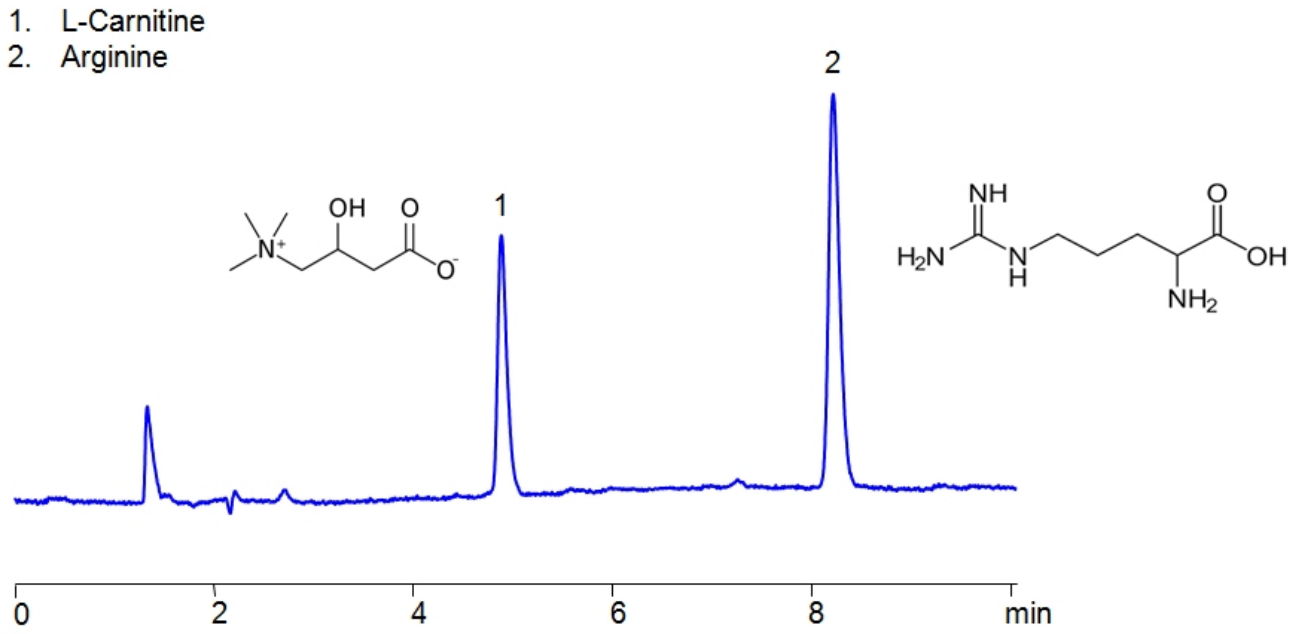
HPLC Method For Analysis Of L-Carnitine and Arginine on Primesep 100 Column

https://sielc.com/hplc-method-for-analysis-of-l-carnitine-and-arginine

Chromatogram



Column:	Primesep 100
Column size:	4.6 × 150 mm, 5 µm
Column part number:	100-46.150.0510
Mobile phase:	MeCN/H_2O – 20/80%
Buffer:	Gradient H_2SO_4 from 0.1 to 0.5%, 10 min
Flow rate:	1.0 mL/min
Detection:	UV 205 nm

Description

· Separation type: Liquid Chromatography Mixed-mode · High Performance Liquid Chromatography (HPLC) Method for Analysis of L-Carnitine and Arginine

L-carnitine is a quaternary ammonium cation (also known as a quat) that is key to the metabolic processes of most living species. Arginine is an alpha amino acid that is key to the biosynthesis of proteins. These two amine-based compounds can be detected in the low UV regime. Using a Primesep 100 mixed-mode column and a gradient mobile phase consisting of water and acetonitrile (MeCN) with a gradient of sulfuric acid (H2SO4) as a buffer, L-carnitine and Arginine can be retained, separated, and analyzed. This analysis method can be UV detected at 205 nm.

Method Parameters

Mobile Phase	MeCN/H2O – 20/80%
Buffer	Gradient H2SO4 from 0.1 to 0.5%, 10 min
Flow Rate	1.0 ml/min

Detection	UV, 205 nm
Class of Compounds	Amino acid
Analyzing Compounds	Carnitine, Arginine

HPLC Column Used

Primesep 100, 4.6×150 mm, 5 µm, 100A

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