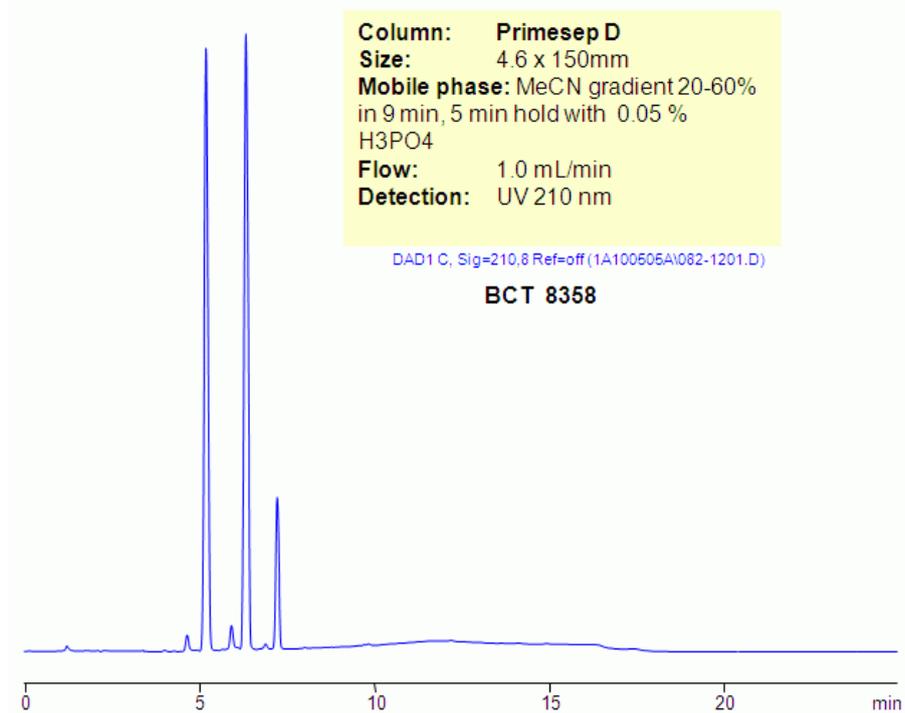


HPLC Separation of Benzalkonium Chloride BCT 8358 on Primesep D column



Benzalkonium chloride is a mixture of alkylbenzyltrimethylammonium chlorides of various even-numbered alkyl chain lengths. It is used as a surfactant. Hydrophobic quaternary amines, like BTC, produce poor peak shape in reversed-phase chromatography due to interaction of quaternary amines with residual silanols. Ideal peak shape can be achieved on reversed-phase anion-exchange columns like Primesep D. Primesep D has a basic group on the surface of silica gel that shields silanols from interacting with quaternary, tertiary, secondary and primary amines. This allows to achieve symmetrical peaks for hydrophobic basic analytes. Compounds need to be hydrophobic enough to get compensation for repulsion effect coming from stationary phase. BTC can be monitored by ELSD and UV. Primesep D will also retain acidic counter-ions of quaternary amines, so simultaneous analysis of hydrophobic basic and hydrophilic basic compounds is possible.

Method Parameters

Column	Primesep D, 4,6x150 mm, 5 µm, 100 Å
Mobile Phase	MeCN
Buffer	H3PO4
Flow Rate	1.0 mL/min
Detection	210

Quelle: <https://sielc.com/Application-HPLC-Separation-of-Benzalkonium-Chloride-BCT-8358-on-Primesep-D-column>