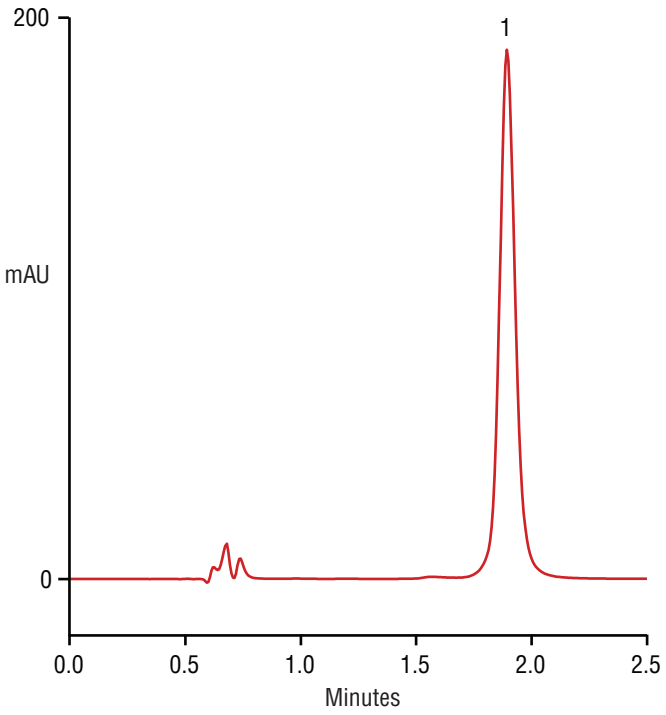
Thermo SCIENTIFIC

A Thermo Fisher Scientific Brand

Minoxidil Determination Using a Thermo Scientific™ Acclaim™ Mixed-Mode WCX-1 Column



Column:	Thermo Scientific™ Acclaim™ Mixed-Mode WCX-1, 3 µm
Dimensions:	3.0 × 50 mm
System:	Thermo Scientific™ Dionex™ UltiMate™ 3000
Mobile Phases:	A: Ammonium dihydrogen phosphate 0.90 g/L, adjusted to pH 3.0 with phosphoric acid B: Acetonitrile
Isocratic Method:	80% A / 20% B (v/v)
Flow Rate:	0.5 mL/min
Temperature:	30 °C
Injection Volume:	2.0 µL
Detection:	UV at 280 nm
Samples:	Generic minoxidil 5% topical solution, diluted in methanol

Peaks:		
	1. Minoxidil	50 µg/mL

27645

Minoxidil is the first approved pharmaceutical treatment for male pattern baldness. It is poorly retained on most HPLC stationary phases. It is also a very weak base (pKa 4.6). By operating at pH < 4, the minoxidil is protonated and can be retained by cation exchange. The Acclaim Mixed-Mode WCX-1 column is a novel, high-efficiency, silica-based column, manufactured by bonding a specially designed proprietary ligand with both hydrophobic and weak cation-exchange properties. This column can function in multiple separation modes: reversed phase, cation exchange, and normal phase/HILIC. Shown here is a fast analysis of minoxidil in a generic formulation using a 3.0 × 50 mm column.