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Application Note

LC-MS Gradient Separation of Buprenorphine and Buprenorphine Glucuronide on XBridge HILIC

Waters Corporation

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

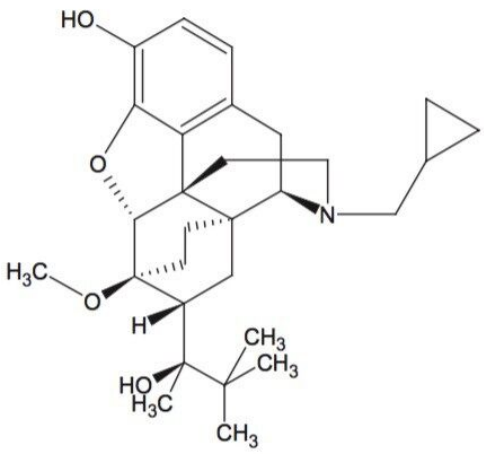
Abstract

This application brief demonstrates the LC-MS gradient separation of buprenorphine and buprenorphine glucuronide on XBridge HILIC Columns.

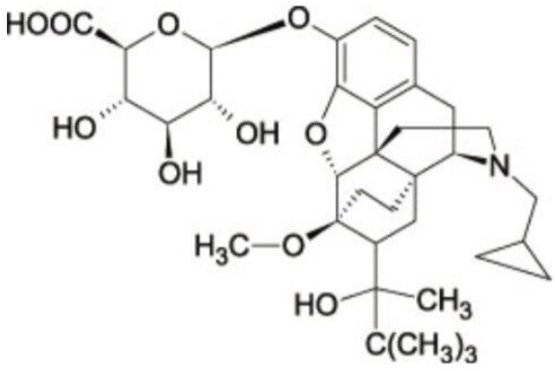
Introduction

The compounds used in this study are:

1. Buprenorphine
2. Buprenorphine glucuronide



Buprenorphine



Buprenorphine glucuronide

Experimental

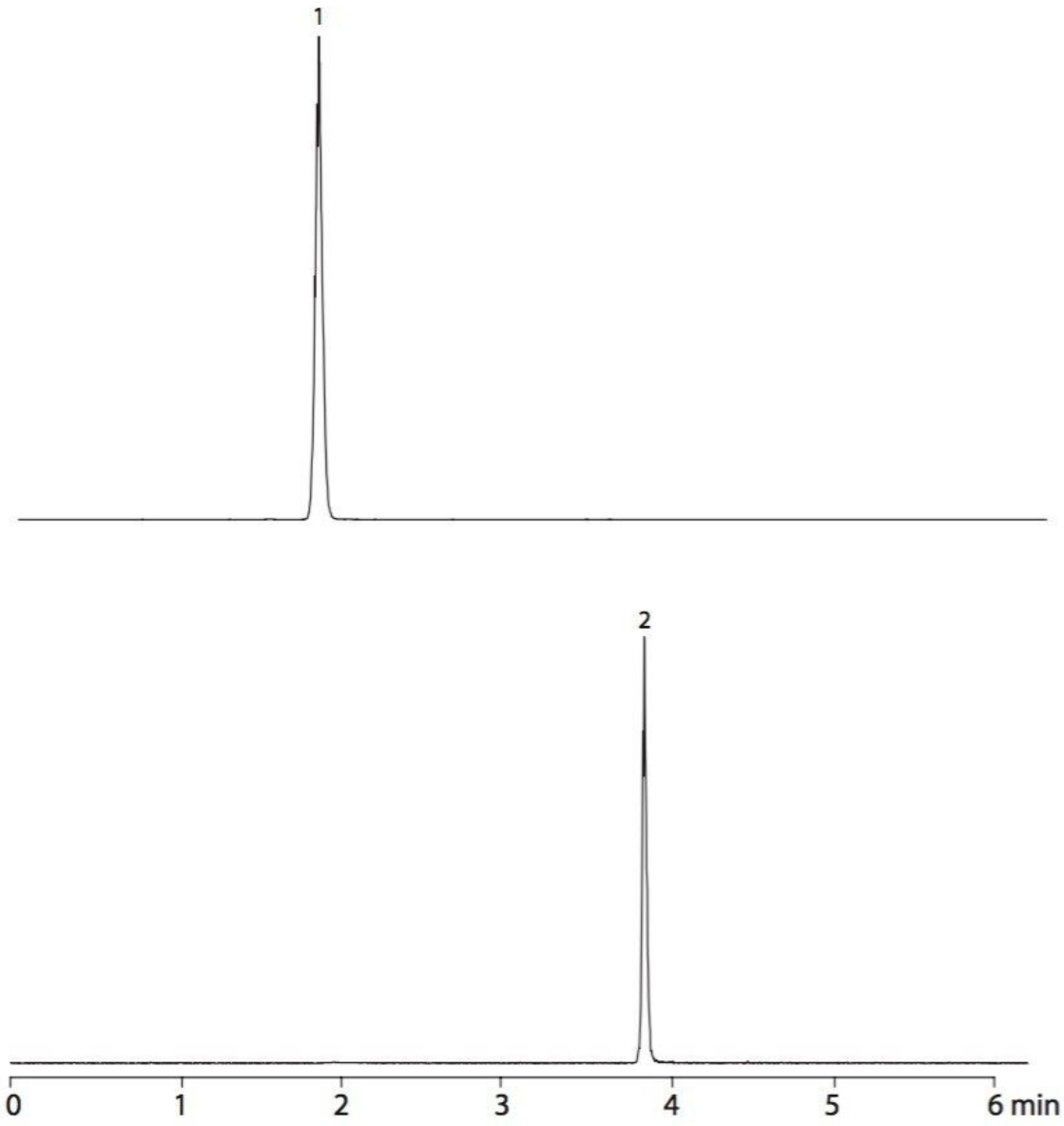
Method Conditions

Column:	XBridge HILIC, 3.5 µm, 2.1 x 100 mm
Part number:	186004433
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:	0.3 mL/min
Injection volume:	5 µL
Sample concentration:	50 ng/mL each
Sample diluent:	75:25 ACN:MeOH with 0.2% HCOOH
Column temperature:	30 °C
Instrument:	Waters ACQUITY UPLC with TQD
MRM:	Buprenorphine 468.3 > 54.7 Buprenorphine glucuronide 644.3 > 468.3
Dwell time:	75 ms
ISD:	10 ms
ICD:	10 ms

Gradient:

Time(min)	Profile
	%A
0.00	0.1
1.05	0.1
4.35	99.9
5.00	99.9
5.01	0.1
6.00	0.1

Results and Discussion



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

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