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アプリケーションノート

Tricyclic Antidepressants in Plasma

Waters Corporation

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

Abstract

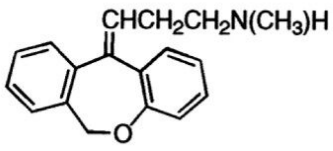
This application brief demonstrates analysis of tricyclic antidepressants in plasma.

Introduction

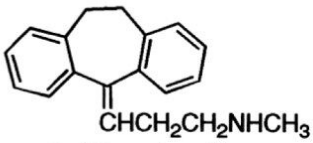
The compounds used in this study are –

Spiked at 500 ng/mL versus Blank:

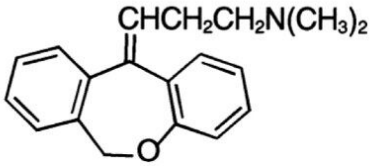
1. Nordoxepin (I.S.)
2. Nortriptyline
3. Doxepin
4. Imipramine
5. Amitriptyline
6. Trimipramine



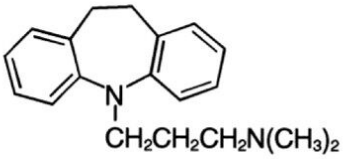
1. Nordoxepin



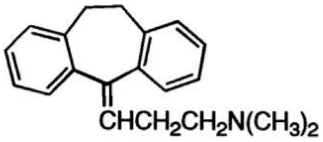
2. Nortriptyline



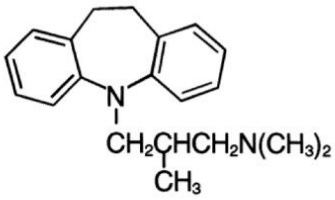
3. Doxepin



4. Imipramine



5. Amitriptyline



6. Trimipramine

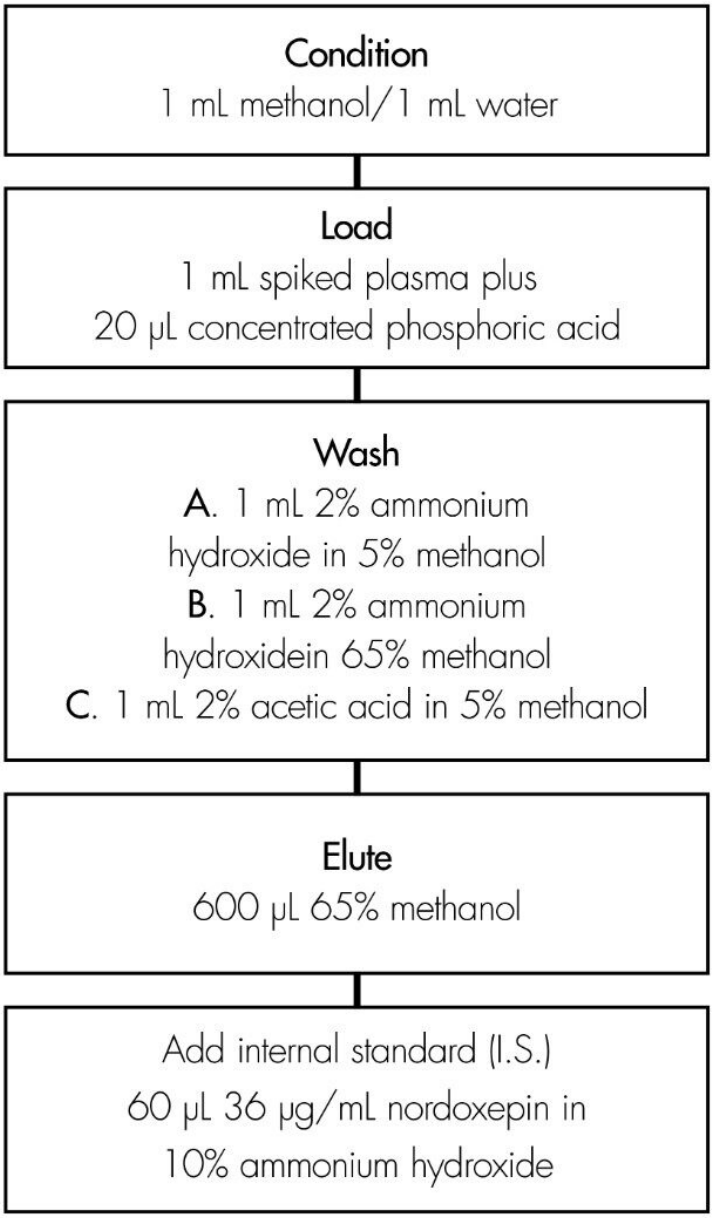
Experimental

HPLC Method

Column:	Symmetry Shield RP_8, 4.6 x 75 mm, 3.5 µm
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

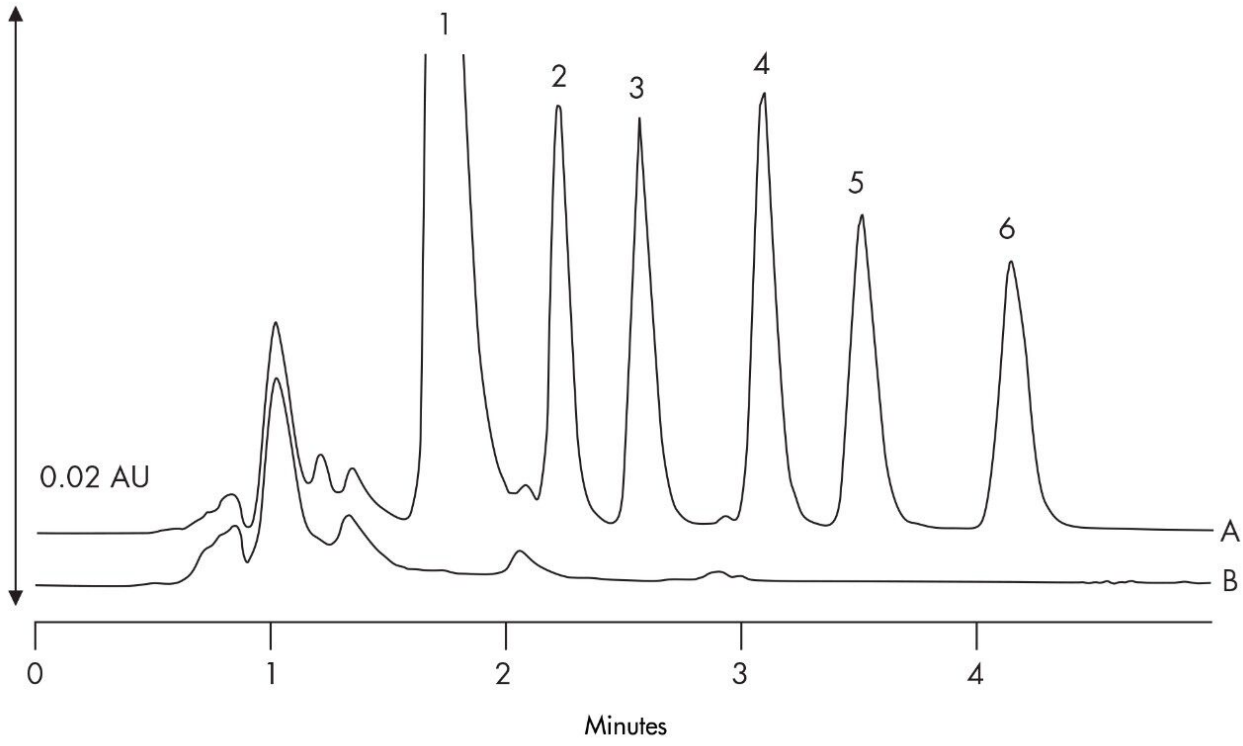
Oasis® HLB Extraction Plate, 30 mg/96-well
Part Number WAT058951



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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