

## Analysis of Morphine and Its Polar Metabolites Using Atlantis T3 Columns

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Waters Corporation



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

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### Abstract

This application brief demonstrates analysis of morphine and its polar metabolites using Atlantis T3 Columns.

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## Introduction

The compounds used in this study are -

1. 10-Hydroxymorphine
  2. Morphine-3 $\beta$ -D-glucuronide
  3. Morphine-6 $\beta$ -D-glucuronide
  4. Morphine
  5. Morphine N-oxide
  6. 6-Acetylmorphine
- 

## Experimental

### Test Conditions

Column:	Atlantis T3, 2.1 x 50 mm, 3 $\mu$ m
Part number:	186003717
Mobile phase A:	0.1% FA in water
Mobile phase B:	ACN
Flow rate:	0.5 mL/min

Injection volume: 15  $\mu$ L

Column temperature: 45  $^{\circ}$ C

MRM:

- morphine 286 > 201
- morphine-3 $\beta$ -D-glucuronide 462 > 286
- morphine-6 $\beta$ -D-glucuronide 462 > 286
- morphine N-oxide 302 > 162
- 6-acetylmorphine 328 > 165
- 10-hydroxymorphine 302 > 58

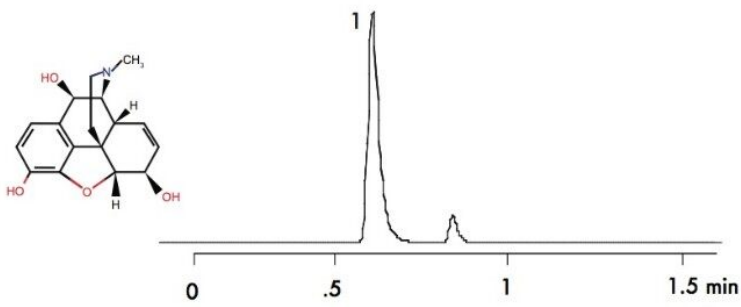
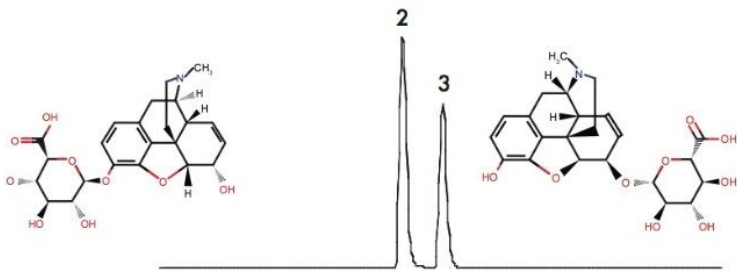
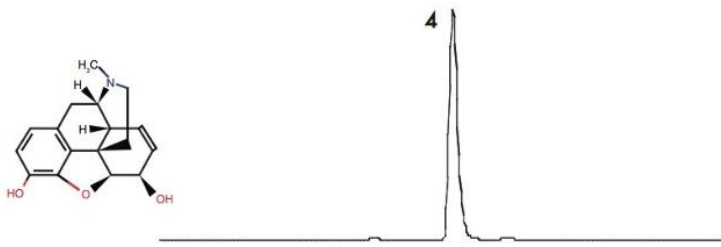
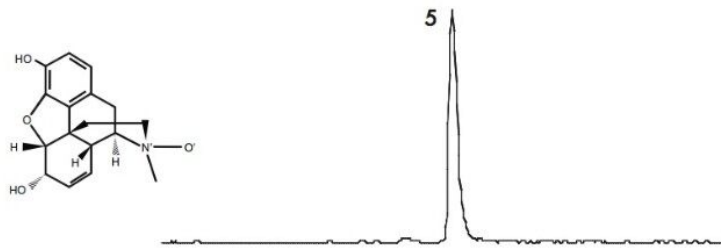
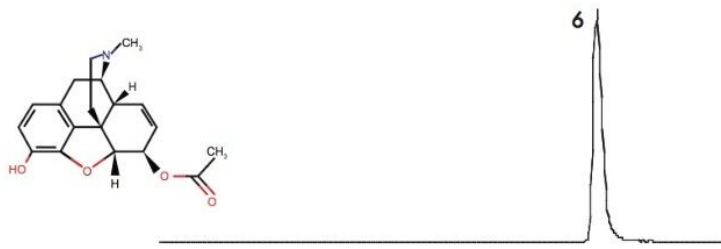
Instrument: Waters ACQUITY UPLC System

## Gradient

Time (min)	Profile	
	%A	%B
0.00	98	2
5.00	2	98

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## Results and Discussion



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## Featured Products

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

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