

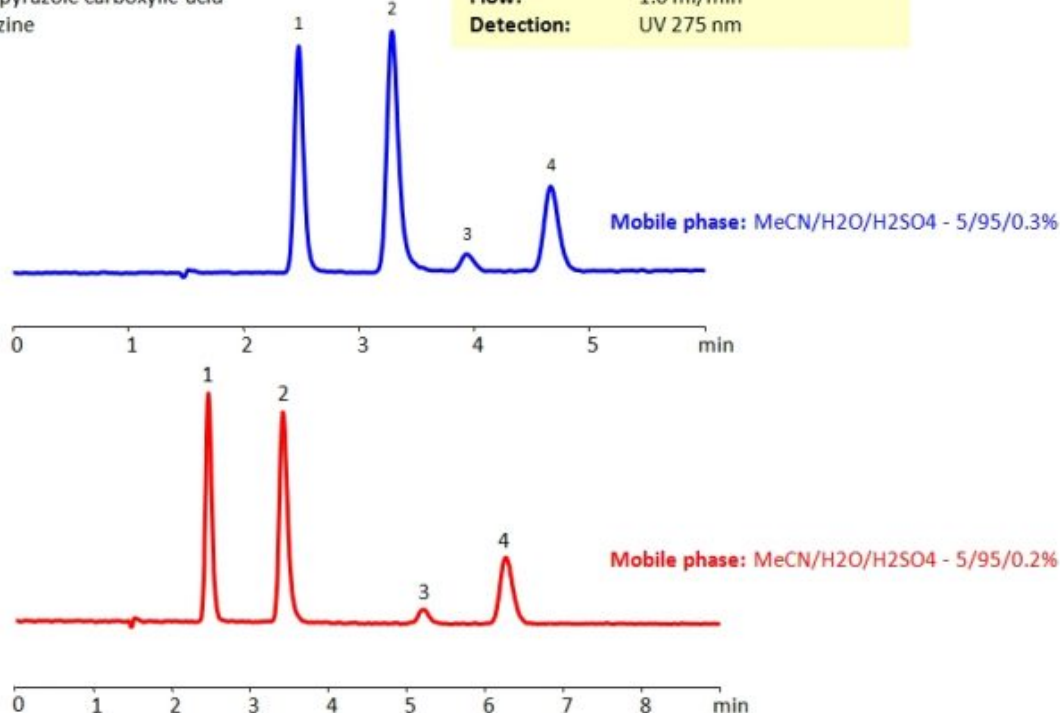
HPLC Separation of Pyrazinecarboxamide and Related Compounds

<https://sielc.com/hplc-separation-of-pyrazinecarboxamide-and-related-compounds>

Chromatogram

1. Pyrazinecarboxamide
2. Pyrazine
3. 3-Amino-4-pyrazole carboxylic acid
4. Aminopyrazine

Column: Primesep A
Size: 4.6 x 100 mm, 5µm, 100A
Flow: 1.0 ml/min
Detection: UV 275 nm



Description

High Performance Liquid Chromatography (HPLC) Method for Analysis of Pyrazine , 2-Aminopyrazine , Pyrazinamide , 3-Aminopyrazole-4-carboxylic acid .

Pyrazinamide is a medication used in the treatment of infectious disease tuberculosis and is on the World Health Organization's (WHO) list of essential medicines. It has the chemical formula C₅H₅N₃O .

Pyrazine is an organic compound with C₄H₄N₂ chemical formula. It is known for its sweet and nutty aroma, but is usually used as a therapeutic agent in several drugs. Derivatives of it are also said to have anti-inflammatory, anticancer, antibacterial, and antioxidant properties.

Aminopyrazine, also known as 2-aminopyrazine and pyrazinamide, is a Pyrazine derivative with C₄H₅N₃ chemical formula. It is typically used as a building block in chemical synthesis and is found in pharmaceuticals, especially in antiviral drugs and other agrochemicals. Structure wise, it is a pyrazine ring with an attached amine group.

It can be retained and separated from other pyrazine compounds, which are structurally similar and can be difficult to separate in reverse-phase HPLC, by using Primesep A mixed-mode column. Primesep A's stationary phase is embedded with strong acidic ion-pairing groups. The analytical method is isocratic and uses the mobile phase of acetonitrile (ACN) and water with sulfuric acid (H₂SO₄) as buffer and UV detection at 275nm.

Method Parameters

Mobile Phase	MeCN/H ₂ O – 5/95%
Buffer	H ₂ SO ₄
Flow Rate	1.0 ml/min
Detection	UV 275 nm
Class of Compounds	Hydrophilic, Heterocyclic, Aromatic
Analyzing Compounds	Pyrazine, 2-Aminopyrazine, Pyrazinamide, 3-Aminopyrazole-4-carboxylic acid

HPLC Column Used

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

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