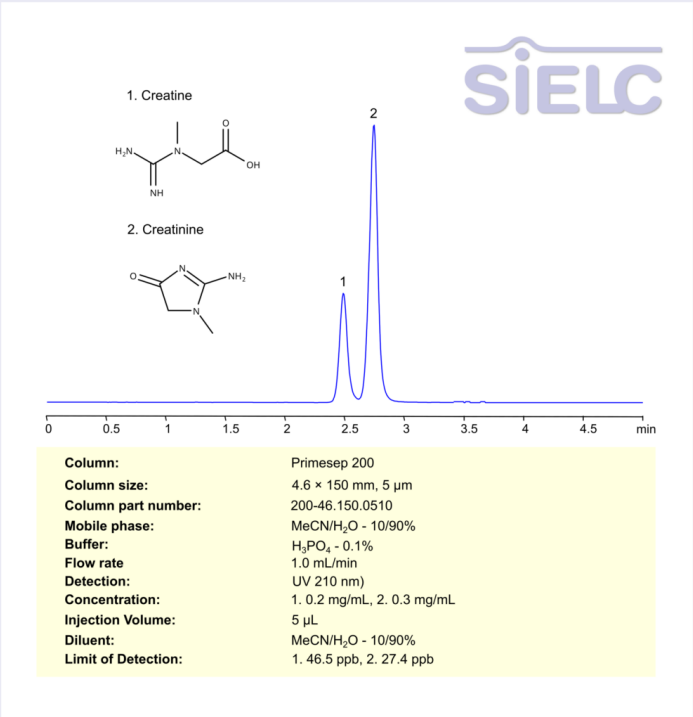
HPLC Method for Analysis of Creatine and Creatinine on Primesep 200 Column



Creatine is a naturally occurring compound found in muscles and is used to produce energy during high-intensity exercise. It is synthesized in the body from amino acids and stored in muscles for quick energy release. Creatinine, on the other hand, is a waste product produced from the breakdown of creatine. It is filtered by the kidneys and excreted in urine. The measurement of creatinine levels in the blood and urine is commonly used to assess kidney function, as high levels may indicate impaired kidney function or other health issues.

Creatine and Creatinine can be analyzed and separated using a Primesep 200 mixed-mode stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water, acetonitrile (MeCN), and phosphoric acid as a buffer. Detection is carried out using UV.

Method Parameters

Column	Primesep 200, 4.6 x 150 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H2O – 10/90%
Buffer	H3PO4 – 0.1%
Flow Rate	1.0 mL/min
Detection	UV 210 nm
Sample	1. 0.2 mg/mL, 2. 0.3 mg/mL
Injection Volume	5 µl

Quelle: https://sielc.com/hplc-method-for-analysis-of-creatine-and-creatinine