

Application Note

## Morphine and Its Glucuronide Metabolites in Serum

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Waters Corporation



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

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### Abstract

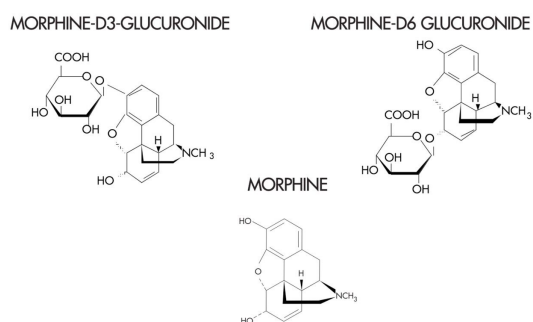
This application brief highlights the analysis of morphine and its glucuronide metabolites using Oasis HLB extraction method.

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## Introduction

Compounds studied in this application brief are:

1. Morphine-D3-glucuronide
2. Morphine-D6-glucuronide
3. Morphine



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## Experimental

### HPLC Method

Column:	SymmetryShield RP <sub>8</sub> , 3.9 x 150 mm, 5 μm (p/n: WAT200655)
Mobile phase:	20 mM potassium phosphate, pH 6.4
Flow rate:	1.0 mL/min

Injection volume:

100  $\mu$ L of porcine serum extract

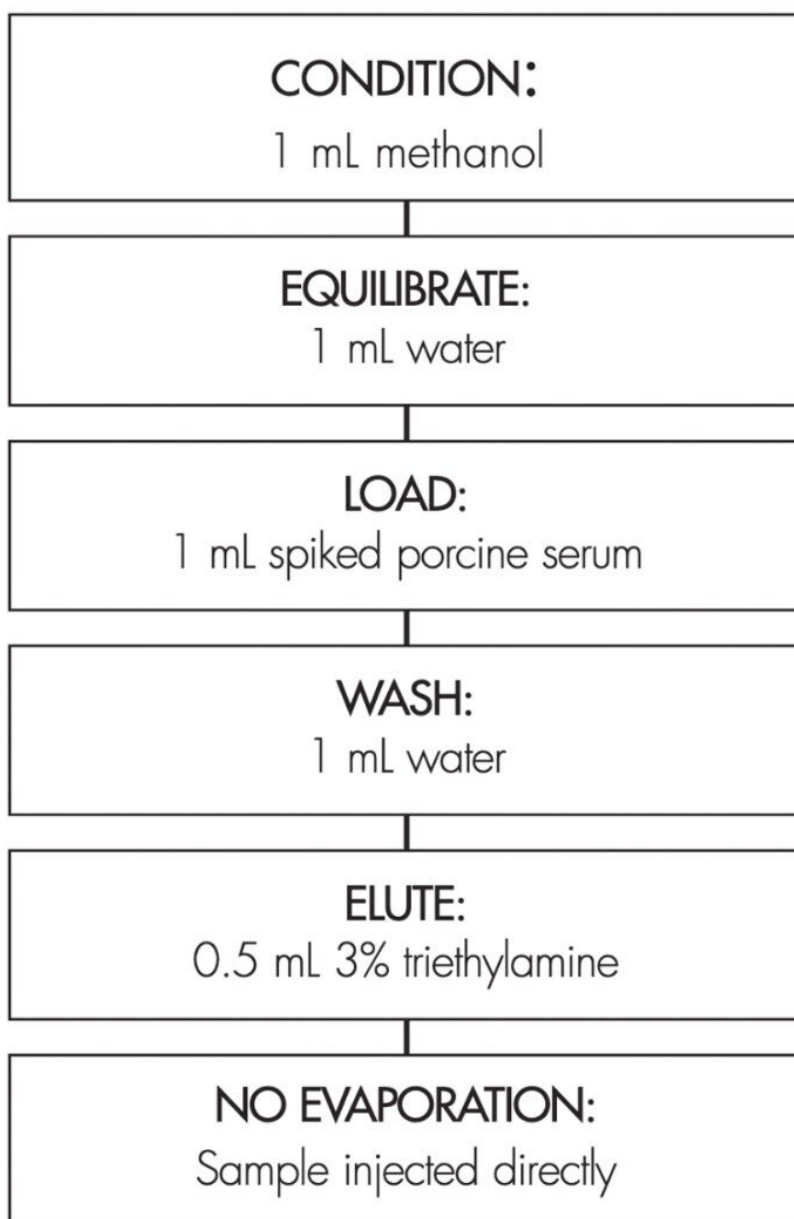
Detection:

Fluorescence; ex 280 nm, em 355 nm

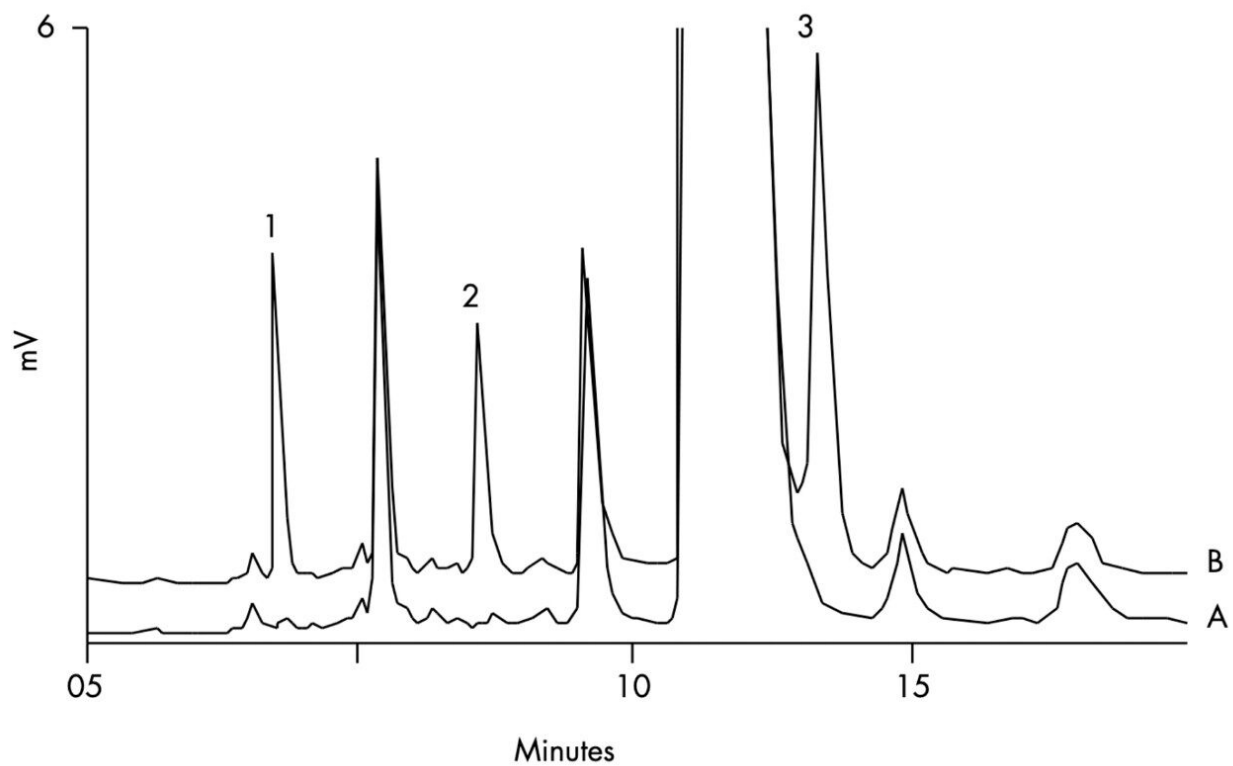
## OASIS<sup>®</sup> HLB EXTRACTION METHOD

Oasis<sup>®</sup> HLB 1 cc/30 mg Extraction Cartridge

Part Number WAT094225



## Results and Discussion



Compound	Concentration µg/mL	% Recovery	%RSD (n=6)
Morphine-D3-glucuronide	0.48	90.7	2.0
	0.097	100	3.1
Morphine-D6-glucuronide	2.4	92.2	2.8
	0.49	93.1	2.5
Morphine	3.6	102	3.6
	0.73	102	3.2

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