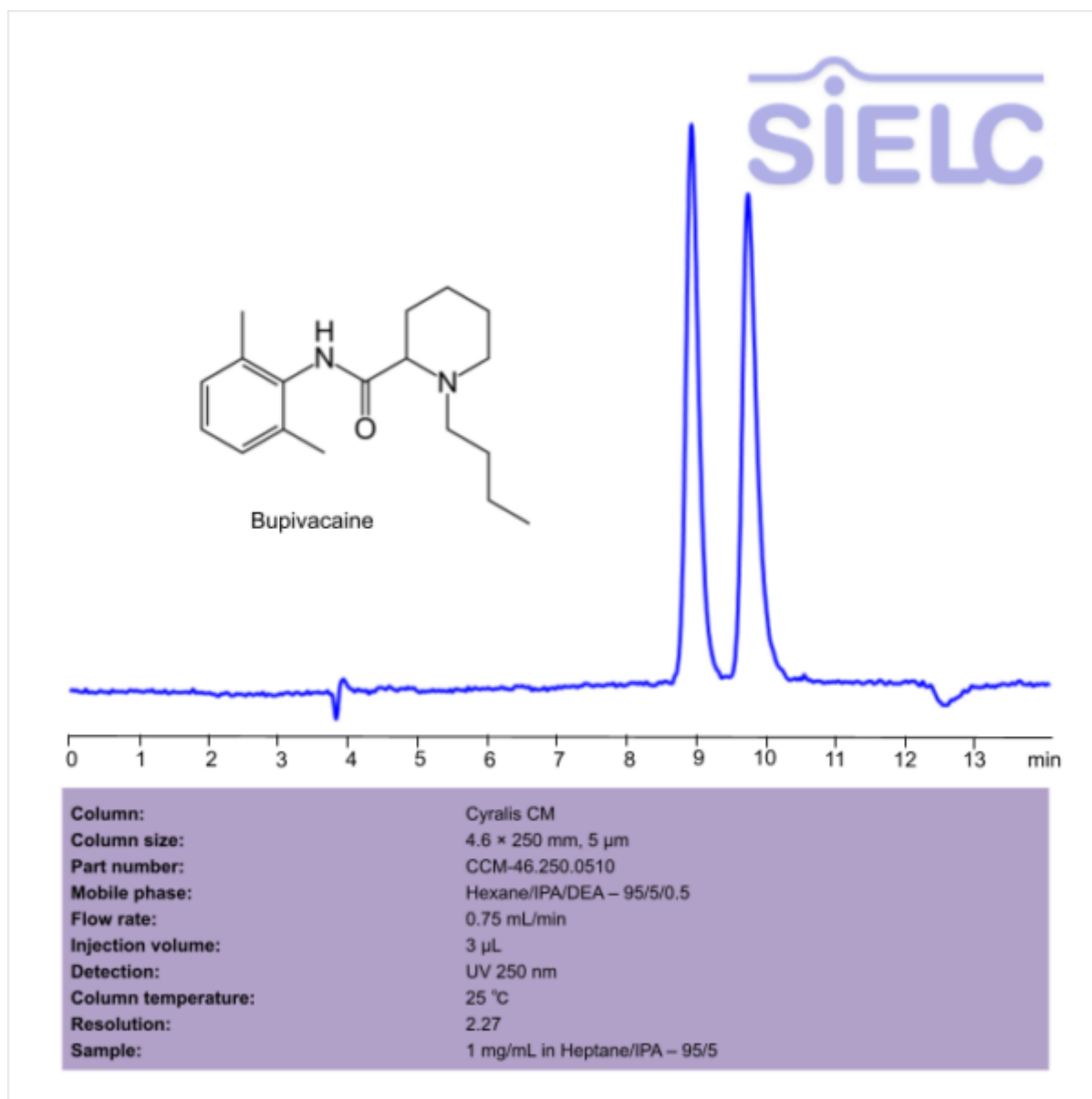


HPLC Chiral Separation of Bupivacaine Enantiomers on Cyralis CM Column

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

Chromatogram



Description

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

Bupivacaine is a type of medication known as a local anesthetic with the chemical formula $C_{18}H_{28}N_2O$. It works by blocking nerve impulses that send pain signals to your brain, numbing the area and reducing discomfort. This drug is most commonly used during surgical procedures, labor and delivery, or dental procedures. Bupivacaine is often injected into the area of the body where pain relief is needed.

Bupivacaine comes in various forms, including an injectable solution and a topical patch. It has a longer duration of action compared to some other local anesthetics, making it particularly useful for procedures that may require prolonged anesthesia or postoperative pain management.

As with any medication, bupivacaine can have side effects and potential risks. These can include low blood pressure (hypotension), irregular heart rhythms (arrhythmias), and in rare cases, severe reactions like seizures or cardiac arrest. Therefore, it's crucial to only use bupivacaine under the direct supervision of a healthcare provider.

You can find detailed UV spectra of Bupivacaine 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 Bupivacaine 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.

Bupivacaine 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 DEA. Detection is performed using UV.

Method Parameters

Mobile Phase	Hexane/IPA/DEA- 95/5/0.5%
Flow Rate	1.0 mL/min
Detection	UV 250 nm
Resolution	2.27
Class of Compounds	Drug
Analyzing Compounds	Bupivacaine

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)