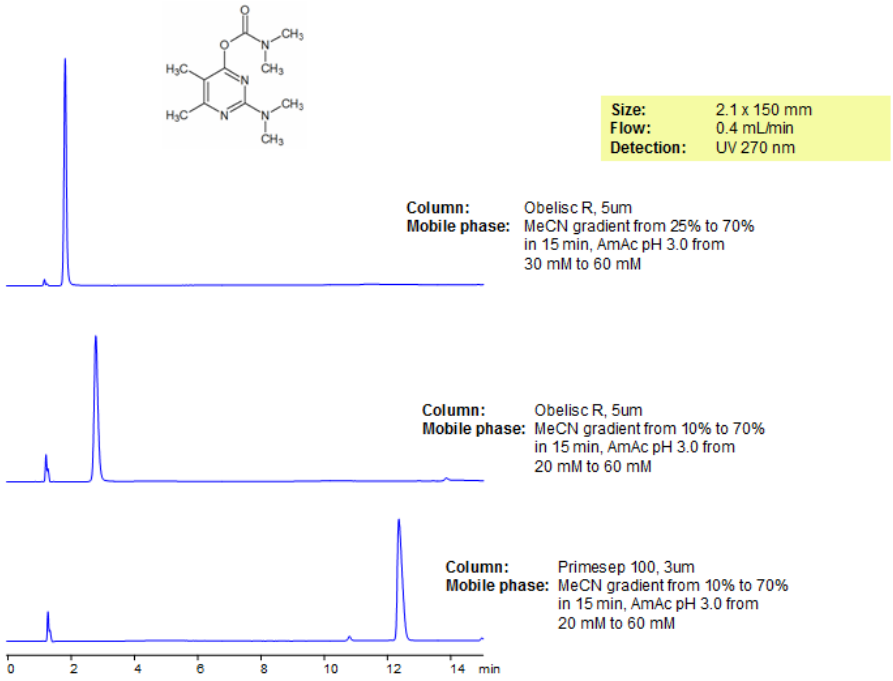
HPLC Retention of Pirimicarb on Primesep 100 and Obelisc R



Pirimicarb is an insecticide that controls aphids on vegetable, cereal, and orchard crops. A carbamate insecticide, pirimicarb inhibits activity of the hydrolase acetylcholinesterase. Pirimicarb is a target pesticide in the EURL (European Union Reference Laboratory) EUPT-FF9 2015 a proficiency test for the analysis of a over a hundred pesticides. Primesep 100 and Obelisc R were used to retain pirimicarb and separate it from impurities. Primesep 100 contains embedded acidic ion-pairing groups and Obelisc R contains embedded ionic and hydrophobic groups which can assist in fine tuning separations. Method is LC/MS compatible and can be used as a general approach for analyzing pirimicarb, other organophosphate insecticides, and 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

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