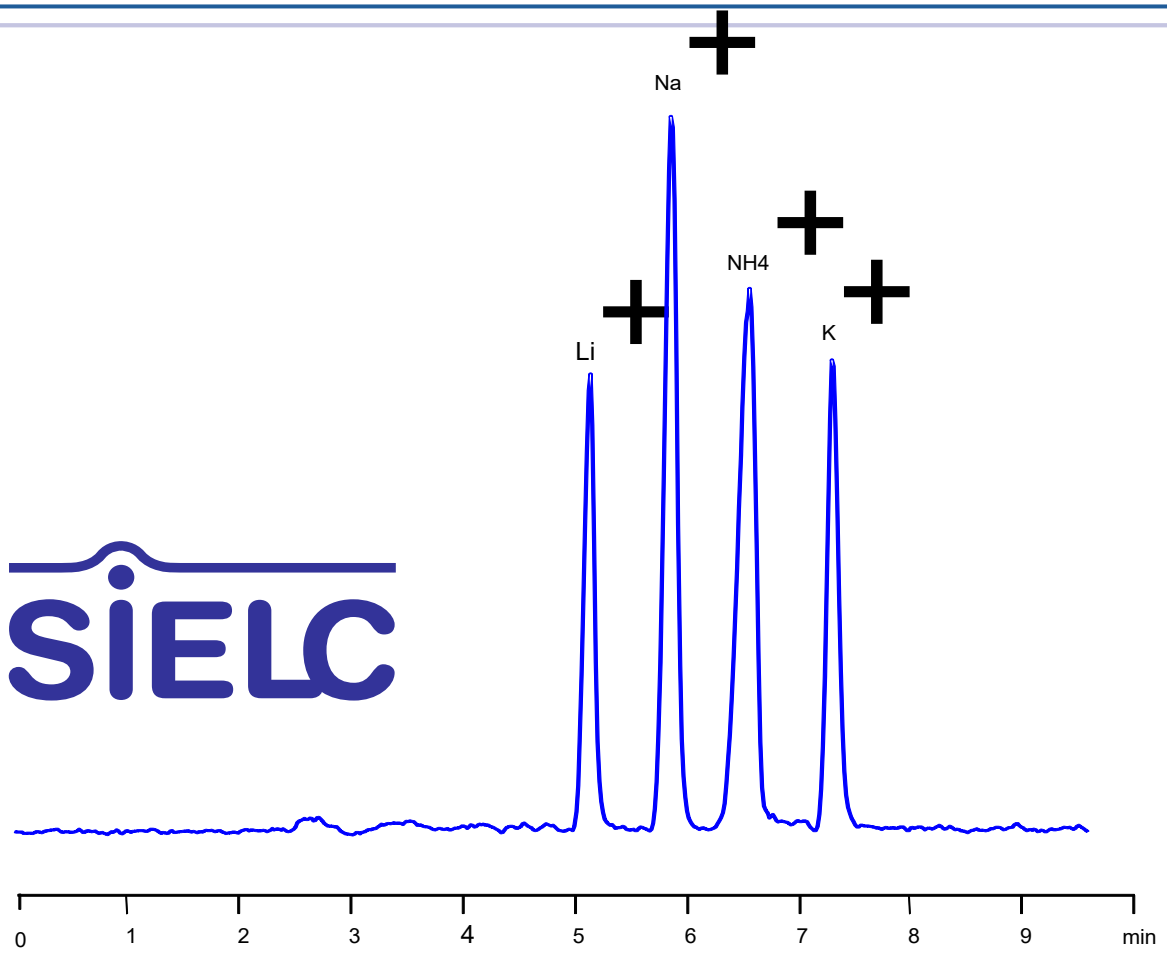
HPLC Method for Separation of Sodium, Potassium, Lithium, and Ammonium on Primesep 100 Column

https://sielc.com/application-separation-of-sodium-potassium-lithium-and-ammonium-in-mixed-mode-hplc

Chromatogram



Column:	Primesep 100
Column size:	4.6 × 250 mm, 5 µm
Column part number:	100-46.250.0[illegible]0
Mobile phase:	MeCN/H[illegible]/20%
Buffer:	TFA - 0.1%
Flow rate	1.0 ml/min
Detection:	ELSD, the nebulizer and evaporator temperatures 50°C with a gas flow rate of 1.6 Standard Liters per Minute (SLM)
Concentration:	1.0 mg/ml
Injection Volume:	5 µL
Diluent:	MeCN/H2O - 50/50%
Limit of Detection:	5 ppm

Description

· Separation type: Liquid Chromatography Mixed-mode · HPLC Method for Analysis of Ammonium Ion , Lithium , Potassium , Sodium on Primesep 100 Column

Inorganic cations and ammonia are usually analyzed by ion-exchange chromatography with a conductivity detector. Mixed-mode chromatography achieves the same goal with an ELSD detector. In addition to retaining ions, mixed-mode column can retain hydrophobic molecules also, making it possible to analyze a wide variety of ionic and non-ionic compounds in one run. In this method sodium, potassium, and lithium ions were separated along with ammonium ions on a Primesep 100 column. Detection technique is ELSD.

Method Parameters

Mobile Phase	MeCN/H2O – 80/20%
Buffer	TFA – 0.1%
Flow Rate	1.0 ml/min
Detection	ELSD, the nebulizer and evaporator temperatures 50°C,with a gas flow rate of 1.6 Standard Liters per Minute (SLM)
Class of Compounds	Ions, Hydrophilic, Ionizable, Vitamin, Supplements
Analyzing Compounds	Sodium, Potassium, Lithium, Ammonium

HPLC Column Used

Primesep 100, 4.6 x 250 mm, 5 µm, 100 A, dual ended

Order this column at hplc-shop.de →