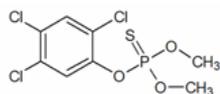


HPLC Retention of Chlorpyrifos-methyl on Primesep 100 and Obelisc R Mixed-Mode Columns



Size: 2.1 x 150 mm

Flow: 0.4 mL/min

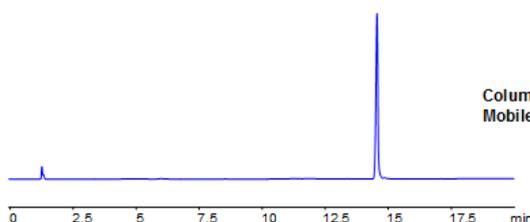
Detection: UV 270 nm



Column: Obelisc R, 5µm
Mobile phase: MeCN gradient from 25% to 70% in 15 min, 7 min hold, AmAc pH 3.0 from 30 mM to 60 mM



Column: Obelisc R, 5µm
Mobile phase: MeCN gradient from 10% to 70% in 15 min, 7 min hold, AmAc pH 3.0 from 20 mM to 60 mM



Column: Primesep 100, 3µm
Mobile phase: MeCN gradient from 10% to 70% in 15 min, 7 min hold, AmAc pH 3.0 from 20 mM to 60 mM

Chlorpyrifos-methyl, an organophosphate pesticide is considered a target pesticide by the EURL (European Union Reference Laboratory) for the EUPT-FF9 2015 a proficiency test for the analysis of a over a hundred pesticides. This compound was separated on two different mixed-mode columns, Primesep 100 and Obelisc R. 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, 7 min hold
Buffer	Gradient AmAc pH 3.0- 20-60 mM, 15 min, 7 min hold
Flow Rate	0.4 mL/min
Detection	UV, 270 nm

Quelle: <https://sielc.com/Application-HPLC-Retention-of-Chlorpyrifos-methyl-on-Primesep-100-and-Obelisc-R-Mixed-Mode-Columns>