



Cocaine and its Metabolites in Serum

Waters Corporation



For forensic toxicology use only.

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

Abstract

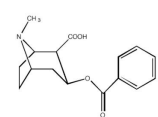
This application brief highlights the analysis of cocaine and its metabolites in serum using Symmetry C₁₈

columns.

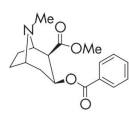
Introduction

Compounds analyzed in this application brief are:

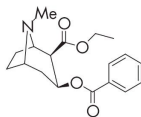
1. Benzoylecgonine
2. Cocaine
3. Cocaethylene



1. Benzoylecgonine



2. Cocaine



3. Cocaethylene

Experimental

HPLC Method

Column:	Symmetry C ₁₈ , 3.9 x 150 mm, 5 µm (p/n: WAT046970)
Guard column:	Sentry guard column, 3.9 x 20 mm, 5 µm (p/n: WAT054250)
Mobile phase A:	20 mM potassium phosphate, pH 7
Mobile phase B:	Methanol
Flow rate:	1.0 mL/min

Injection volume:

1 mL of reconstituted porcine serum extract

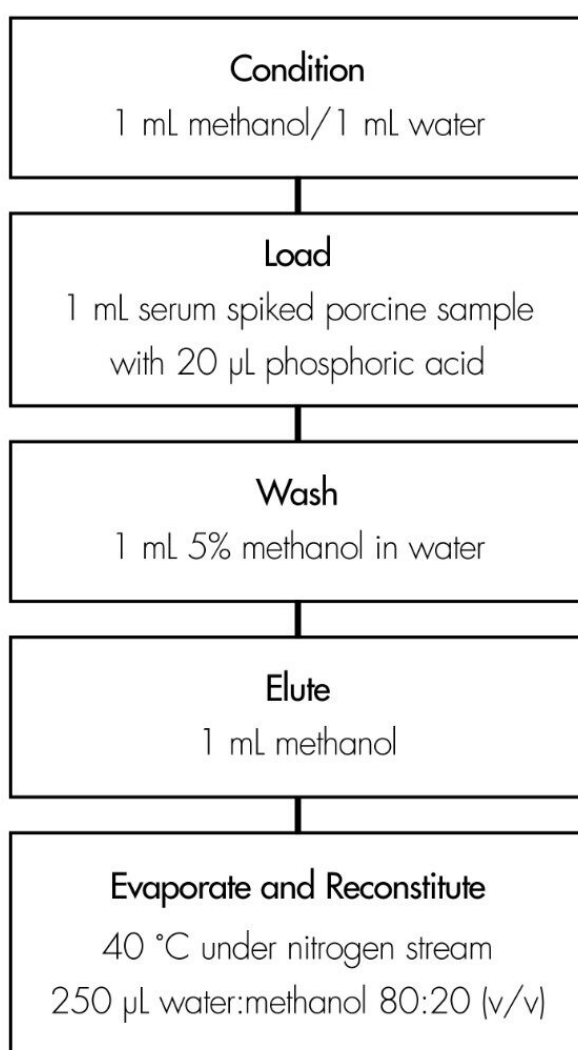
Detection:

UV @ 235 nm

Oasis® HLB Extraction Method

Oasis® HLB 1 cc/30 mg Extraction Cartridge

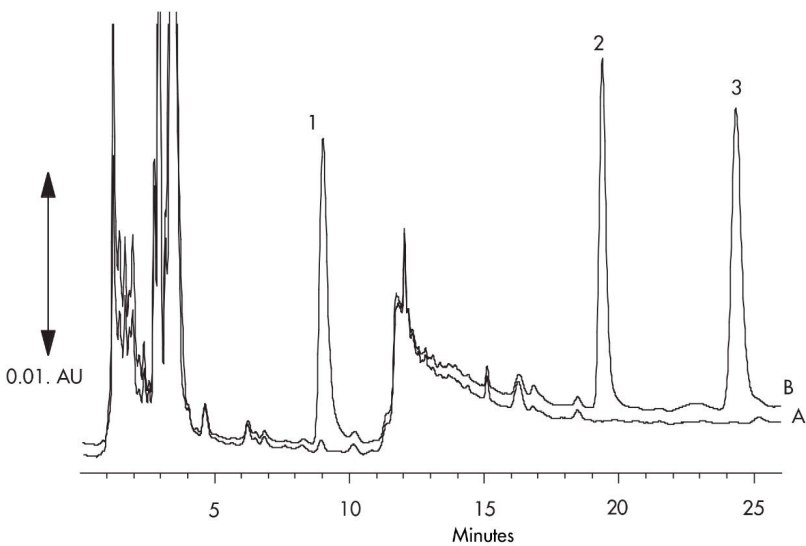
Part Number WAT094225



Gradient

Time (min)	Profile	
	%A	%B
0.0	78	22
8.5	78	22
8.6	42	58
30	42	58

Results and Discussion



Compound	Concentration µg/mL	% Recovery	%RSD (n-6)
1. Benzoylecgonine	2.00	93.7%	1.7%
	0.40	93.6%	2.2%
2. Cocaine	2.00	98.0%	1.1%
	0.40	93.4%	2.9%
3. Cocaethylene	2.50	97.7%	2.8%
	0.50	98.2%	5.1%

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