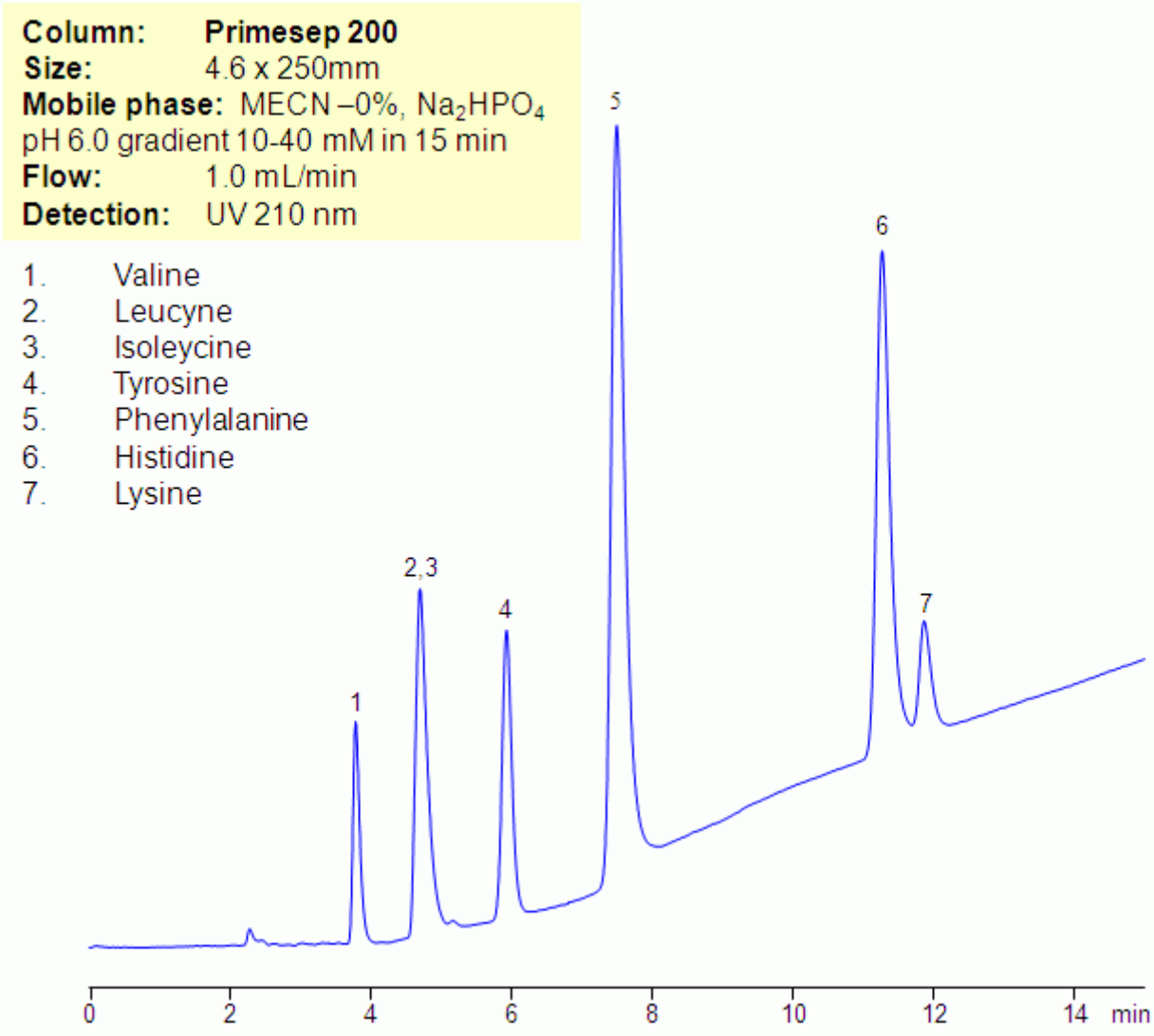
HPLC Separation of Amino Acids in Zero Organic Mode on Primesep 200 column

https://sielc.com/Application-HPLC-Separation-of-Amino-Acids-in-Zero-Organic-Mode-on-Primesep-200-column

Chromatogram



Description

Essential and non-essential amino acids can be retained and separated in zero-organic mode on Primesep mixed-mode HPLC columns. Zero-organic mode is required to monitor isotopes of carbon. Amino acids are retained by combination of reversed-phase and cation-exchange mechanisms. At lower pH, some of the amino acids are more hydrophobic. Buffer pH will affect ionization state of amino acids, and at higher pH (above 2.5), the amino acids will be less hydrophobic and retentive in zero-organic mode. Amino acids can be monitored by low UV. Method can be used in archeological research for analysis of various molecules where presence of organic component of the mobile phase interferes with analysis.

Method Parameters

Mobile Phase	MeCN/H2O
Buffer	Na2HPO4
Flow Rate	1.0 ml/min

Detection	UV 210 nm
Class of Compounds	Drug, Acid, Hydrophilic, Ionizable, Vitamin, Supplements
Analyzing Compounds	Valine, Leucyne, Isoleycine, Tyrosine, Phenylalanine, Histidine, Lysine

HPLC Column Used

Primesep 200, 4.6×250 mm, 5 µm, 100A

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