

APPLICATIONS

Chiral Separation of Chlormezanone with a Lux[®] i-Amylose-3 Chiral Stationary Phase by HPLC under Polar Organic Mobile Phase Conditions

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Overview

In this application note, a chiral screening mobile phase conditions was used on the Lux i-Amylose-3 immobilized polysaccharide-based chiral stationary separate a racemic mixture phase to of Chlormezanone. Chlormezanone is used in the as an anxiolytic agent and contains a stereogenic center and is chiral. The therapeutic use of Chlormezanone increased has interest the in development of an efficient and fast HPLC method that could resolve its enantiomeric compounds. To resolve the enantiomers a general screening polar organic mobile phase conditions of Acetonitrile with 0.1 % Diethylamine was used. An Agilent® 1100 (Santa Clara, CA) HPLC system with an injection volume of 10 µL and a flow rate of 1.0 mL/min was used for this example and resulted in a selectivity factor of $\alpha = 1.37$. The Lux i-Amylose-3 chiral selector is а complementary but distinct chiral selectivity in comparison to i-Amylose-1 and i-Cellulose-5. It combines the 5-position methyl group of the i-Amylose-3 chiral selector with the electron-withdrawing potential of the i-Cellulose-5, 3-position chlorine group. Combined with the strong solvent flexibility of the immobilization process the Lux i-Amylose-3 column's broad enantioselectivity promotes greater chiral separation success.

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LC Conditions

Column:	Lux 5 µm i-Amylose-3
Dimensions:	250 x 4.6 mm
Part No.:	<u>00G-4779-E0</u>
Recommended Guard:	SecurityGuard™
Guard Holder Part No.:	KJ0-4282
Guard Cartridge Part No.:	<u>AJ0-8650</u>
Mobile Phase:	Acetonitrile with 0.1 % Diethylamine
Flow Rate:	1.0 mL/min
Injection Volume:	10 μL (2 mg/mL)
Detection:	UV-Vis @ 254 nm
Sample:	1. Chlormezanone
	2. Chlormezanone

Enantiomers of Chlormezanone











PPLICATIONS

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