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Nota de aplicación

LC-MS Gradient Separation of 6-Acetylmorphine and Morphine on XBridge HILIC

Waters Corporation

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

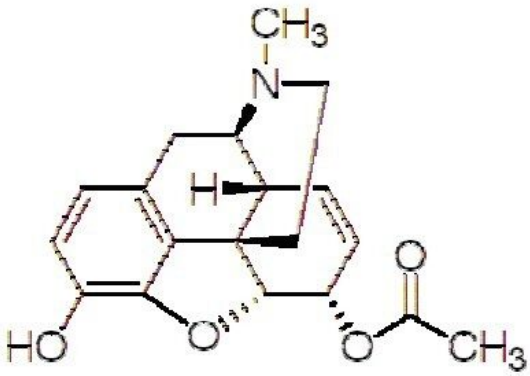
Abstract

This application brief demonstrates the LC-MS gradient separation of 6-acetylmorphine and morphine on XBridge HILIC Columns.

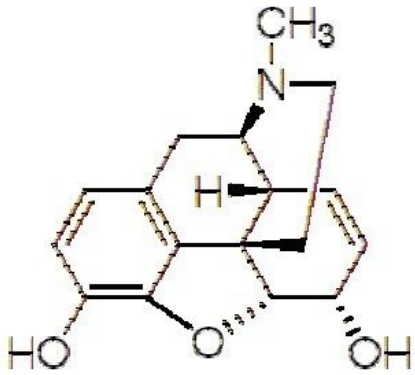
Introduction

The compounds used in this study are:

1. 6-Acetylmorphine
2. Morphine



6-Acetylmorphine



Morphine

Experimental

LC Conditions

Column:	XBridge HILIC, 2.1 x 100 mm, 3.5 µm
Part number:	186004433
Mobile phase A:	10 mM NH_4COOH with 0.125% formic acid in 50:50 ACN:H_2O
Mobile phase B:	10 mM NH_4COOH with 0.125% formic acid in 90:10 ACN:H_2O
Flow rate:	0.6 mL/min
Sample concentration:	10 ng/mL each
Injection volume:	10.0 µL (PLNO, 20 µL loop)
Strong and weak needle wash:	95:5 ACN:H_2O
Column temperature:	30 °C
Detection:	MS
Instrument:	Waters ACQUITY UPLC with TQD

Gradient:

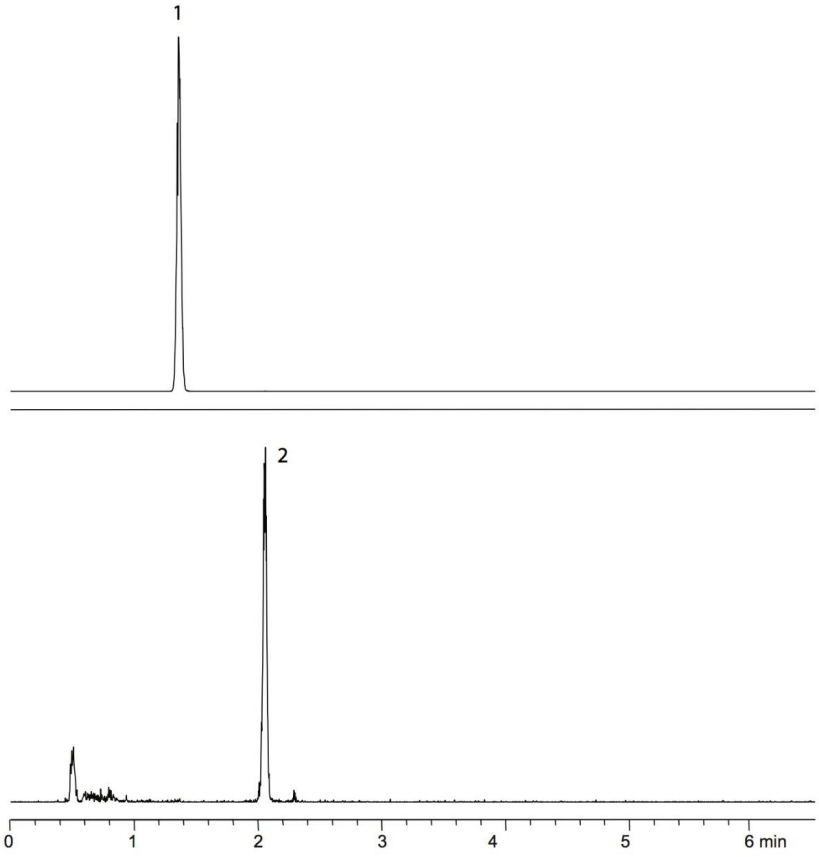
Time(min)	Profile
	%A
0.00	0.1
1.05	0.1
4.35	99.9

Time(min)	Profile
4.50	0.1
6.00	0.1

MS Conditions

Ionization mode:	ES+
Capillary:	1.0 kV
Cone:	50 V
Source temperature:	120 °C
Desolvation temperature:	350 °C
Cone gas flow:	50 L/Hr
Desolvation gas flow:	800 L/Hr
Dwell time:	20 msec
ISD and ICD:	10 msec
MRM:	Morphine 286 > 200.9 6-Acetylmorphine 328 > 164.9

Results and Discussion



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