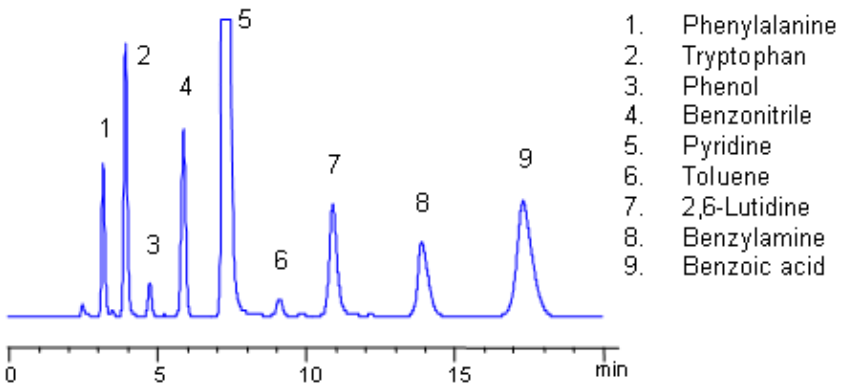
HPLC Separation of Amino Acids, Bases, Acids, and Neutrals on Obelisc R

Column:	Obelisc R
Size:	150 x 4.6 mm
Mobile phase:	MeCN 35%, AmAc 10 mM pH 4.0
Flow:	1.0 mL/min
Detection:	UV 250 nm



Separating basic, acidic and zwitterionic compounds in one run in reverse-phase HPLC can be very challenging. The methods might require the use of ion-pairing reagents and complex gradients that can make MS-compatibility difficult. Obelisc R column which has both positive and negative ion-pairs embedded in the stationary phase allows for fine tuning and separation of a wide range of compounds with different ionic properties. Acids, bases, amino acids and neutral compounds were separated isocratically in one run using a simple MS-compatible mobile phase of acetonitrile (ACN) and water with Ammonium Acetate (AmAc) buffer. Can also be UV detected at 250 nm.

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, 4.6×250 mm, 5 µm, 100 Å
Mobile Phase	MeCN/H2O – 35/65%
Buffer	AmAc 10 mM pH 4.0
Flow Rate	1.0 mL/min
Detection	UV, 250 nm

AugustaChrom - Dr. Roland Kießwetter
Tel.: +49 821 599 783 70
Fax: +49 821 599 783 71
E-Mail: info@hplc-shop.de

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