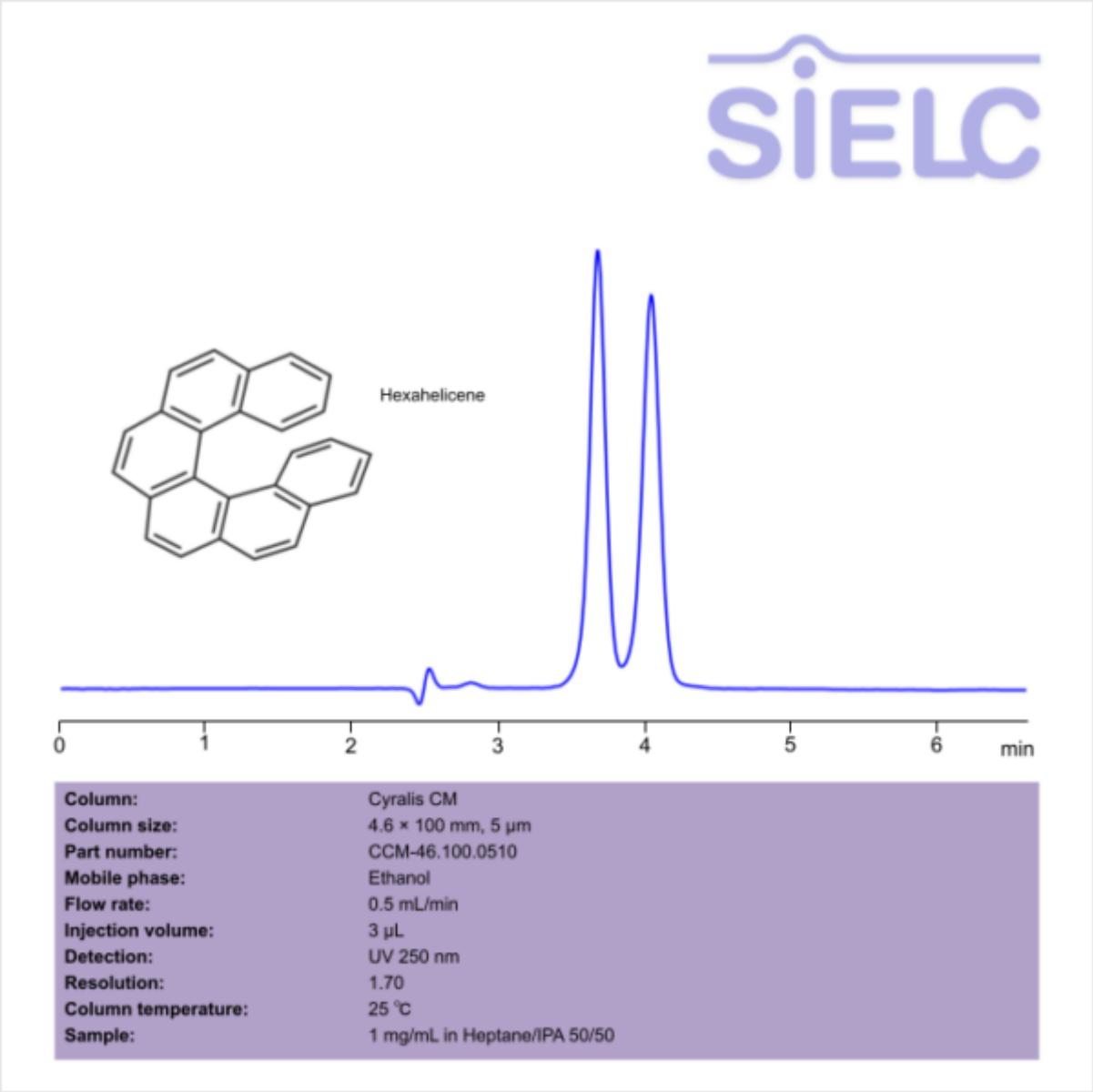
HPLC Chiral Separation of Hexahelicene on Cyralis CM Column

https://sielc.com/hplc-chiral-method-for-analysis-of-hexahelicene

Chromatogram



Column:	Cyralis CM
Column size:	4.6 × 100 mm, 5 µm
Part number:	CCM-46.100.0510
Mobile phase:	Ethanol
Flow rate:	0.5 mL/min
Injection volume:	3 µL
Detection:	UV 250 nm
Resolution:	1.70
Column temperature:	25 °C
Sample:	1 mg/mL in Heptane/IPA 50/50

Description

· High Performance Liquid Chromatography (HPLC) Method for Analysis of Hexahelicene .

Hexahelicene is a polycyclic aromatic hydrocarbon with the chemical formula C 26 H 16 . Due to the steric crowding and the angular structure, the molecule twists into a chiral helix. It currently does not have any uses, but is being studied as an asymmetric catalyst, as well as potential uses in liquid crystal technology, nanotechnology, and optoelectronics.

This application describes a normal-phase chiral HPLC method for the separation of Hexahelicene enantiomers using SIELC's Cyralis CM chiral column. Cyralis CM is a cellulose-based chiral stationary phase (CSP) designed for enantiomeric separations, optical purity testing, chiral impurity analysis, and stereoisomer characterization in pharmaceutical, chemical, agrochemical, and fine chemical applications. For best results, the sample should be prepared fresh for analysis.

Hexahelicene can be retained and analyzed using the Cyralis CM stationary phase column. The analysis utilizes an isocratic method with a mobile phase consisting of Ethanol. Detection is performed using UV.

Method Parameters

Mobile Phase	Ethanol
Flow Rate	0.5 mL/min
Detection	UV 250 nm
Resolution	1.70
Class of Compounds	Polycyclic Aromatic Hydrocarbon
Analyzing Compounds	Hexahelicene

HPLC Column Used

Cyralis CM, 4.6 x 100 mm, 5 µm, 100 A, dual ended

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