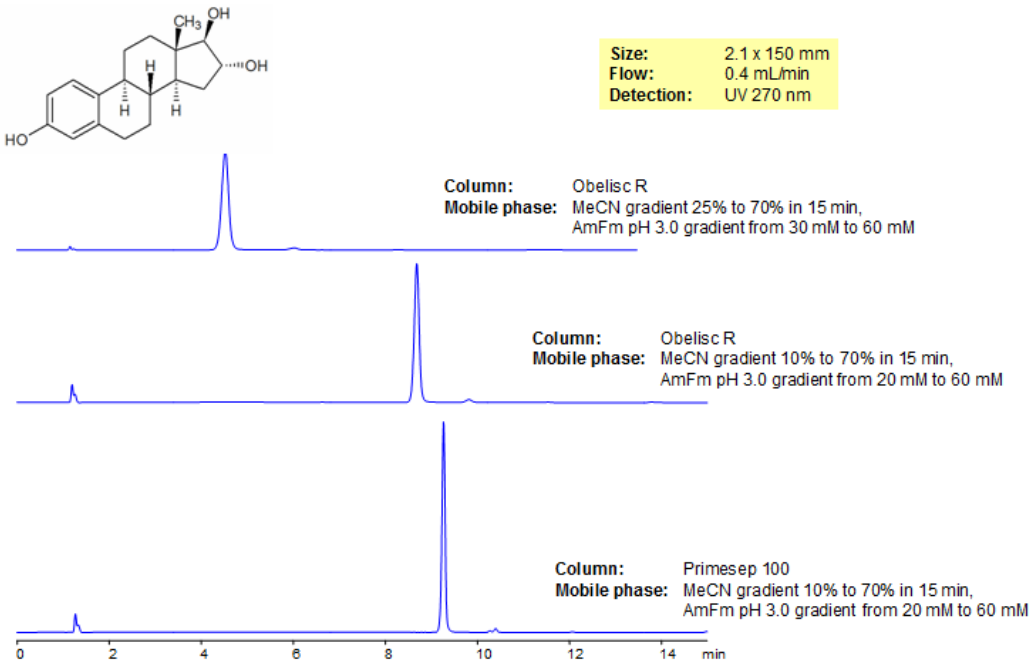
16a-Hydroxyestradiol Separation on Mixed-Mode HPLC Columns



Separation type: Liquid Chromatography Mixed-mode

16a-Hydroxyestradiol is an estrogen very similar to estriol, but with three C13 in the 2,3,4 positions. Estriol is often used as a marker for fetal health since it is produced by the adrenal cortex of the fetus. 16a-Hydroxyestradiol was analyzed for a study focused on emerging contaminants in water by the Federal Institute of Hydrology of Koblenz, Germany. It was retained on both Primesep 100 and Obelisc R HPLC Columns. Obelisc R is a mixed-mode column which uses a long hydrophobic chain and multiple ionic groups to fine tune retention. Primesep 100 is a reverse phase column with embedded acidic ion pairing groups. Method is LC/MS compatible and will be effective for achieving unique retention for many 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
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-16a-Hydroxyestradiol-Separation-on-Mixed-Mode-HPLC-Columns