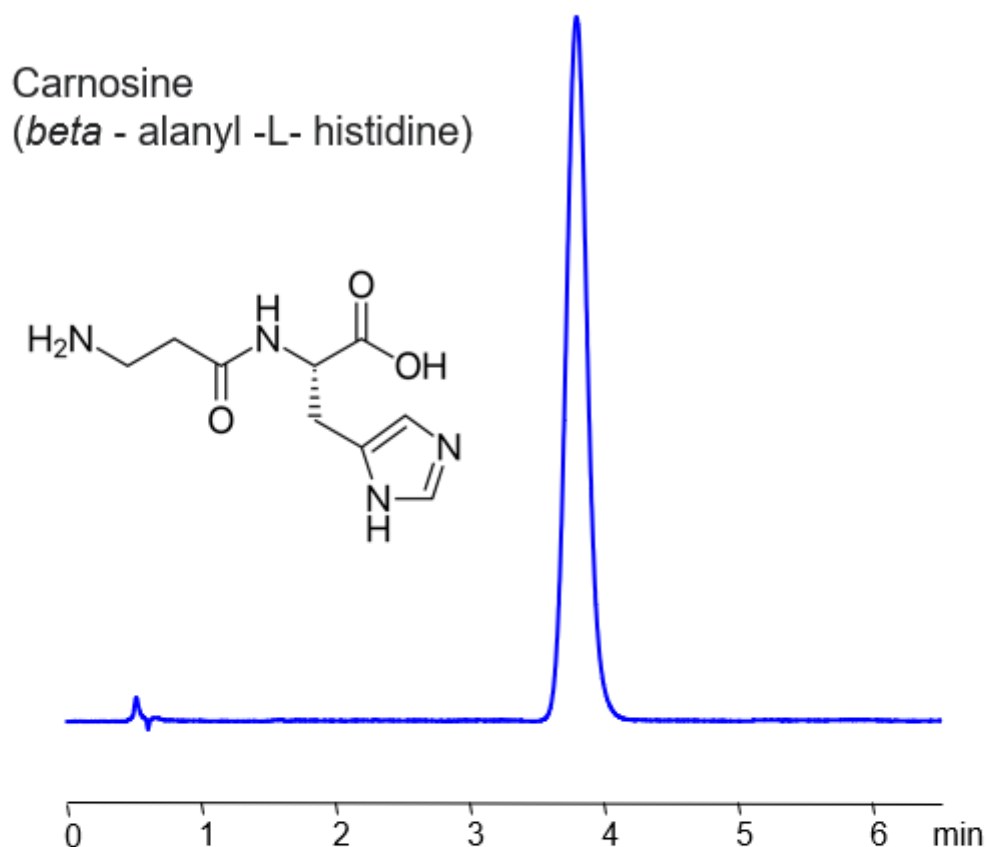


HPLC Method for Analysis of Carnosine (beta-alanyl-L-histidine) on BIST B+ Column

<https://sielc.com/hplc-method-of-carnosine>

Chromatogram



Column:	BIST B+
Column size:	4.6 × 50 mm, 5 µm
Mobile phase:	MeCN - 75 %,
Buffer:	H ₂ SO ₄ – 0.2%
Flow rate:	1.0 mL/min
Detection:	UV 205 nm

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Carnosine (beta-alanyl-L-histidine) .

Carnosine is a dipeptide molecule with the chemical formula $C_9H_{14}N_4O_3$. It is synthesized from beta-alanine and histidine. It is a naturally occurring pH buffer. It is found in muscles and brain tissue, but is produced in the liver. Some use it as a nutritional supplement, but it can be used in topical applications to reduce wrinkles.

Using SIELC's newly introduced BIST™ method, Carnosine (beta-alanyl-L-histidine) can be retained on a positively charged, anion-exchange BIST B+ column. There are two keys to this retention method: 1) a multi-charged, negative buffer, such as Sulfuric acid (H_2SO_4), which acts as a bridge, linking the positively charged peptide to the positively charged column surface and 2) a mobile phase consisting mostly of organic solvent (such as MeCN) to minimize the formation of a solvation layer around the charged analytes. Using this new and unique analysis method, Carnosine can be separated, retained, and UV detected at 205 nm.

Method Parameters

Mobile Phase	MeCN – 75%
Buffer	H_2SO_4 – 0.2%
Flow Rate	1.0 ml/min
Detection	UV 205 nm
Peak Retention Time	3.71 min
Class of Compounds	Dipeptide
Analyzing Compounds	Carnosine (beta-alanyl-L-histidine)

HPLC Column Used

BIST B+, 4.6 x 50 mm, 5 µm, 100 Å, dual ended

[Order this column at hplc-shop.de →](https://www.hplc-shop.de)