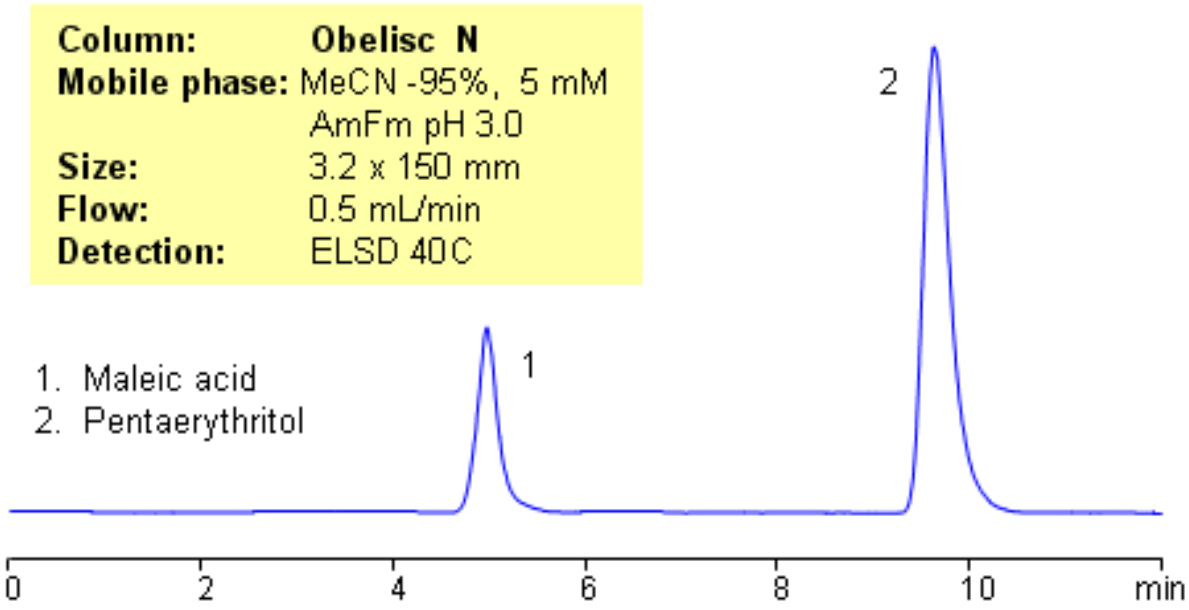
HPLC Separation of Maleic Acid and Pentaerythritol



Application Notes: Maleic acid is a small hydrophilic acid, which is poorly retained in reversed-phase chromatography. Pentaerythritol is hydrophilic neutral molecule. A miixed-mode HILIC/anion-exchange method was developed on Obelisc N HPLC column. The retention time for maleic acid can be controlled by amount of ACN, buffer pH, and buffer concentration. Pentaerythritol retention time is only controlled by the amount of acetonitrile. The method is LC/MS and ELSD compatible. Application Columns: Obelisc N Application compounds: Maleic Acid, Pentaerythritol Detection technique: LC/MS, ELSD/CAD

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 N, 3.2×150 mm, 5 µm, 100 Å
Mobile Phase	MeCN/H2O – 95/5%
Buffer	AmFm pH 3.0- 5 mM
Flow Rate	0.5 mL/min
Detection	ELSD

Quelle: https://sielc.com/Application-HPLC-Separation-of-Maleic-Acid-and-Pentaerythritol