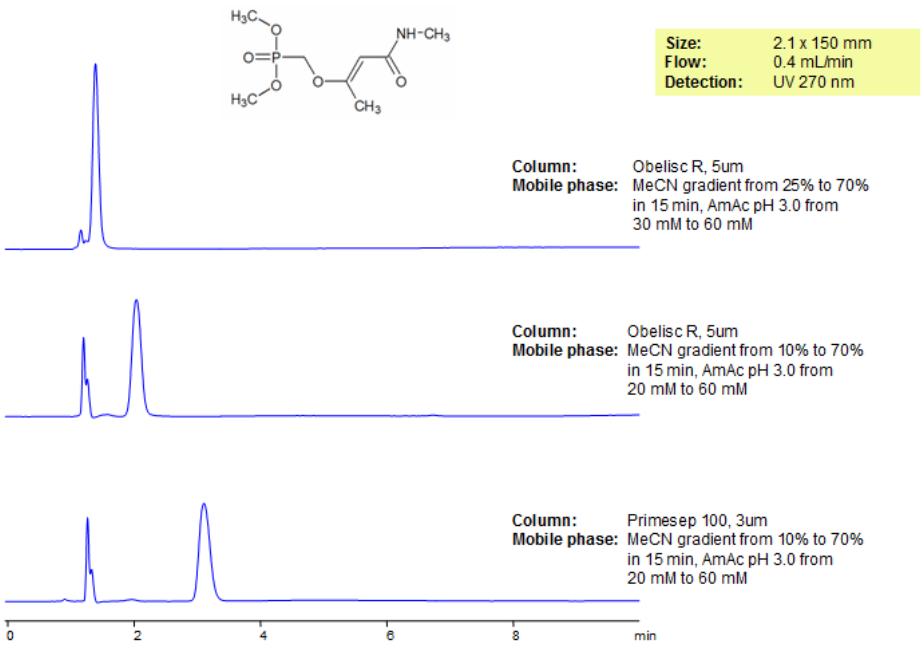
Retention of Monocrotophos on Primesep 100 and Obelisc R Columns



Monocrotophos is a pesticide that is acutely toxic to both birds and humans. With similar action as other organophosphate pesticides it has been banned and many other countries. Monocrotophos was analyzed on two different stationary phases. Primesep 100 is a reverse phase column that contains embedded acidic ion-pairing groups, while Obelisc R retains with long hydrophobic chains and multiple ionic pairing groups on the surface. Method is LC/MS compatible and can be replicated to analyze dozens of other pesticides.

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	Primesep 100, 2.1×150 mm, 5 µm, 100 Å
Mobile Phase	Gradient MeCN – 10-70%, 15 min
Buffer	Gradient AmAc pH 3.0- 20-60 mM, 15 min
Flow Rate	0.4 mL/min
Detection	UV, 270 nm

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Quelle: https://sielc.com/Application-Retention-of-Monocrotophos-on-Primesep-100-and-Obelisc-R-Columns

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