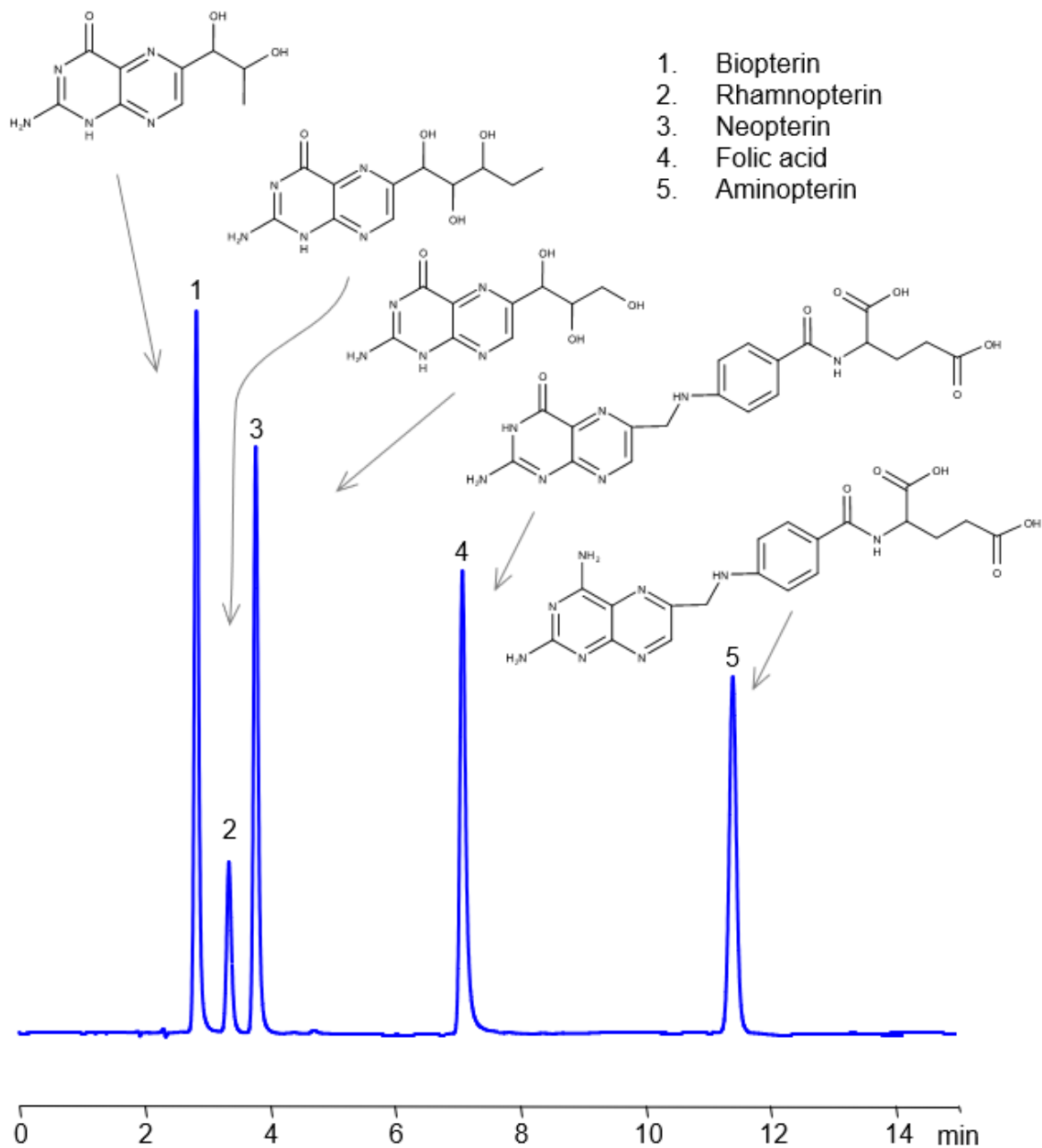


HPLC Method for Separation of Biopterin, Rhamnopterin, Neopterin, Folic Acid and Aminopterin on Primesep 100 Column

<https://sielc.com/hplc-separation-of-pteridines-folic>

Chromatogram



Column:	Primesep 100
Column size:	4.6 × 150 mm, 5 μm
Column part number:	100-46.150.0510
Mobile phase:	Gr MeCN – 5-60%, 15 min
Buffer:	Ammonium formate pH 3.0 – 50 mM
Flow rate:	1.0 mL/min
Detection:	UV 275 nm

Description

· Separation type: Liquid Chromatography Mixed-mode

These compounds, including Biopterin, Rhamnopterin, Neopterin, Folic Acid, and Aminopterin, are all related to the chemical structure known as pterin. Pterins are a group of heterocyclic compounds composed of a pteridine ring system, which consists of two fused six-membered rings, a pyrimidine ring and a pyrazine ring. Here's a brief overview of each:

These five pterins can be retained, separated and analyzed using a reverse-phase Primesep 100, 4.6 x 150 mm, 5 µm, 100 Å, dual ended column. The mobile phase for this method consists of water, acetonitrile (MeCN), and ammonium formate, which serves as a buffer. This analytical method can be monitored using UV detection at 275 nm, an Evaporative Light Scattering Detector (ELSD), or any other evaporative detection method such as Charged Aerosol Detection (CAD) or Electrospray Ionization Mass Spectrometry (ESI-MS)

LOD was determined for this combination of instrument, method, and analyte, and it can vary from one laboratory to another even when the same general type of analysis is being performed.

Method Parameters

Mobile Phase	Gradient MeCN -5-60%, 10 min
Buffer	Ammonium formate pH 3.0 – 50 mM
Flow Rate	1.0 ml/min
Detection	UV 275 nm
Peak Retention Time	2.21, 3.28, 3.81, 6.85, 11.21 min
Sample concentration	0.02 mg/ml
Injection volume	5 µl
Sample diluent	H2O + NaOH
LOD	10 ppb
Class of Compounds	Pteridines
Analyzing Compounds	Biopterin,Rhamnopterin,Neopterin,Folic Acid,Aminopterin

HPLC Column Used

Primesep 100, 4.6 x 150 mm, 5 µm, 100 Å, dual ended

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