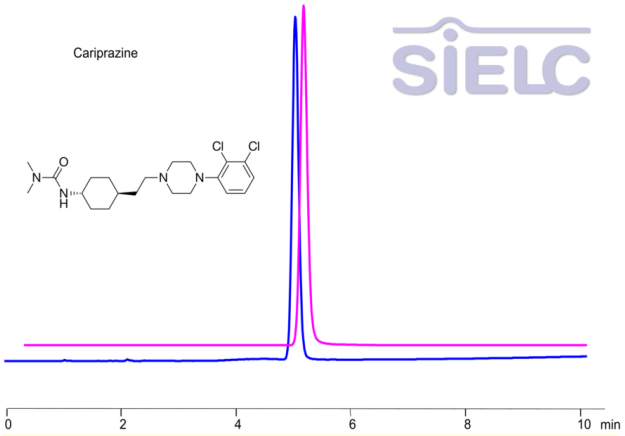
HPLC-MS Method for Analysis of Cariprazine on Primesep B Column



Column:	Primesep B
Column size:	4.6 × 150 mm, 5 µm
Column part number:	B-46.150.0510
Mobile phase:	Gradient MeCN/H2O - 30-70%, min
Buffer:	Formic Acid - 0.2%
Flow rate	1.0 ml/min
Detection:	UV 260 nm, LC-MS (ESI, SIM) m/z 427 [M+]
Concentration:	1.0 mg/ml
Injection Volume:	1 µL
Diluent:	MeCN/H2O - 50/50%
Limit of Detection:	Cariprazine - UV - 40 ppb, SIM + 427 - 3 ppb

Separation type: Liquid Chromatography Mixed-mode SIELC Technologies

Cariprazine is an atypical antipsychotic medication primarily used to treat psychiatric disorders such as schizophrenia and bipolar disorder. It is a dopamine D2/D3 receptor partial agonist , with a preference for the D3 receptor, which helps modulate neurotransmitter activity in the brain. This unique mechanism makes it effective in managing symptoms like hallucinations, delusions, and mood swings.

Brand name : Vraylar (most common)

Cariprazine has shown efficacy in treating both the positive (hallucinations, delusions) and negative (social withdrawal, lack of motivation) symptoms of schizophrenia. Its partial agonist effect at D3 receptors may help reduce the risk of some side effects seen with other antipsychotics, such as weight gain or sedation.

Cariprazine can be retained, separated and analyzed using a Primesep B mixed-mode stationary phase column. The analysis employs a gradient method with a simple mobile phase comprising water, acetonitrile (MeCN), and formic acid as a buffer. This method allows for detection using UV 260 nm.

You can find detailed UV spectra of Cariprazine and information about its various lambda maxima by visiting the following link .

AugustaChrom - Dr. Roland Kießwetter
Tel.: +49 821 599 783 70
Fax: +49 821 599 783 71
E-Mail: info@hplc-shop.de

Method Parameters

Column	Primesep B, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN/H2O – 30-70%, 10 min
Buffer	Formic Acid – 0.2%
Flow Rate	1.0 mL/min
Detection	UV 260 nm, LC-MS (ESI, SIM) m/z 247 [M+]
Limit of Detection	UV 40 ppb, LC MS – 3 ppb

Quelle: https://sielc.com/hplc-method-cariprazine