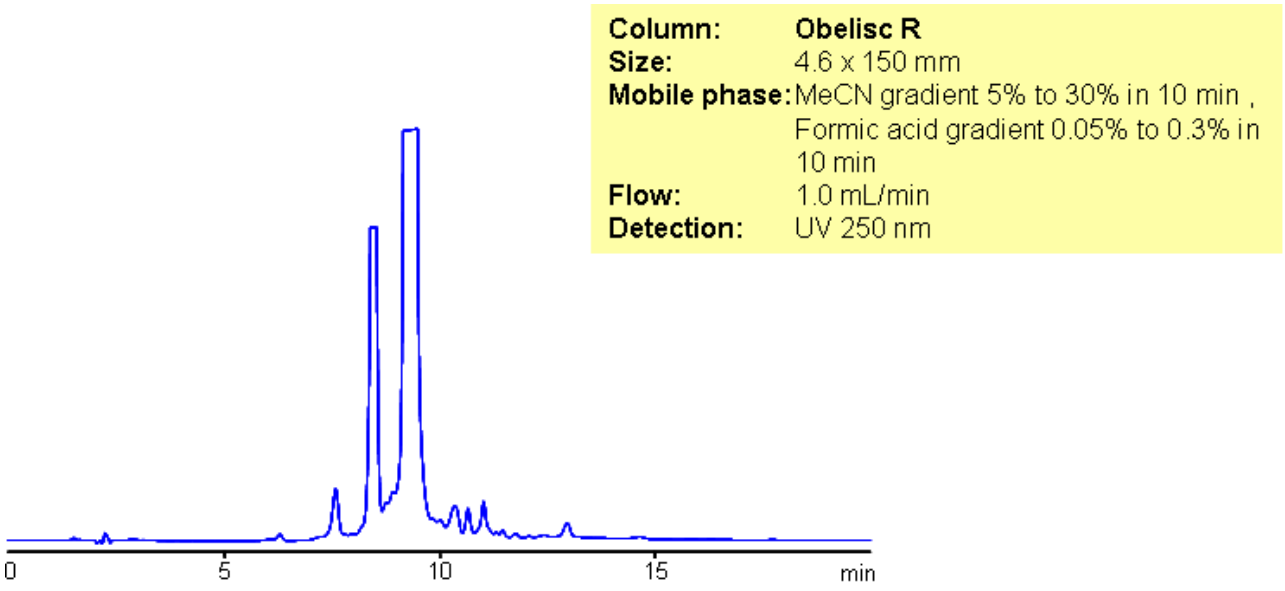
Analysis of Antibiotic Tylosin and Related Impurities in Mixed-Mode Chromatography



Tylosin is a macrolide antibiotic with a broad spectrum of activity against gram-negative and gram-positive organisms. It is highly polar and basic molecule with limited retention in reversed-phase chromatography. Tylosin and related impurities were analysed on Obelisc R trimodal column. Method is compatible with LC/MS and prep chromatography and can be used for HPLC analysis of tylosin in various biofluids.

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	Obelisc R, 2.1×150 mm, 5 µm, 100 Å
Mobile Phase	Gradient MeCN – 5-30%, 10 min, 5 min hold
Buffer	Gradient Formic Acid – 0.05%-0.3%, 10 min, 5 min hold
Flow Rate	1.0 mL/min
Detection	UV, 250 nm

Quelle: https://sielc.com/Analysis_of_Antibiotic_Tylosin_and_Related_Impurities_in_Mixed-Mode_Chromatography