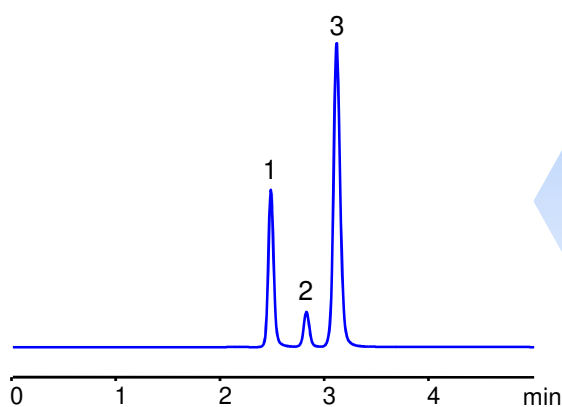


Cool Applications

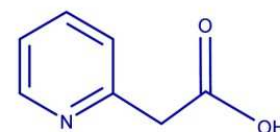
"Making Tough LC Applications Look Cool"

HPLC SEPARATION OF MIXTURE OF PYRIDYLACETIC ACIDS

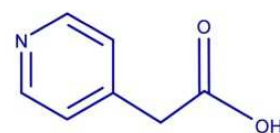


Column: Primesep C
Part number: C-46.150.0310
Column size: 4.6 x 150 mm, 3 μ m
Mobile phase: 10% ACN with 10 mM AmFm pH 4.0
Flow rate: 1.0 ml/min
Detection: UV 270 nm

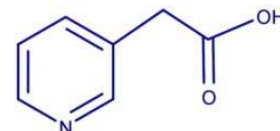
1 2-Pyridylacetic acid



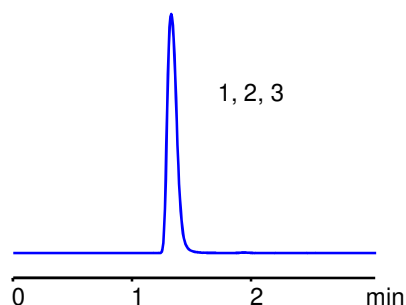
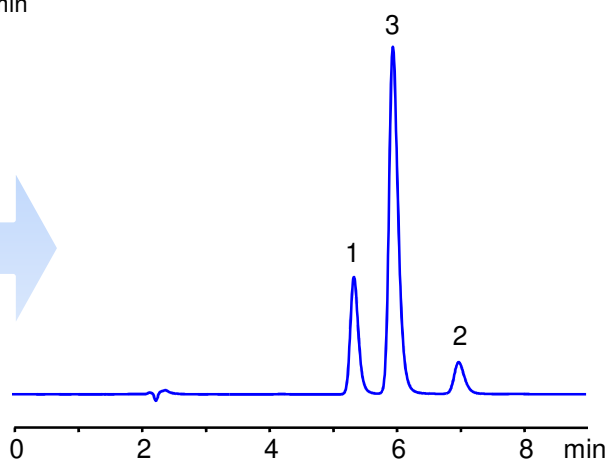
2 4-Pyridylacetic acid



3 3-Pyridylacetic acid



Column: Primesep N
Part number: N-46.250.0510
Column size: 4.6 x 150 mm, 5 μ m
Mobile phase: 80% ACN with 20mM AmFm pH 4.0
Flow rate: 1.0 ml/min
Detection: UV 270 nm



Column: C18
Column size: 4.6 x 150 mm, 5 μ m
Mobile phase: 10% ACN with 0.1% H₃PO₄
Flow rate: 1.0 ml/min
Detection: UV 270 nm

Application Comments

Isomers of Pyridylacetic acid are difficult to resolve using traditional single mode separation chromatography due to their similar structure. However in mixed-mode chromatography it is often an easy task. When more than one mode of interaction is involved (e.g. hydrophobic and cation-exchange on Primesep C or hydrophilic and cation-exchange on Primesep N) then small differences in molecule structure can play significant roles in retention and resolution as a result. In this example 3-Pyridylacetic acid, 2-Pyridylacetic acid and 4-Pyridylacetic acid were separated on mixed-mode Primesep C and Primesep N columns, with a simple mobile phase. Elution of compounds can be monitored by UV, Evaporative Light-Scattering (ELSD), Corona (CAD) or MS detection.