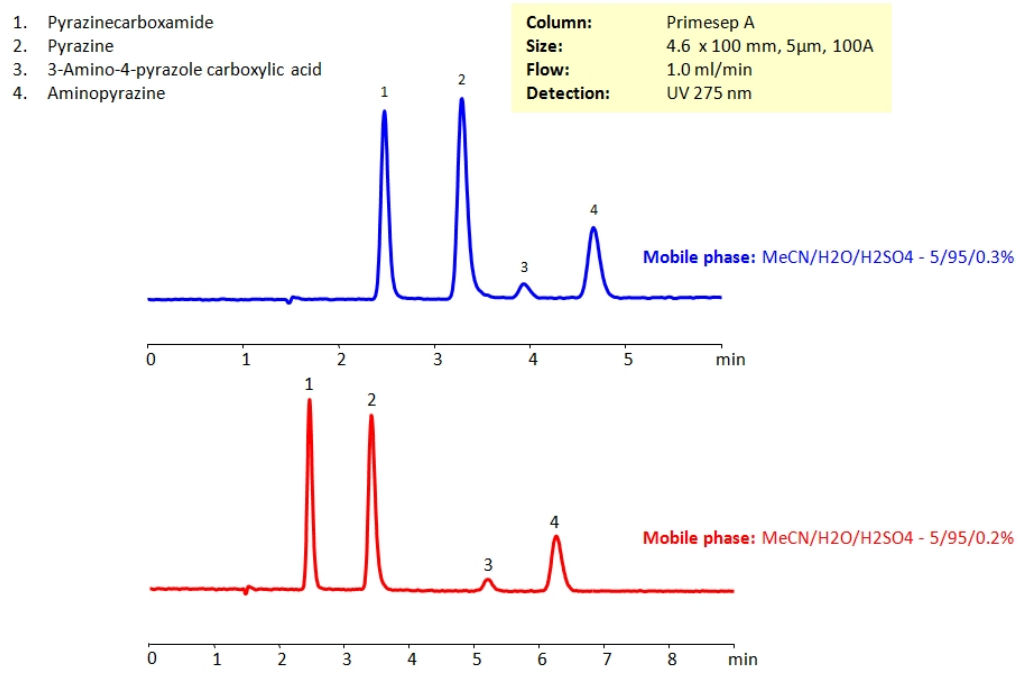
HPLC Separation of Pyrazinecarboxamide and Related Compounds



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 C4H4N2chemical 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 C4H5N3chemical 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 275 nm.

Method Parameters

Column	Primesep A, 4.6 x 100 mm, 5 µm, 100 Å, dual ended
Mobile Phase	MeCN/H2O – 5/95%
Buffer	H2SO4
Flow Rate	1.0 mL/min
Detection	UV 275 nm

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