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Application Note

Codeine and its Glucuronide Metabolite in Plasma

Waters Corporation

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

Abstract

This application brief highlights on the analysis of codeine and its glucuronide metabolite in plasma.

Introduction

CODEINE

CODEINE-6-GLUCURONIDE

Experimental

Detection:

HPLC Conditions

Column: Symmetry C₁₈, 2.1 x 150 mm, 3.5 µm

Guard column: Symmetry C₁₈, 2.1 x 10 mm, 3.5 µm

Part numbers: Column - 186000174, Guard - 186000169

Mobile phase: Methanol/Acetonitrile/0.05% TFA in water 5:5:90

Flow rate: 0.3 mL/min

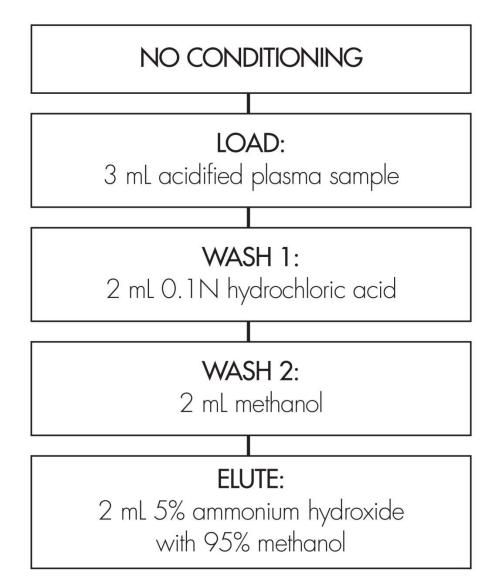
Injection volume: 80 µL Plasma extract

Temperature: 30° C

UV @ 220 nm (0.04 AUFS)

OASIS® MCX EXTRACTION METHOD

Oasis® MCX Extraction Cartridge, 3 cc/60 mg Part Number 186000254



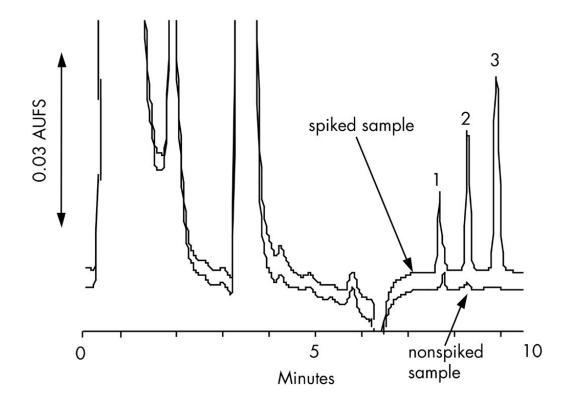
After elution, the extract is diluted 1:3 with water for HPLC analysis

Results and Discussion

The compounds analyzed in this study are:

- 1. Ranitidine (I.S.)
- 2. Codeine-6-Glucuronide (C-6-G)
- 3. Codeine

Chromatogram of Plasma Extracts: A) Blank B) Spiked Sample



Spike level	% Recovery (n=3) 0.12 μg/mL	% RSD (n=3) 0.6 μg/mL
Codeine	95.4 (5.0)	103.4 (0.9)
Codeine-6-Glucuronide	106.8 (1.9)	104.6 (1.3)

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