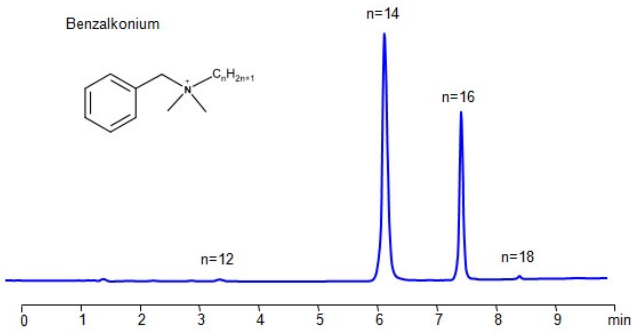
HPLC MS Method for Analysis of Benzalkonium Chloride on Primesep SB Column



Column:	Primesep SB
Column size:	2.1 × 100 mm, 5 µm
Column part number:	SB-2.1.100.0510
Mobile phase:	Gradient MeCN – 30-70%, 10 min,
Buffer:	Ammonium formate pH 3.0 – 20 mM
Flow rate:	0.2 mL/min
Detection:	UV 262 nm, SIM + 276, 304, 332, 360
Injection volume:	1.0 µL
Sample:	0.0025 mg/ml
LOD:	1 ppb

Benzalkonium chloride is a quaternary ammonium compound and belongs to the class of chemicals known as cationic surfactants. It is often used as a disinfectant, antiseptic, and preservative in various products, including pharmaceuticals, personal care products, and surface disinfectants.

Function: It has antimicrobial properties and is effective against bacteria, viruses, and fungi. It disrupts the cell membranes of microorganisms, leading to their inactivation.

Variants: There are different variants of Benzalkonium chloride with varying alkyl chain lengths, and the specific composition may affect its properties and applications.

Benzalkonium can be retained, and analyzed using a Primesep SB mixed-mode stationary phase column. The analysis utilizes a gradient method with a simple mobile phase consisting of water, acetonitrile (MeCN), and ammonium formate as a buffer. Detection is achieved using UV and LC MS positive mode

Method Parameters

Column	Primesep SB, 2.1 x 100 mm, 5 µm, 100 Å, dual ended
Mobile Phase	Gradient MeCN – 30 – 70%, 10 min
Buffer	Ammonium formate pH 3.0 – 40 mM
Flow Rate	0.2ml/min
Detection	UV 262 nm, SIM + 276, 304, 332, 360
Injection Volume	1 µl

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Quelle: https://sielc.com/hplc-ms-method-for-analysis-benzalkonium-chloride

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