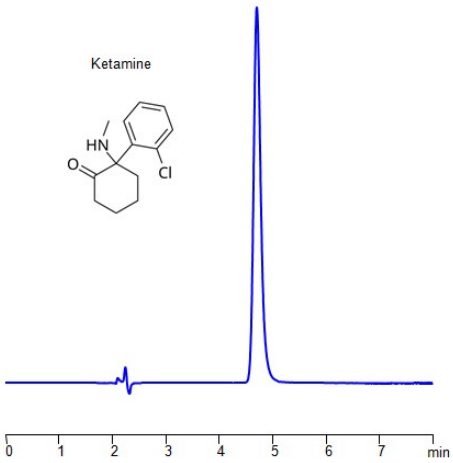
HPLC Method for Analysis of Ketamine Form on Primesep B Column



Column:	Primesep B
Column size:	4.6× 150 mm, 5 µm
Column part number:	100-46.150.0510
Mobile phase:	MeCN/H_2O – 5/95%
Buffer:	H_2SO_4 – 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 200 nm

Separation type: Liquid Chromatography Mixed-mode

Ketamine is a medication primarily used for induction and maintenance of anesthesia. It also has analgesic and sedative properties.

Ketamine is classified as an arylcyclohexylamine. Chemically, it is known as (RS)-2-(2-chlorophenyl)-2-(methylamino)cyclohexanone.

Ketamine is used primarily as an anesthetic and analgesic in both human and veterinary medicine. It has a unique mechanism of action, acting primarily as an antagonist of the N-methyl-D-aspartate (NMDA) receptor, which is involved in pain transmission and synaptic plasticity.

Beyond its primary medical use, ketamine has also been investigated for its rapid-acting antidepressant effects and is used in certain treatment-resistant cases of depression.

Due to its potential for misuse and the hallucinogenic effects it can produce at sub-anesthetic doses, ketamine is also classified as a controlled substance in many countries.

Ketamine can be retained, and analyzed on a Primesep B mixed-mode stationary phase column using an isocratic analytical method with a simple mobile phase of water, Acetonitrile (MeCN), and a sulfuric acid as a buffer. This analysis method can be detected using UV at 200 nm.

*LOD was determined for this combination of instrument, method, and analyte, and it can vary from one laboratory to another even when the same general type of analysis is being performed.

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Method Parameters

Column	Primesep B, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H2O – 5/95%
Buffer	H2SO4 – 0.2%
Flow Rate	1.0 mL/min
Detection	UV 200 nm

Quelle: https://sielc.com/hplc-determination-of-ketamine-2