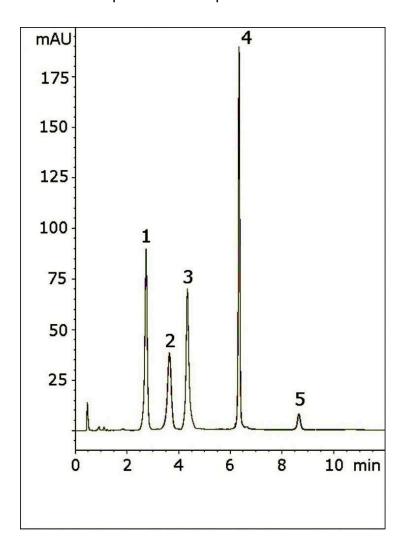
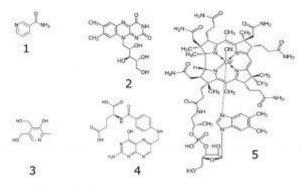


# B Vitamins Analysis with HPLC - AppNote

## **Separation of Five Highly Polar Vitamins**

The B Vitamins are all highly polar and often ion pair agents are needed in Reverse Phase in order to retain them. However, these agents are incompatible with LCMS and therefore limit the applications of these methods. In this method using the Diamond Hydride Column, good separation is obtained with MS-compatible mobile phase solvents.





#### Peaks:

- 1. Niacinamide
- 2. Riboflavin
- 3. Pyridoxine
- 4. Folic Acid
- 5. Cyanocobalamin

#### **Method Conditions**

Column: Cogent Diamond Hydride™, 4µm, 100Å

Catalog No.: 70000-7.5P Dimensions: 4.6 x 75mm

**Mobile Phase:** 

A: DI Water / 10 mM Ammonium Formate

B: 95% Acetonitrile / 5% Solvent A

#### **Gradient:**

Time (minutes)	%B
0	100
2	100
9	50
10	100

Post Time: 2 minutes Flow rate: 1.0 mL/minute Detection: UV @ 266 nm

Injection vol.: 2µL

**Sample Preparation:** Mix of 0.1 mg/L Niacinamide, 0.01 mg /mL Riboflavin, 0.3 mg / mL Pyridoxine, 0.05 mg / mL Folic Acid, 1.0 mg / mL Cyanocobalamin in 50% Solvent A/ 50% Solvent B diluent. Peak

identities were confirmed by individual standards.

to: 0.9 minutes

Note: The word "Vitamin" was originally spelled "vitamine" when it was first coined by biochemist Casimir Funk. It was derived from the words "vital" and "amine" because it was believed at the time that all Vitamins were chemical Amines. The "e" was dropped from the word when it was discovered that this is not the case.



### **Attachment**

No 162 B Vitamins Analysis pdf 0.6 Mb Download File

Printed from the Chrom Resource Center Copyright 2025, All Rights Apply **MicroSolv Technology Corporation** 9158 Industrial Blvd. NE, Leland, NC 28451 Tel: (732) 380-8900 Fax: (910) 769-9435

Email: customers@mtc-usa.com

Website: www.mtc-usa.com