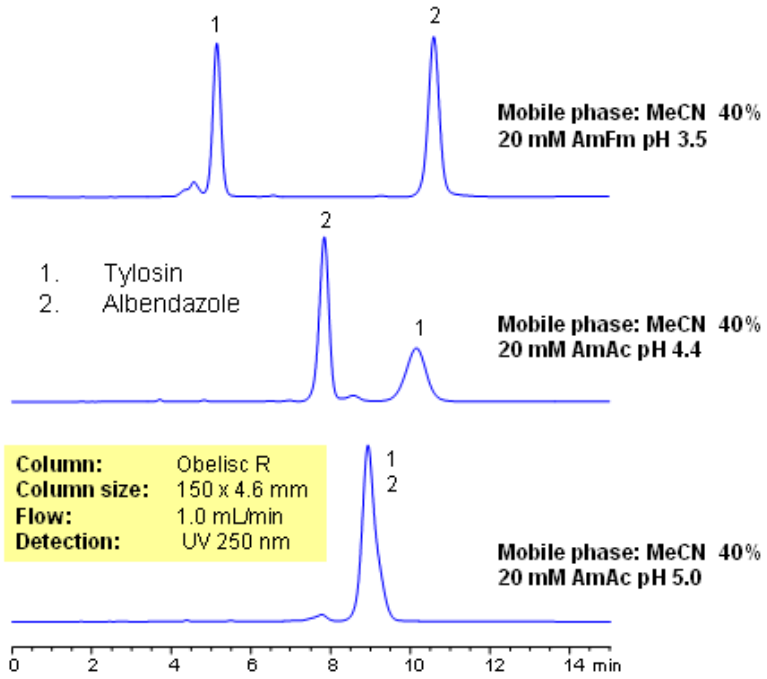
HPLC Separation of Tylosin and Albendazole



Tylosine is an antibiotic used in veterinary medicine. This sugar-based amino compound is found naturally in fermentation products. Presence of sugar moieties and amino group make it impossible to analyze this compound by reversed-phase HPLC with LC/MS compatible conditions. Mixed-mode chromatography allows to overcome this obstacle, and retain and analyze this and other aminoglycosides on an Obelisc R column. This column is suitable for analysis of aminosugars with several basic groups in the molecule (streptomycine, neomycin, amikasin, arbekasin, dibekasin, framycetin, kanamycin, gentamycin, verdomycin, astromycin, hydromycin, etc.). In case of several amino groups, higher buffer concentration and lower pH (3-3.5) are required in order to facilitate elution from the column. This method does not use ion-pairing reagent, and is designed to replace traditional reversed-phase columns and ion-pairing reagent methods. In this application, Albedazole is used as internal standard to quantify aminoglycoside.

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

Detection	UV Detection

Quelle: https://sielc.com/Application-HPLC-Separation-of-Tylosin-and-Albendazole

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