HPLC Conditions

Column: Lux 5 μm i-Amylose-1
Dimensions: 250 x 4.6 mm
Part No: 00G-4762-E0
Mobile Phase: Hexane/Acetone (60:40)
Flow Rate: 1 mL/min
Temperature: 25 °C
Detection: UV @ 210 nm
Sample: Lorazepam

App ID 24453



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Lux[®] Chiral Column Ordering Information

3 μm Minibore, MidBore [™] , and Analytical Columns (mm)								SecurityGuard [™] Cartridges (mm) 10/pk		
Phases	50 x 2.0	150 x 2.0	100 x 3.0	150 x 3.0	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 2.0*	4 x 3.0*
i-Amylose-1	00B-4761-B0	00F-4761-B0	00D-4761-Y0	00F-4761-Y0	00B-4761-E0	00D-4761-E0	00F-4761-E0	00G-4761-E0	AJO-8640	AJO-8641
								for ID:	2.0–3.0 mm	3.2–8.0 mm

5 μm Minibore and Analytical Columns (mm)					SecurityGuard [™] Cartridges (mm) 10/pk	
Phases	50 x 4.6	100 x 4.6	150 x 4.6	250 x 4.6	4 x 2.0*	4 x 3.0*
i-Amylose-1	00B-4762-E0	00D-4762-E0	00F-4762-E0	00G-4762-E0	AJO-8640	AJO-8641
					for ID:	2.0–3.0 mm 3.2–8.0 mm

5 μm Semi-Prep Columns (mm)		SecurityGuard [™] Cartridges (mm) 3/pk
Phases	250 x 10.0	10 x 10.0 [‡]
i-Amylose-1	00G-4762-N0	AJO-8642
		for ID: 9–16 mm

- * SecurityGuard Analytical Cartridges require holder, Part No.: KJO-4282
- ‡ Semi-Prep SecurityGuard Cartridges require holder, Part No.: AJO-9281
- ** HPLC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8223
- SFC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8617
- ◆ HPLC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8277
- SFC PREP SecurityGuard Cartridges require holder, Part No.: AJO-8618

5 μm Axia [™] Packed Preparative Columns (mm)					SecurityGuard [™] Cartridges (mm) ea	
Phases	150 x 21.2	250 x 21.2	250 x 30	250 x 50	15 x 21.2**	15 x 30.0*
i-Amylose-1	00F-4762-P0-AX	00G-4762-P0-AX	00G-4762-U0-AX	00G-4762-V0-AX	AJO-8634	AJO-8635
					for ID:	18–29 mm 30–49 mm



If Lux analytical columns (≤ 4.6 mm ID) do not provide at least an equivalent or better chiral separation as compared to a competing column of the same particle size, similar phase and dimensions, return the column with comparative data within 45 days for a FULL REFUND.

Terms and Conditions

Subject to Phenomenex Standard Terms and Conditions which may be viewed at www.phenomenex.com/TermsAndConditions.

Trademarks

Lux is a registered trademark, Axia, MidBore, and SecurityGuard are trademarks of Phenomenex.

Disclaimer

Comparative separations may not be representative of all applications.

Axia column and packing technology is patented by Phenomenex. U.S. Patent No. 7, 674, 383.

SecurityGuard is patented by Phenomenex. U.S. Patent No. 6, 162, 362. *CAUTION: this patent only applies to the analytical-sized guard cartridge holder, and does not apply to SemiPrep, PREP or ULTRA holders, or to any cartridges.*

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