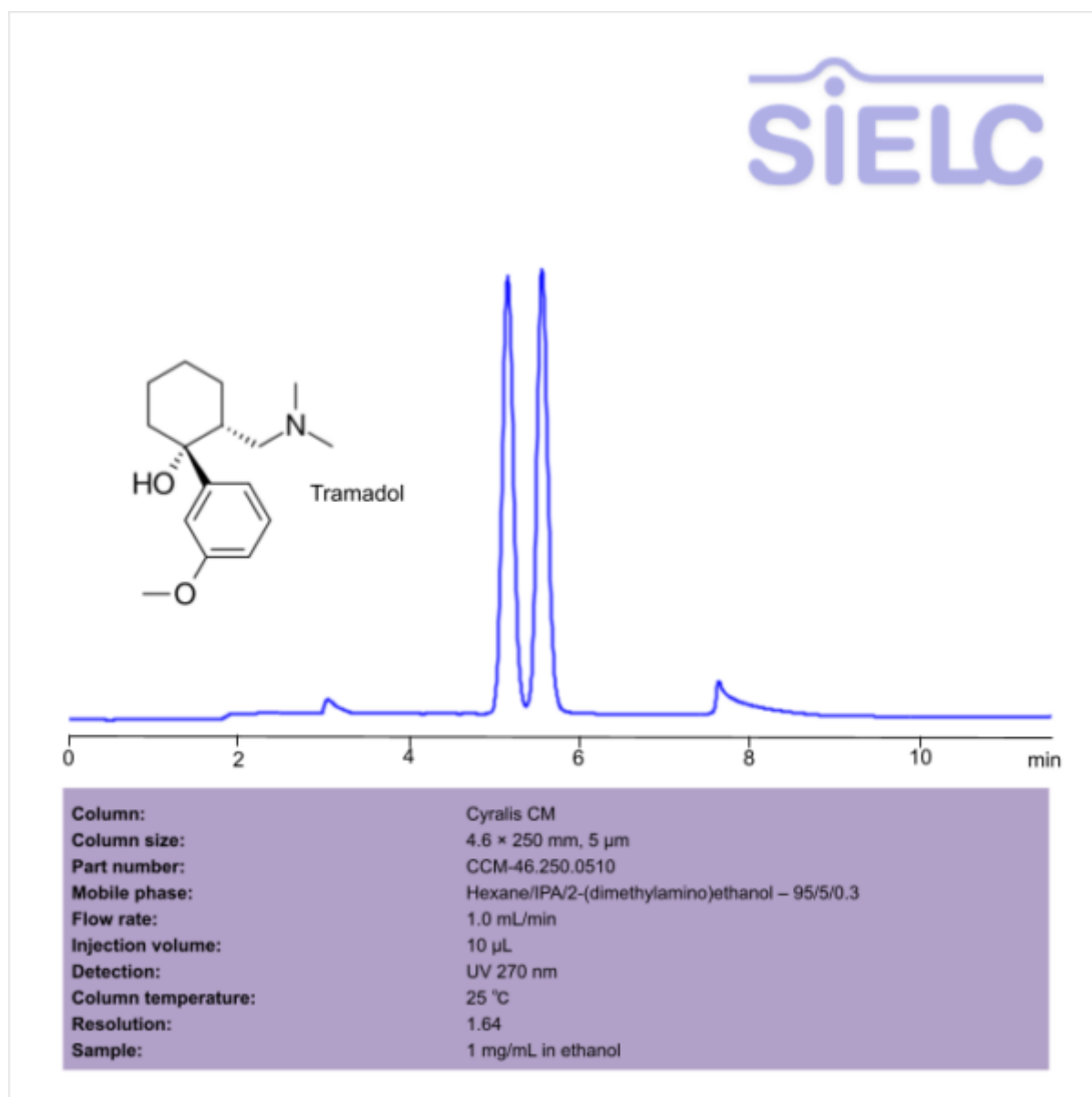


HPLC Chiral Separation of Tramadol Enantiomers on Cyralis CM Column

<https://sielc.com/hplc-chiral-method-for-analysis-of-tramadol>

Chromatogram



Description

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

Tramadol is a narcotic analgesic with the chemical formula $C_{16}H_{25}NO_2$. It is used to manage severe pain. It is a synthetic codeine analogue. The way it works is similar to opioids, such as morphine and codeine due to it acting on specific opioid receptors. An overdose on the drug can cause acute liver failure. Tramadol, also known as Ultram and other brand names, is a synthetic opiate used to treat moderate to severe pain. The painkilling effects of Tramadol last for about 6 hours. You can find detailed UV spectra of Tramadol and information about its various lambda maxima by visiting the following link.

This application describes a normal-phase chiral HPLC method for the separation of Tramadol 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.

Tramadol can be retained and analyzed using the Cyralis CM stationary phase column. The analysis utilizes an isocratic method with a mobile phase consisting of Hexane, IPA, and 2-(dimethylamino)ethanol. Detection is performed using UV.

Method Parameters

Mobile Phase	Hexane/IPA/2-(dimethylamino)ethanol
Flow Rate	1.0 mL/min
Detection	UV 270 nm
Resolution	1.64
Class of Compounds	Drug
Analyzing Compounds	Tramadol

HPLC Column Used

Cyralis CM, 4.6 x 250 mm, 5 µm, 100 Å, normal phase

[Order this column at hplc-shop.de →](https://www.hplc-shop.de)