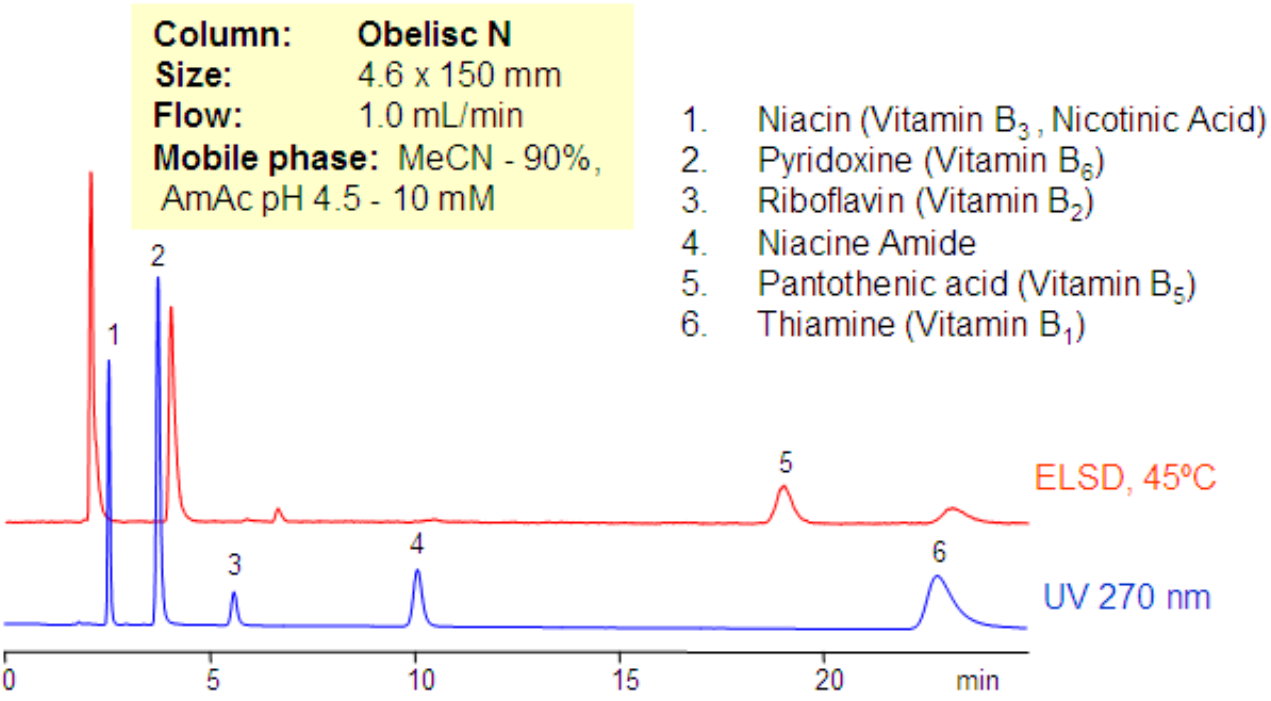
HPLC Method for Separation of Vitamins Group B such as Nicotinic Acid, Pyridoxine, Niacinamide, Pantothenic Acid, Riboflavin on Obelisc N Column



Separation of vitamins group B is achieved on Obelisc N column in HILIC mixed-mode. Vitamins of this group are different in polarity and ionic properties. Retention and separation is achieved by optimization of amount of ACN, buffer and buffer pH. Combination of UV and ELSD detection is used to monitor HPLC separation. B vitamins are water-soluble vitamins that play an important role in cell metabolism. Supplements containing all six are generally referred to as a vitamin B complex. Individual B vitamin supplements are referred to by the specific name of each vitamin. This method can be used to analyze individual B vitamins as well as vitamin B complex. Isolation of impurities as well as degradation products is possible by preparative chromatography.

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.

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Method Parameters

Column	Obelisc N , 4.6×150 mm, 5 µm, 100 Å
Mobile Phase	MeCN/H2O
Buffer	AmAC pH 4.5 – 10 mM
Flow Rate	1.0 mL/min
Detection	UV, 270 nm, ELSD

Quelle: https://sielc.com/Application-HILIC-Separation-of-Vitamins-Group-B