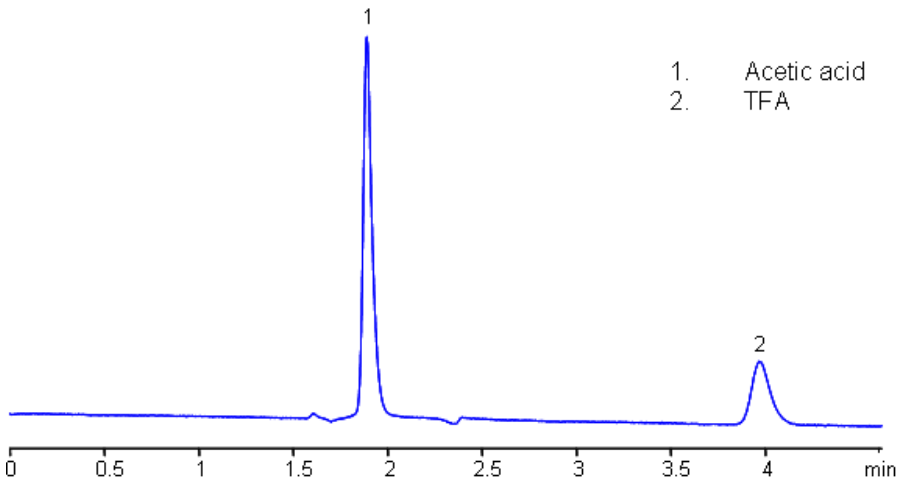
HPLC Analysis of Trifluoroacetic and Acetic Acid on Obelisc N Mixed-Mode HPLC Column

Column: Obelisc N
Size: 4.6 x 150 mm
Mobile phase: MeCN 60% with 0.05% H2SO4
Flow: 1.0 mL/min
Detection: UV 210 nm



Separation type: Liquid Chromatography Mixed-mode

Trifluoroacetic acid (TFA) and acetic acid (AcOH) are very commonly used in organic chemistry. They were separated using an Obelisc N column which uses HILIC/anion-exchange. The mixed-mode of Obelisc N allows for better peak shape and retention of carboxylic acids. Sulfuric acid was used to enhance polar retention by suppressing ionization of the strong acid TFA.

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, 4.6×150 mm, 5 µm, 100 Å
Mobile Phase	MeCN – 60%
Buffer	H2SO4 – 0.05%
Flow Rate	1.0 mL/min
Detection	UV, 210 nm

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Quelle:
https://sielc.com/HPLC_Analysis_of_Trifluoroacetic_and_Acetic_Acid_on_Obelisc_N_Mixed-Mode_HPLC_Column