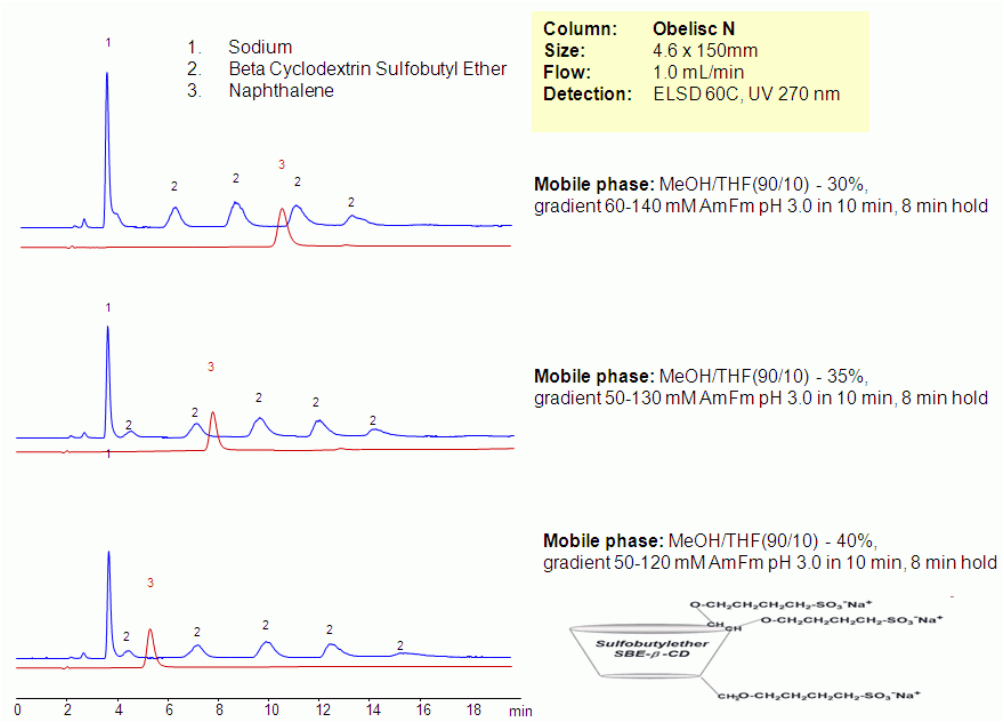
HPLC Separation of Cyclodextrin Sulfobutyl Ether and Hydrophobic Compound



Cyclodextrin sulfobutyl ether is sulfonated derivative of cyclodextrin. The degree of sulfobutylation varies, and the compound is a mixture of several components. All compounds are very polar and acidic in nature, and are not retained by traditional reversed-phase chromatography. Separation was achieved on an Obelisc N column in anion-exchange mode. Hydrophobic naphthalene was used a a reference standard. Cyclodextrin was monitored by ELSD.

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 N2, 4.6×150 mm, 5 µm, 100 Å
Mobile Phase	MeOH, THF
Buffer	AmFm pH 3.0
Flow Rate	1.0 mL/min
Detection	ELSD, 60C UV 270 nm

Quelle: https://sielc.com/Application-HPLC-Separation-of-Cyclodextrin-Sulfobutyl-Ether-and-Hydrophobic-Compound

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