Waters™

アプリケーションノート

Barbiturates in Human Urine

Waters Corporation

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

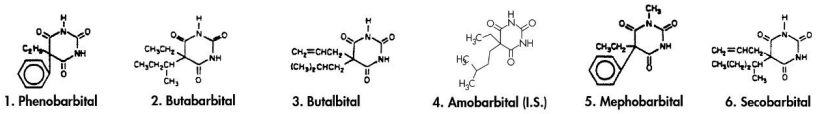
Abstract

This application brief demonstrates analysis of barbiturates in human urine.

Introduction

The compounds used in this study are –

1. Phenobarbital
2. Butabarbital
3. Butalbital
4. Amobarbital (I.S.)
5. Mephobarbital
6. Secobarbital



Experimental

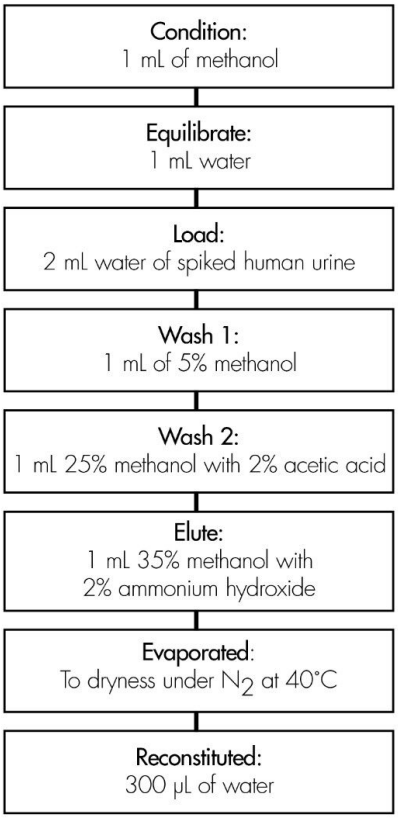
HPLC Method

Column:	Symmetry Shield RP_{18}, 2.1 x 150 mm, 5 µm
Guard column:	Sentry Guard Column RP_{18}, 3.9 x 20 mm, 5 µm
Part number:	Column - 186000111, Guard - 186000107
Mobile phase:	50 mM potassium phosphate, pH 7.0/acetonitrile 71:29
Flow rate:	1.0 mL/min
Injection volume:	80 µL urine extract

Temperature:	30 °C
Detection:	UV @ 214 nm (0.350 AUFS)

Oasis® HLB Extraction Method

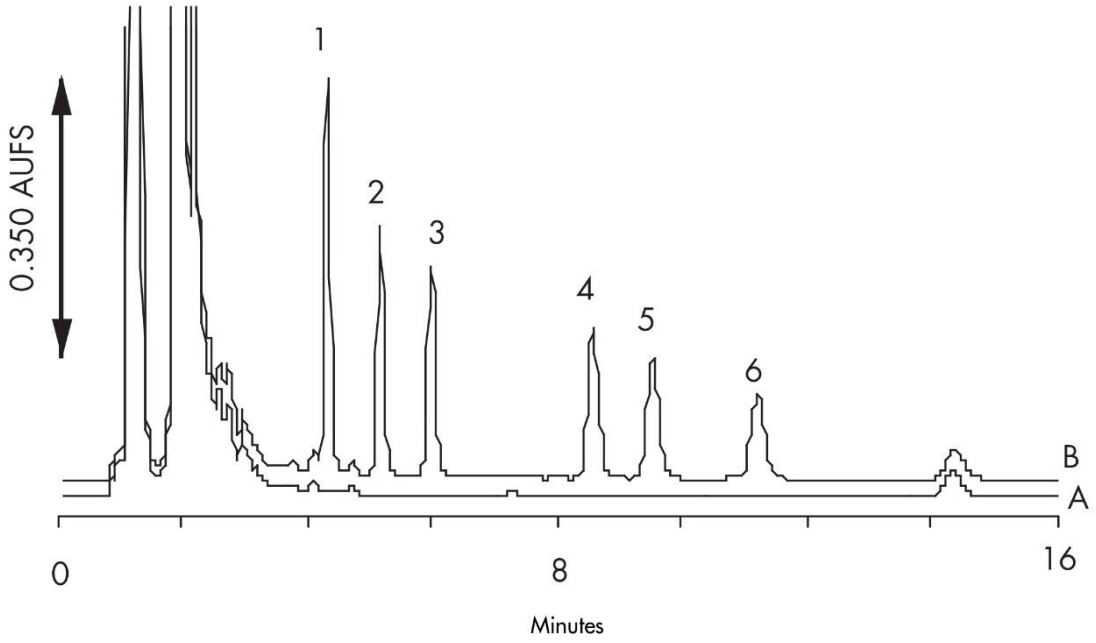
Oasis® HLB Extraction Plate, 30 mg/96-well
Part Number WAT058951



Results and Discussion

Compound	% Recovery (n=8) 0.2 µg/mL	%RSD (n=8) 1.0 µg/mL
1. Phenobarbital	114.3 (1.7)	106.5 (0.5)
2. Butabarbital	95.7 (1.3)	105.5 (0.7)
3. Butalbital	109.5 (0.9)	104.2 (0.9)
4. Amobarbital (I.S.)		86.3 (1.7)
5. Mephobarbital	92.5 (3.6)	92.4 (1.7)
6. Secobarbital	101.5 (5.2)	94.8 (2.2)

Chromatogram of A) Blank Urine, B) Spiked Urine



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