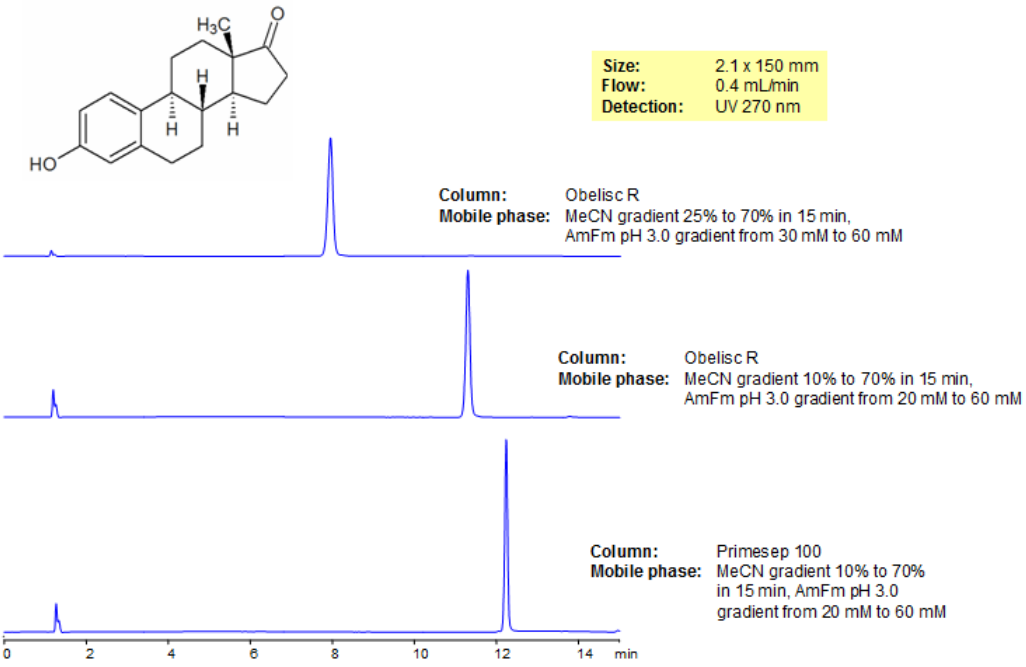
HPLC Separation of Estrone



Estrone, also known at oestrone and E1 is a naturally occurring estrogen which is the predominant estrogen in postmenopausal women. It can be found in its long-lived form estrone sulfate. In certain scenarios estrone can be a carcinogen and causes breast pain, nausea, headaches and leg cramps. It was separated on both Obelisc R and Primesep 100 which have unique modes of retention. Method is LC/MS compatible and useful for separating a number of 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-HPLC-Separation-of-Estrone