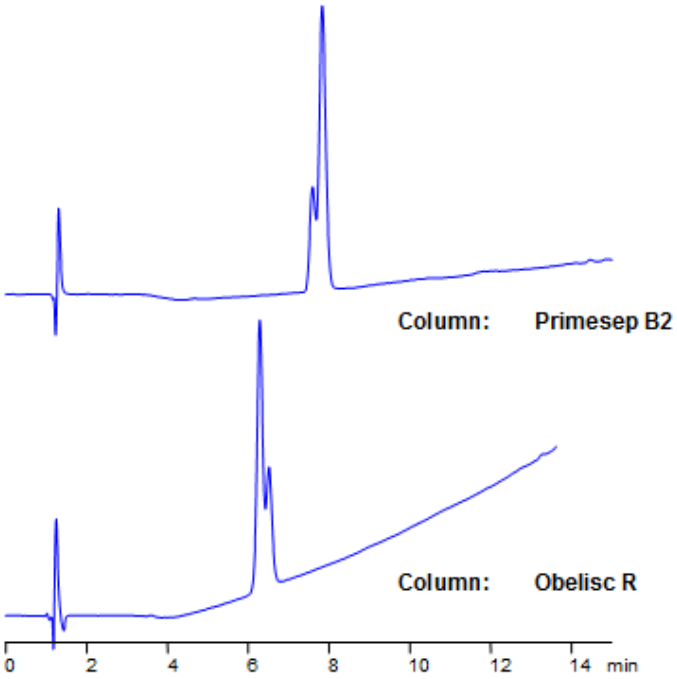
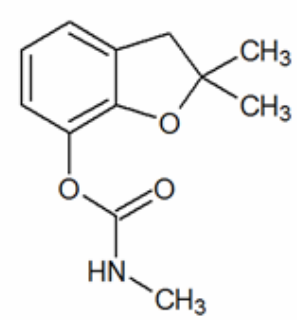
Carbofuran Separation on Primesep and Obelisc Mixed-Mode HPLC Columns

https://sielc.com/Application-Carbofuran-Separation-on-Primesep-and-Obelisc-Mixed-Mode-HPLC-Columns

Chromatogram



Dimensions:	150 x 2.1mm
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



Description

· Separation type: Liquid Chromatography Mixed-mode

High Performance Liquid Chromatography (HPLC) Method for Analysis of Carbofuran. Carbofuran is one of the most acutely toxic insecticides used on field crops. It is banned in Europe, Canada, and as of 2009 was banned in the United States. The EURL (European Union Reference Laboratory), included carbofuran as a target pesticide for the EUPT-CF9 a proficiency test for cereals and feedingstuff that require muli-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 carbofuran and other phenoxy acids.

Method Parameters

Mobile Phase	Gradient MeCN – 10-70%, 15 min, 7 min hold
Buffer	Gradient AmAc pH 4,5- 20-50 mM, 15 min, 7 min hold
Flow Rate	0.4 ml/min
Detection	UV, 250 nm
Class of Compounds	Insecticide, Herbicide, Fungicide, Hydrophobic, Ionizable
Analyzing Compounds	Carbofuran

HPLC Column Used

Obelisc R, 2.1×150 mm, 5 µm, 100A

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