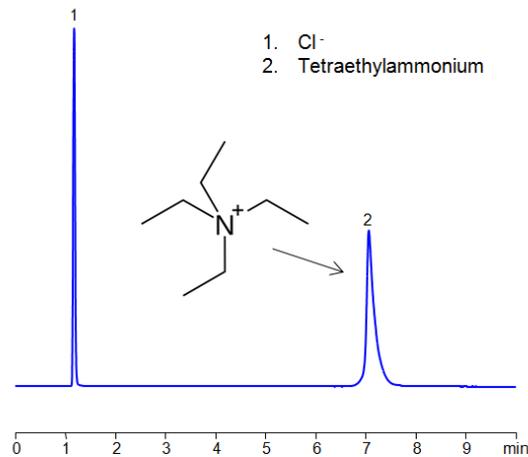


HPLC Method for Analysis of Tetraethylammonium Chloride on Newcrom AH Column



Column:	Newcrom AH
Column size:	4.6 × 150 mm, 3 µm, 100Å
Column part number:	NAH-46.150.0310
Mobile phase:	MeCN – 50%
Buffer:	AmFm pH 3.0 – 10 mM
Flow rate:	1.0 mL/min
Detection:	ELSD, 50C

HPLC Method for Analysis of Tetraethylammonium on Newcrom AH by SIELC Technologies

Tetraethylammonium is a quaternary ammonium cation with the chemical formula (C₂H₅)₄N⁺. This compound consists of a central nitrogen atom surrounded by four ethyl groups.

As with other quaternary ammonium compounds, the nitrogen atom in tetraethylammonium carries a positive charge. This compound is often used in its salt forms, such as tetraethylammonium bromide or tetraethylammonium chloride.

Tetraethylammonium has a variety of uses in both the scientific and industrial domains. In biological research, it's commonly used to block potassium channels in cell membranes, which allows researchers to study these channels in isolation. It's also utilized in organic chemistry as a phase transfer catalyst, facilitating reactions between compounds in different phases.

The tetraethylammonium can be retained, analyzed, on a Newcrom AH column using an isocratic analytical method with a simple mobile phase of water, Acetonitrile (MeCN), and an Ammonium formate (AmFm) ionic modifier. This analysis method can be detected with an Evaporative Light Scattering Detector (ELSD) or any other evaporative detection method (CAD, ESI-MS).

LOD was determined for this combination of instrument, method, and analyte, and it can vary from one laboratory to another even when the same general type of analysis is being performed.

Method Parameters

Column	Newcrom AH, 4.6 x 150 mm, 3 µm, 100 Å, dual ended
Mobile Phase	MeCN/H ₂ O – 50/50%
Buffer	AmFm pH 3.0- 10 mM
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) (MS- compatible mobile phase)
Limit of Detection	320 ppb
Injection Volume	1 µl

Quelle: <https://sielc.com/hplc-method-of-tetraethylammonium>