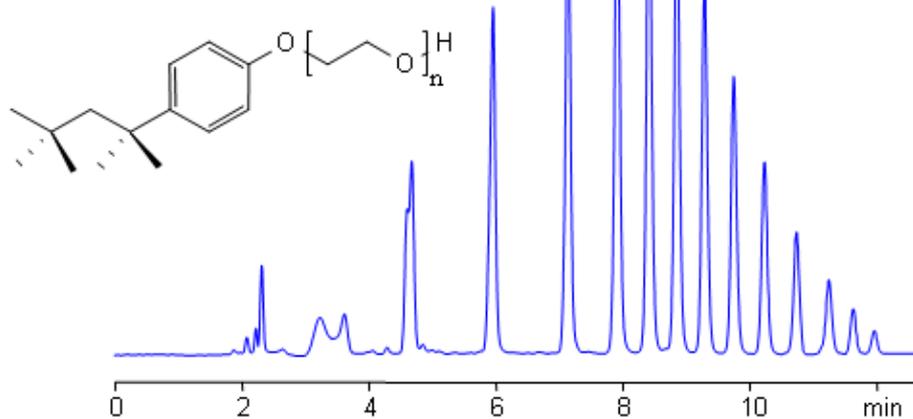


HPLC Separation of the Nonionic Surfactant Triton-X-100

Column: SHARC 1
Column size: 4.6 x 150 mm
Flow: 1.0 mL/min
Mobile phase: Gradient MeCN/MeOH 100/0 to MeCN/MeOH 50/50 with 0.1% Formic acid with 0.01% AmFm in 12 min
Detection: UV 270 nm



Triton X-100 is a non-ionic surfactant which has a hydrophilic polyethylene oxide group (on average it has 9.5 ethylene oxide units), and a hydrocarbon lipophilic or hydrophobic group. SHARC1HPLCcolumns are used to separate oligomers of Triton X-100. Separation is achieved in anhydrous conditions by hydrogen bonding using acetonitrile (ACN) and methanol (MeOH) as the mobile phase with formic acid and ammonium formate (AmFm) as buffer. This method can be used in determination of oligomers of Triton X-100 in detergents, liquid, paste, and powdered cleaning formulations. This separation can be monitored with almost any detection technique (UV, ELSD, LC/MS, RI, CAD, etc.)

The SHARC™ family of innovative columns represents the first commercially available columns primarily utilizing separation based on hydrogen bonding. SHARC stands for Specific Hydrogen-bond Adsorption Resolution Column. Hydrogen bonding involves an interaction or attraction between a bound hydrogen atom and molecules containing electronegative atoms, such as oxygen, nitrogen, and fluorine.

Method Parameters

Column	Sharc 1, 4.6x150 mm, 5 µm, 100 Å
Mobile Phase	Gradient MeCN/MeOH – 100/0- 50/50%, 12 min
Buffer	Formic Acid 0.1% , AmFm – 0.01%
Flow Rate	1.0 mL/min
Detection	UV, 270 nm

Quelle: <https://sielc.com/HPLC%20Separation%20of%20the%20Nonionic%20Surfactant%20Triton-X-100>