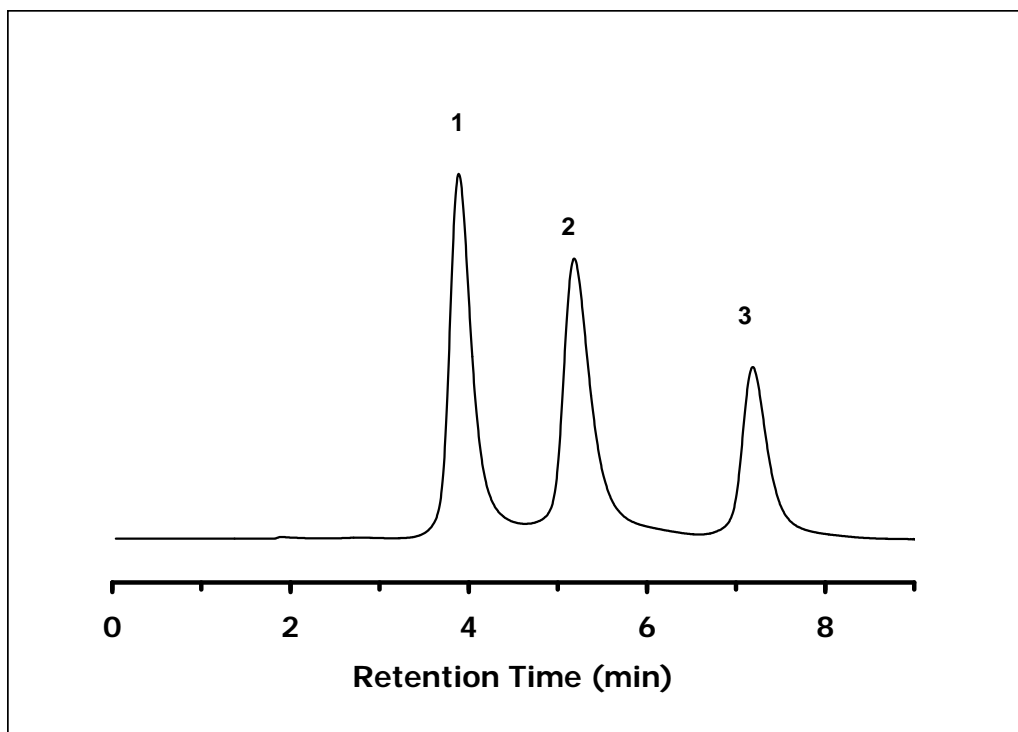


**ZIC® -HILIC Separation of Morphine from its 3- and 6-gluconides****Chromatographic Conditions**

Column: ZIC®-HILIC, PEEK 50 x 4.6 mm, 5 µm, 200 Å (P/N 2712-055)  
Injection: 5 µL in mobile phase  
Detection: UV @ 212 nm (UFS 1.0 V)  
Pressure Drop: 5.3 MPa (763 psi)  
Flow Rate: 0.5 mL/min  
Mobile Phase (v/v): 70%, Acetonitrile  
30%, Ammonium Acetate 5 mM

**Chromatographic Data**

No.	Compound	Time (min)	Retention factor	
	$t_0$	void volume	1.0	-
1	M6G	Morphine-6-gluconide	3.9	2.9
2	M3G	Morphine-3-gluconide	5.2	4.2
3	M	Morphine	7.2	6.2

A method for On-line Desalting and Determination of Morphine, Morphine-3-gluconide and Morphine-6-gluconide in Microdialysis and Plasma Samples using Column Switching and ZIC®-HILIC separation - Tandem Mass Spectrometry can be found at:  
Rapid Commun. Mass Spectrom., 19 (2005) 2116-2122