HPLC Method for Analysis of Kynurenic Acid on Primesep 100 Column

Separation type: Liquid Chromatography Mixed-mode SIELC Technologies

Kynurenic acid (KYNA) is a metabolite in the kynurenine pathway, which degrades the amino acid tryptophan. It acts as an antagonist to receptors in the brain, such as NMDA and alpha-7 nicotinic acetylcholine receptors, playing a dual role in the central nervous system. KYNA is neuroprotective by inhibiting excitatory neurotransmission and reducing oxidative stress, but elevated levels are linked to cognitive impairments and disorders like schizophrenia and depression.

Kynurenic Acid can be retained, separated and analyzed using a Primesep 100 mixed-mode stationary phase column. The analysis employs a gradient method with a simple mobile phase comprising water, acetonitrile (MeCN), and sulfuric acid as a buffer. This method allows for detection using UV 240 nm.

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

Method Parameters

Column	Primesep 100, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN from 5% to 50%
Buffer	Gradient H2SO4from 0.1% to 0.2%
Flow Rate	1.0 mL/min
Detection	UV 240 nm

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Quelle: https://sielc.com/hplc-method-kynurenic-acid