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

Separation type: Liquid Chromatography Mixed-mode

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

Column	Primesep 100, 4.6 x 250 mm, 5 µm, 100 Å, dual ended
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)

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