Waters™

アプリケーションノート

Gradient Separation of Morphine and Metabolites on ACQUITY UPLC BEH HILIC

Waters Corporation

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

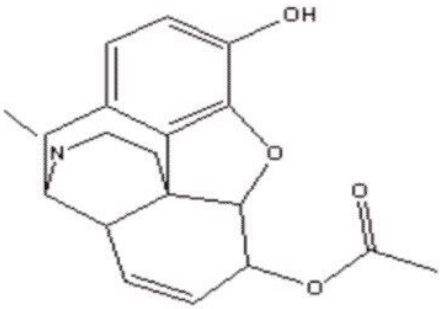
Abstract

This application brief demonstrates the gradient separation of morphine and metabolites on ACQUITY UPLC BEH HILIC Columns.

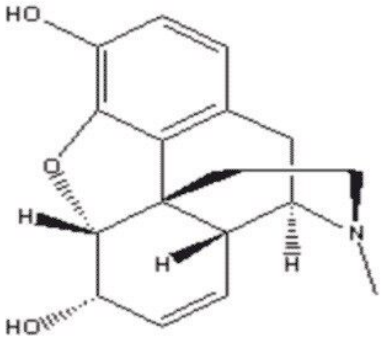
Introduction

The compounds used in this study are:

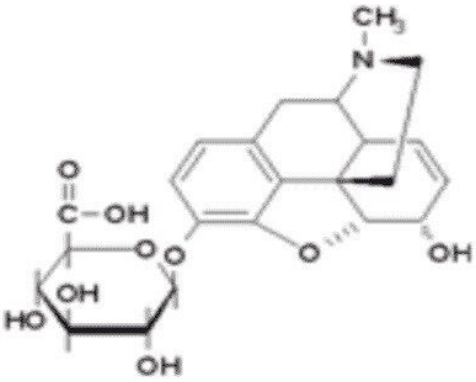
1. 6-Acetylmorphine
2. Morphine
3. Morphine-3β-D-glucuronide



6-Acetylmorphine



Morphine



Morphine-3β-D-glucuronide

Experimental

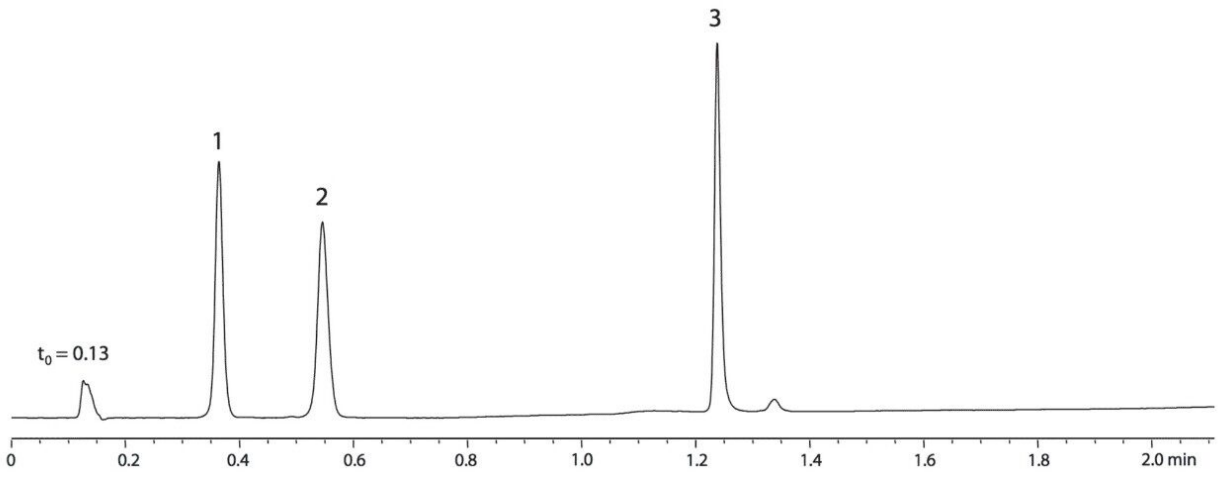
Test Conditions

Column:	ACQUITY UPLC BEH HILIC, 2.1 x 50 mm, 1.7 µm
Part Number:	186003460
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:	1.235 mL/min
Injection Volume:	5 µL
Sample Concentration:	25 ng/mL each
Sample Diluent:	75:25 ACN:MeOH
Column Temperature:	30 °C
Sample Temperature:	15 °C
Weak Needle Wash:	ACN/H_2O 95/5
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
0.51	0.1
2.11	99.9
2.19	0.1
2.91	0.1

Results and Discussion



Featured Products

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

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

WA60132, August 2009