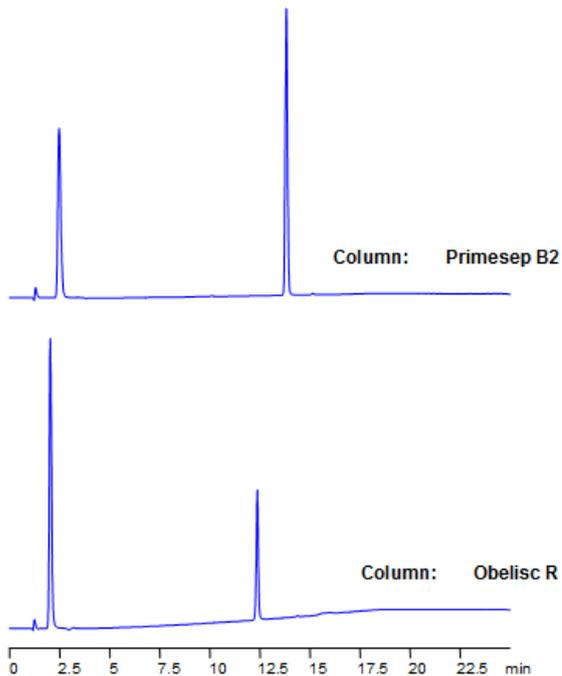
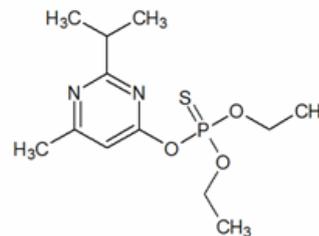


## HPLC Separation of Diazinon on Obelisc and Primesep Mixed-Mode Columns



**Dimensions:** 150 x 2.1 mm  
**Mobile Phase:** MeCN gradient from 10% to 70% in 15 min, 7 min hold. AmAc pH 4.5 from 20 mM to 50 mM in 15 min, 7 min hold  
**Flow:** 0.4 ml/min  
**Detection:** UV 250 nm



Diazinon is a nonsystemic organophosphate insecticide developed in the early 1950's. It was heavily used as an all-purpose indoor/outdoor home pesticide, but was banned for home use in 2004. The thiophosphoric ester in diazinon can form toxic phosphine gases and phosphorus oxides. The EURL (European Union Reference Laboratory), included diazinon as a target pesticide for the EUPT-CF9 a proficiency test for cereals and feedingstuff that require multi-residue methods. Primesep B2 and Obelisc R were used to retain carbofuran and separate it from impurities. Primesep B2 contains embedded basic 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 diazinon, 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

<b>Column</b>	Obelisc R, 2.1×150 mm, 5 µm, 100 Å
<b>Mobile Phase</b>	Gradient MeCN – 10-70%, 15 min, 7 min hold
<b>Buffer</b>	Gradient AmAc pH 4,5- 20-50 mM, 15 min, 7 min hold
<b>Flow Rate</b>	0.4 mL/min
<b>Detection</b>	UV, 250 nm

Quelle: <https://sielc.com/Application-HPLC-Separation-of-Diazinon-on-Obelisc-and-Primesep-Mixed-Mode-Columns>