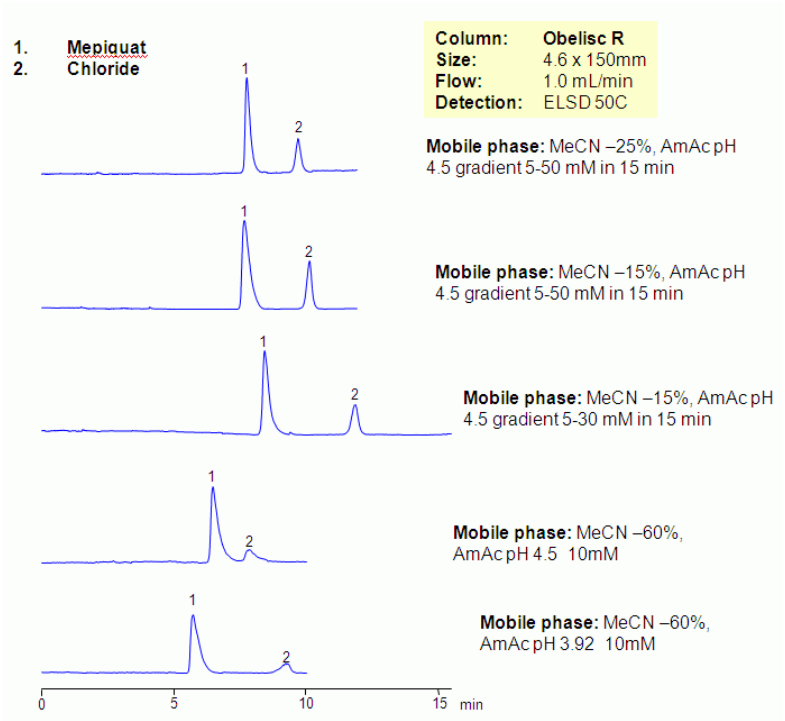
HPLC Separation of Mepiquat on Obelisc R Column



Mepiquat is a plant growth regulator that is monitored by EPA in water. It is a quaternary amine that is very polar in nature. Mepiquat and other hydrophilic amines are not retained on reversed-phase columns, and produce poor peak shape due to residual silanol interactions. Ion-pairing reagent is required to retain mepiquat. Ion-pairing reagents are not compatible with LC/MS detection and most environmental application require high sensitivity methods to determine very low level of contaminants. Obelisc R mixed-mode column can be used for EPA methods for determination of common pesticides, herbicides and insecticides where analysis of very polar ionic compounds is required.

SIELC has developed the Obelisc™ columns, which are mixed-mode and utilize Liquid Separation Cell technology (LiSC™). These cost-effective columns are the first of their kind to be commercially available and can replace multiple HPLC columns, including reversed-phase (RP), AQ-type reversed-phase, polar-embedded group RP columns, normal-phase, cation-exchange, anion-exchange, ion-exclusion, and HILIC (Hydrophilic Interaction Liquid Chromatography) columns. By controlling just three orthogonal method parameters - buffer concentration, buffer pH, and organic modifier concentration - users can adjust the column properties with pinpoint precision to separate complex mixtures.

Method Parameters

Column	Obelisc R, 4.6×50 mm, 5 µm, 100 Å
Mobile Phase	MeCN/H2O
Buffer	AmAc
Flow Rate	1.0 mL/min
Detection	ELSD50C

Quelle: https://sielc.com/Application-Separation-of-Mepiquat-on-Obelisc-R-Column