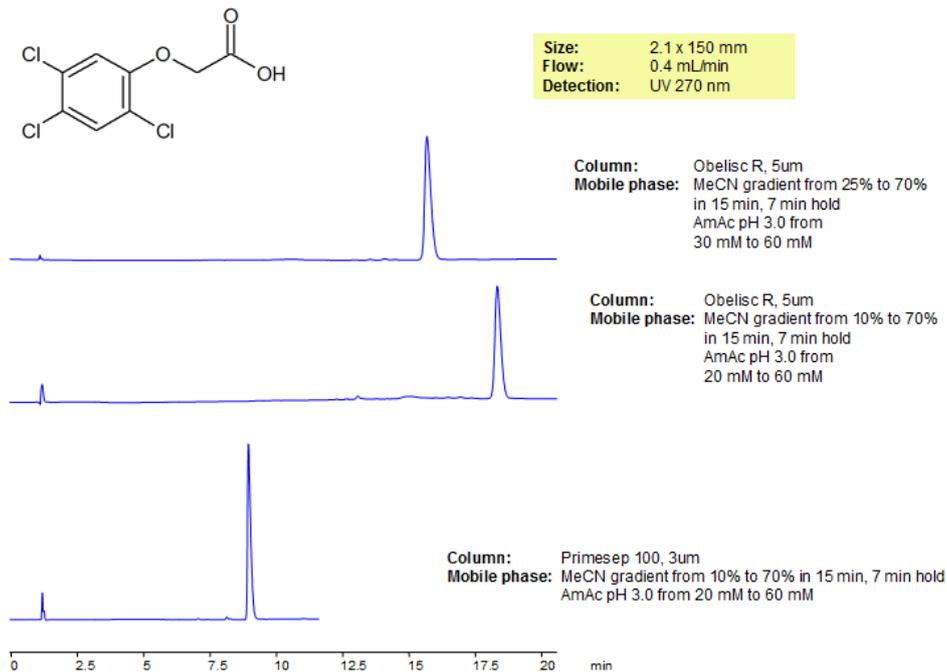


HPLC Analysis of 2,4,5-T on Mixed-Mode Columns



Separation type: Liquid Chromatography Mixed-mode

2,4,5-T is a synthetic herbicide that defoliates broad-leaf plants. It was a major component of Agent Orange, a defoliant used during the Vietnam War. 2,4,5-T has been replaced by dicamba and triclopyr due to its possible toxicity. 2,4,5-T was included in a proficiency test ran by the EURL (European Union Reference Laboratory) using QuEChERS methodology on acidic pesticides. Obelisc R retained 2,4,5-T because it has a long hydrophobic chain and ionic pairing groups. Primesep 100 retains by reverse-phase and with acid ion-pairing groups. Method is LC/MS compatible and same conditions can be used on many different 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-Analysis-of-2-4-5-T-on-Mixed-Mode-Columns>