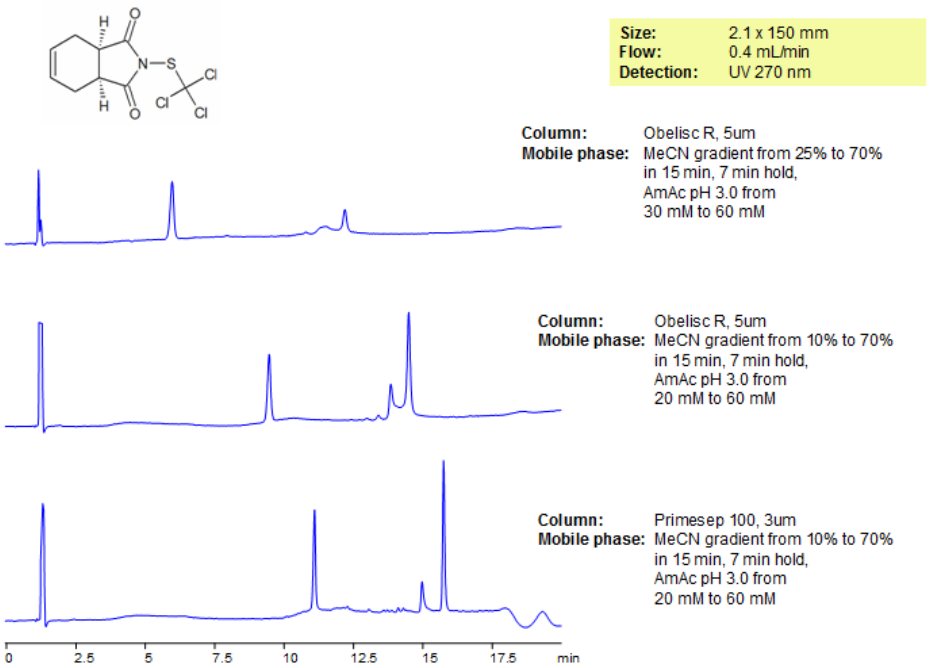
HPLC Separation of Captan on Obelisc R and Primesep 100 Columns



Captan is a fungicide that is typically combined with other pesticides. It is in the class of fungicides called phthalimide, and is used on a number of vegetables and ornamental plants. Captan reduces infections on the surface of plant material improving their appearance. The EURL-SRM (European Union Reference Laboratory – Single Residue Methods) included captan in a list of pesticides difficult to analyze by traditional multiresidue methods. We separated and analyzed captan using two mixed-mode columns with different modes of separation. Obelisc R has a long hydrophobic chain and multiple ion-pairing groups, and Primesep 100 contains acidic ion-pairing groups. Method is LC/MS compatible and can be use 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%
Buffer	Gradient AmAc pH 3.0- 20-60 mM
Flow Rate	0.4 mL/min
Detection	UV, 270 nm

Quelle: https://sielc.com/Application-HPLC-Separation-of-Captan-on-Obelisc-R-and-Primesep-100-Columns