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Applikationsbericht

Tricyclic Antidepressants in Plasma

Waters Corporation



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

Abstract

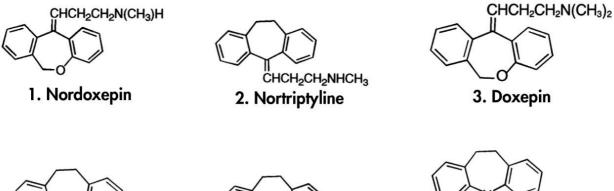
This application brief demonstrates analysis of tricyclic antidepressants in plasma.

Introduction

The compounds used in this study are -

Spiked at 500 ng/mL versus Blank:

- 1. Nordoxepin (I.S.)
- 2. Nortriptyline
- 3. Doxepin
- 4. Imipramine
- 5. Amitriptyline
- 6. Trimipramine





CHCH₂CH₂N(CH₃)₂

5. Amitriptyline

CH₂CHCH₂N(CH₃)₂ CH₃ CH₃ 6. Trimipramine

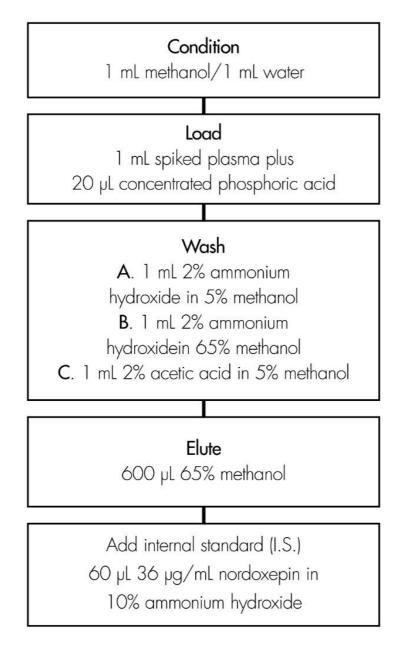
Experimental

HPLC Method

Column:	Symmetry Shield RP ₈ , 4.6 x 75 mm, 3.5 μ m	
Part numbers:	WAT094263	
Mobile phase:	50 mM phosphate, pH 7/methanol 26:74	
Flow rate:	1.4 mL/min	
Injection volume:	1 mL spiked plasma plus 20 μL concentrated phosphoric acid, 100 μL injection	
Temperature:	29 °C	
Detection:	UV @ 254 nm	

Oasis® HLB Extraction Method

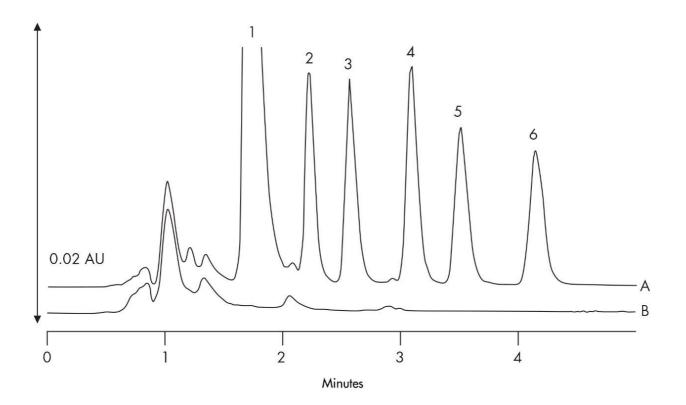
Oasis® HLB Extraction Plate, 30 mg/96-well Part Number WAT058951



Results and Discussion

	500 ng/mL		100 ng/mL	
Compound	Recovery	RSD (n=96)	Recovery	%RSD (n=95)
Nortriptyline	92.3%	1.4%	90.8%	5.7%
Doxepin	90.6%	1.4%	90.4%	4.7%
Imipramine	92.2%	1.7%	86.4%	5.3%
Amitriptyline	90.2%	1.6%	85.3%	5.8%
Trimipramine	90.3%	1.9%	89.8%	6.1%

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



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