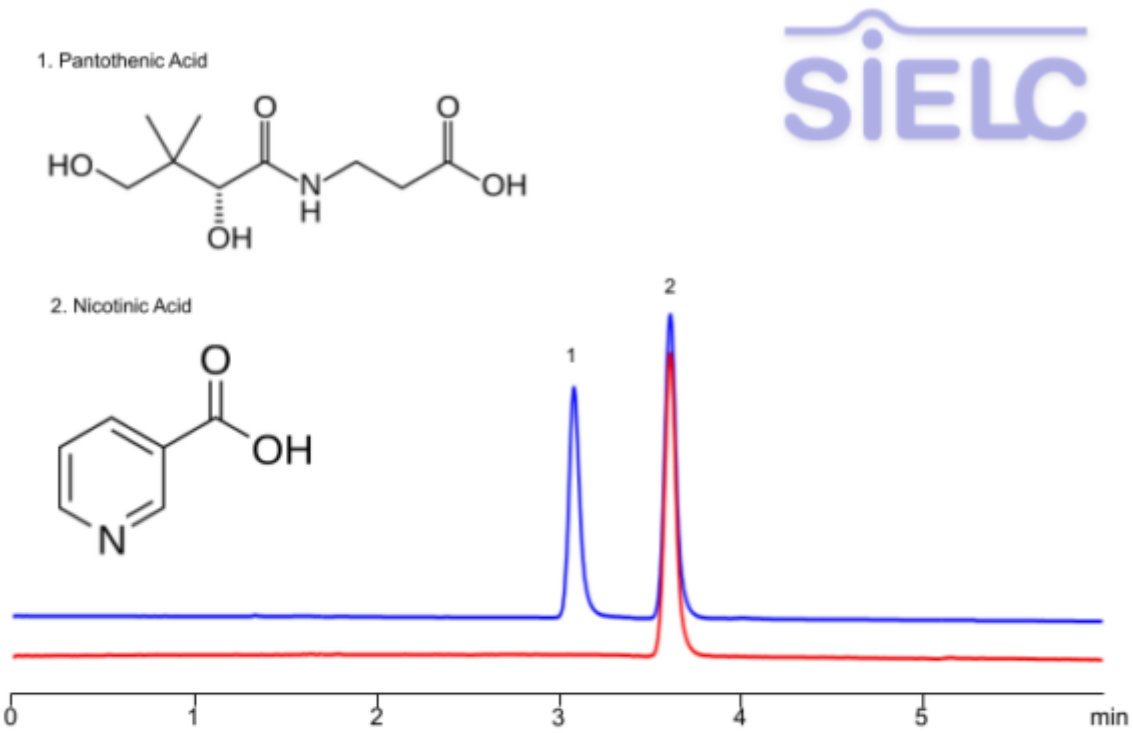
HPLC UV Method for Separation of Nicotinic Acid and Pantothenic Acid on Chromni Column

https://sielc.com/hplc-method-for-uv-analysis-of-nicotinic-acid-and-pantothenic-acid

Chromatogram



Column	Chromni™ (coated)
Column Size	4.6 × 150 mm, 3 µm
Part Number	CHR-46.150.0310.C
Mobile Phase	MeCN/H_2O – 90/10%
Buffer	H_3PO_4 – 0.1%
Flow Rate	1.0 mL/min
Injection Volume	1 µl
Sample	1. 0.4 mg/mL, 2. 0.3 mg/mL
Solvent	MeCN/H_2O – 50/50%
Detection	UV 200 nm, 275 nm
LOD*:	1. 30 ppb, 2. 20 ppb

Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Nicotinic Acid (Vitamin B3) , Pantothenic Acid (Vitamin B5) .

Nicotinic acid , also known as niacin and vitamin B3 , is a water-soluble B vitamin with C■H■NO■ molecular formula. It is an essential nutrient that is crucial for energy production. Nicotinic acid is commonly used as a dietary supplement to treat vitamin B3 deficiency, and it's also prescribed in higher doses to help lower cholesterol levels. It works by dilating blood vessels, which can lead to a flushing sensation, hence it is sometimes referred to as "flushing niacin." You can find detailed UV spectra of Niacin and information about its various lambda maxima by visiting the following link.

Pantothenic Acid , also known as vitamin B5 , is an essential nutrient with the chemical formula C 19 H 17 NO 5 . It plays a crucial role in energy and coenzyme A production. That energy and coenzyme are used for synthesis and degradation of proteins, carbohydrates, and fats. You can find detailed UV spectra of Nicotinic Acid (Vitamin B3) , Pantothenic Acid (Vitamin B5)

and information about its various lambda maxima by visiting the following link.

Nicotinic Acid (Vitamin B3) , Pantothenic Acid (Vitamin B5) can be retained and analyzed using the Chromni stationary phase column. The analysis utilizes an isocratic method with a simple mobile phase consisting of water and acetonitrile (MeCN) and water with a phosphoric acid buffer. Detection is performed using UV.

Method Parameters

Mobile Phase	MeCN/H2O – 90/10%
Buffer	H2PO4– 0.1%
Flow Rate	1.0 ml/min
Detection	UV 200 nm; 275 nm
Limit Of Detection*	30 ppb; 20 ppb
Class of Compounds	Vitamin
Analyzing Compounds	Nicotinic Acid (Vitamin B3),Pantothenic Acid (Vitamin B5)

HPLC Column Used

Chromni, 4.6 x 150 mm, 3 µm, 100 A, surface coated

Order this column at hplc-shop.de →