

Nota de aplicación

## 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

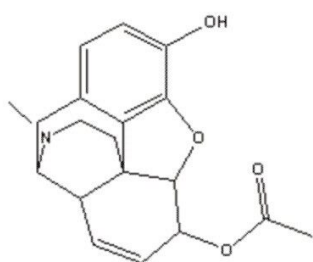
This application brief demonstrates the gradient separation of morphine and metabolites on Xbridge HILIC Columns.

---

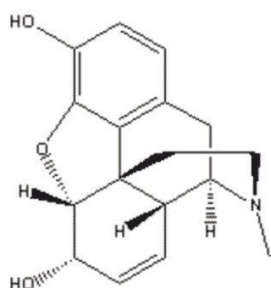
## Introduction

The compounds used in this study are:

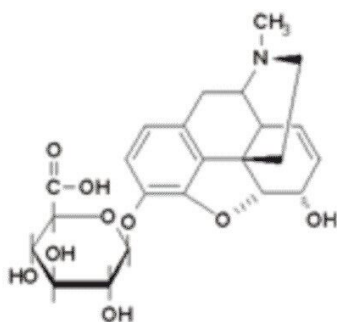
1. 6-Acetylmorphine
2. Morphine
3. Morphine-3 $\beta$ -D-glucuronide



6-Acetylmorphine



Morphine



Morphine-3- $\beta$ -D-glucuronide

---

## Experimental

### Method Conditions

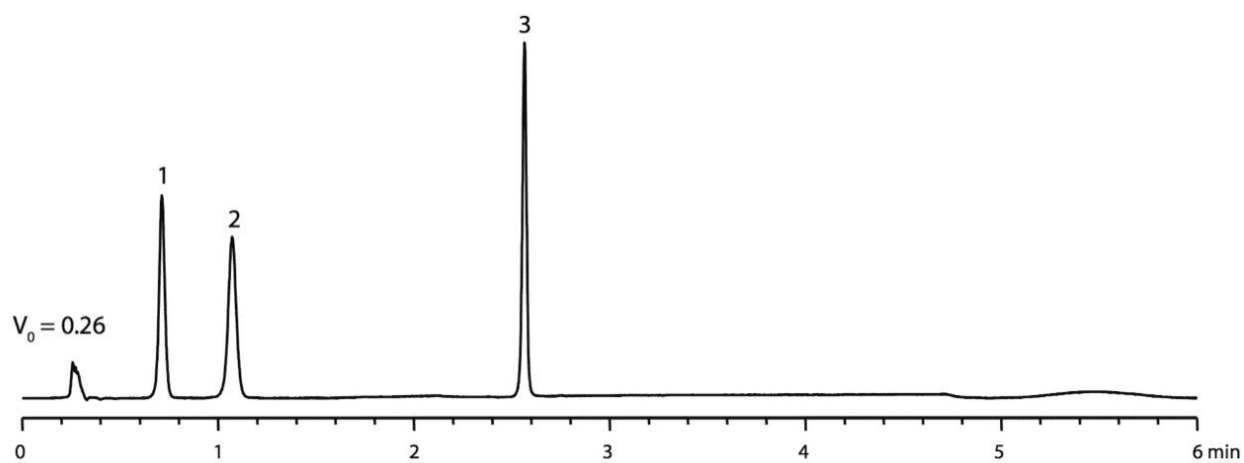
Column:	XBridge HILIC, 2.1 x 50 mm, 3.5 $\mu$ m
Part number:	186004432
Mobile phase A:	10 mM $\text{NH}_4\text{COOH}$ in $\text{H}_2\text{O}$ , 0.125% $\text{HCOOH}$ in 50:50 ACN: $\text{H}_2\text{O}$
Mobile phase B:	10 mM $\text{NH}_4\text{COOH}$ in $\text{H}_2\text{O}$ , 0.125% $\text{HCOOH}$ in 90:10 ACN: $\text{H}_2\text{O}$
Flow rate:	0.6 mL/min
Injection volume:	5 $\mu$ L
Sample concentration:	25 ng/mL each
Sample diluent:	75:25 ACN:MeOH with 0.2% $\text{HCOOH}$
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



---

## Featured Products

ACQUITY UPLC System <<https://www.waters.com/514207>>

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

WA64079, August 2009

© 2021 Waters Corporation. All Rights Reserved.