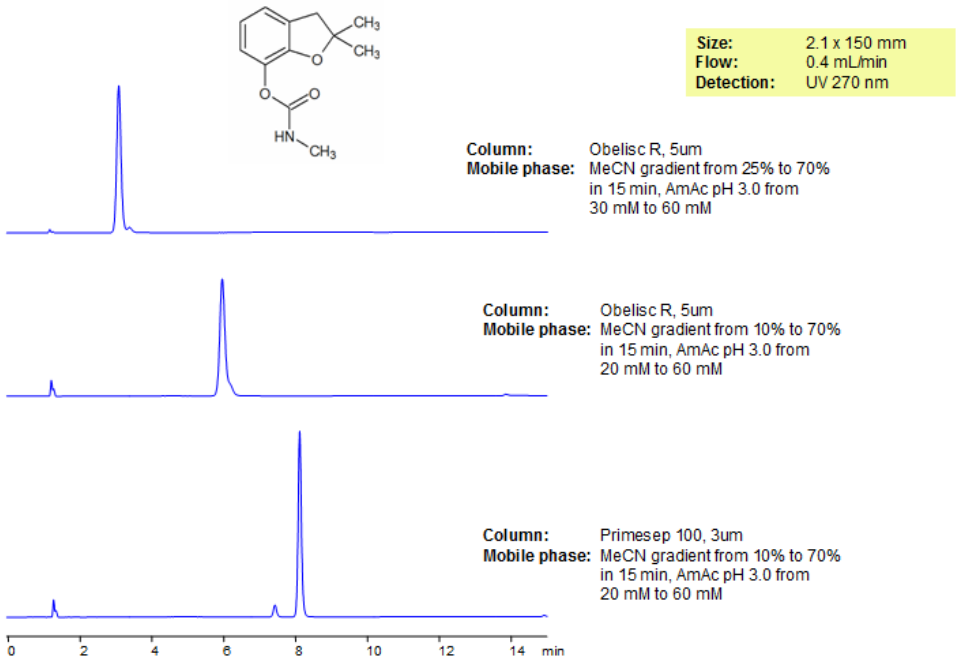
HPLC Separation of Carbofuran on Obelisc R and Primesep 100 Columns



Carbofuran is an insecticide notable for its high toxicity to vertebrates, especially birds; it is one of the most toxic to humans as well. While band in many countries such as the U.S. and Canada, it can be purchased over-the-counter in some countries such as Kenya. Carbofuran was 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. Obelisc R and Primesep 100 were used to analyze carbofuran. Primesep 100 separates by reverse-phase and utilizing embedded acidic ion-pairing groups. Obelisc R uses long hydrophobic chains and multiple ion-pairing groups.

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-Separation-of-Carbofuran-on-Obelisc-R-and-Primesep-100-Columns