

Application Note

Gradient Separation of Morphine and Metabolites on XBridge HILIC

Waters Corporation



This is an Application Brief and does not contain a detailed Experimental section.

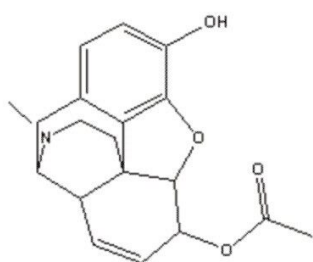
Abstract

This application brief demonstrates the gradient separation of morphine and metabolites on Xbridge HILIC Columns.

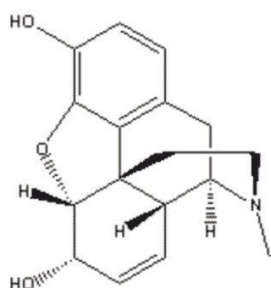
Introduction

The compounds used in this study are:

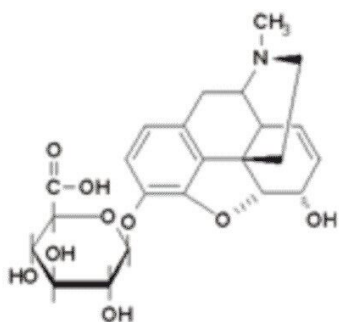
1. 6-Acetylmorphine
2. Morphine
3. Morphine-3 β -D-glucuronide



6-Acetylmorphine



Morphine



Morphine-3- β -D-glucuronide

Experimental

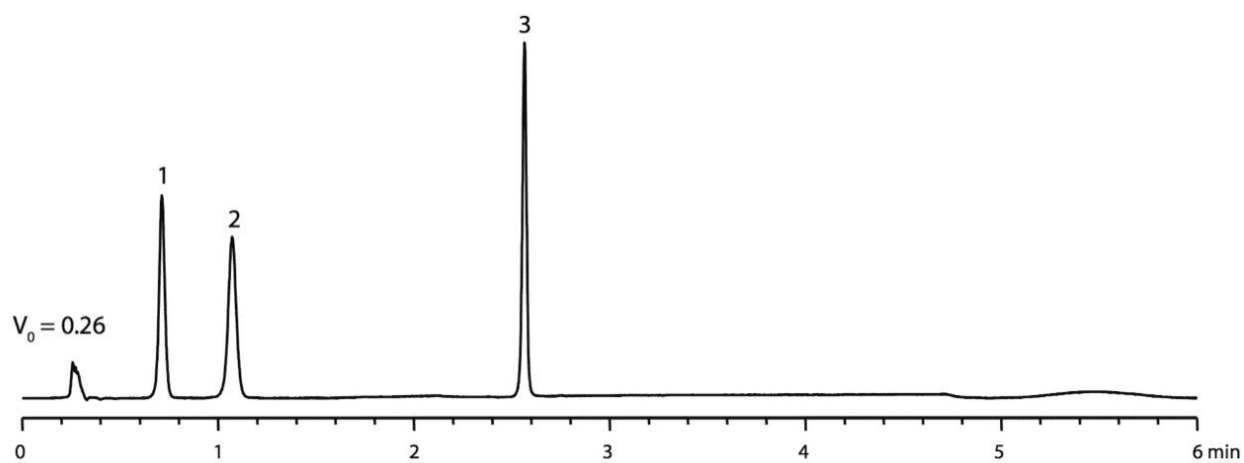
Method Conditions

Column:	XBridge HILIC, 2.1 x 50 mm, 3.5 μ m
Part number:	186004432
Mobile phase A:	10 mM NH_4COOH in H_2O , 0.125% HCOOH in 50:50 ACN: H_2O
Mobile phase B:	10 mM NH_4COOH in H_2O , 0.125% HCOOH in 90:10 ACN: H_2O
Flow rate:	0.6 mL/min
Injection volume:	5 μ L
Sample concentration:	25 ng/mL each
Sample diluent:	75:25 ACN:MeOH with 0.2% HCOOH
Column temperature:	30 $^\circ\text{C}$
Detection:	UV @ 280 nm
Sampling rate:	20 points/sec
Time constant:	0.1
Instrument:	Waters ACQUITY UPLC with ACQUITY PDA

Gradient:

Time(min)	Profile
	%A
0.00	0.1
1.05	0.1
4.35	99.9
4.50	0.1
6.00	0.1

Results and Discussion



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ACQUITY UPLC PDA Detector <<https://www.waters.com/514225>>

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