

Application Note

Fractionation of Acidic and Neutral from Basic Drugs in Plasma

Waters Corporation

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

Abstract

This application brief demonstrates fractionation of acidic and neutral from basic drugs in plasma.

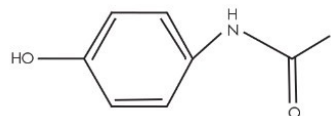
Introduction

The compounds used in this study are -

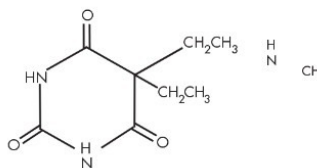
1. Acetaminophen
 2. Barbitol
 3. *p*-Toluamide
 4. Amphetamine
 5. Methamphetamine
-

6. *m*-Toluidine

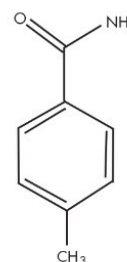
7. Ranitidine (I.S.)



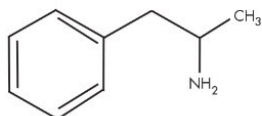
ACETAMINOPHEN



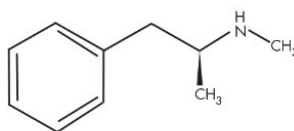
BARBITAL



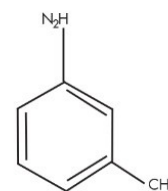
TOLUAMIDE



AMPHETAMINE



METHAMPHETAMINE



TOLUIDINE

Experimental

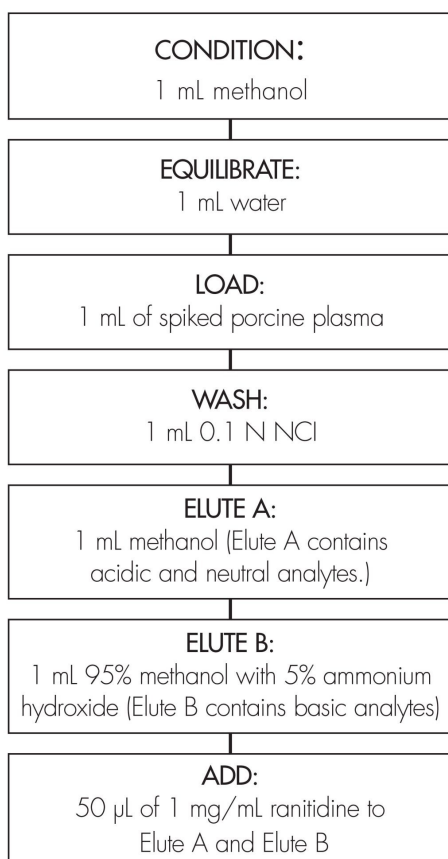
LC Conditions

Column:	Symmetry Shield RP ₈ , 4.6 x 75 mm, 3.5 µm
Guard column:	Symmetry Shield RP ₈ , 3.9 x 20 mm, 3.5 µm
Part numbers:	Column WAT094263, Guard 186000704

Mobile phase:	5% CH ₃ OH/95% 20 mM K ₂ HPO ₄ /KH ₂ PO ₄ , pH 7
Flow rate:	2 mL/min
Temperature:	36 °C
Injection:	10 µL plasma extract
Detection:	UV @ 214 nm (0.010 AUFS)

OASIS® MCX EXTRACTION METHOD

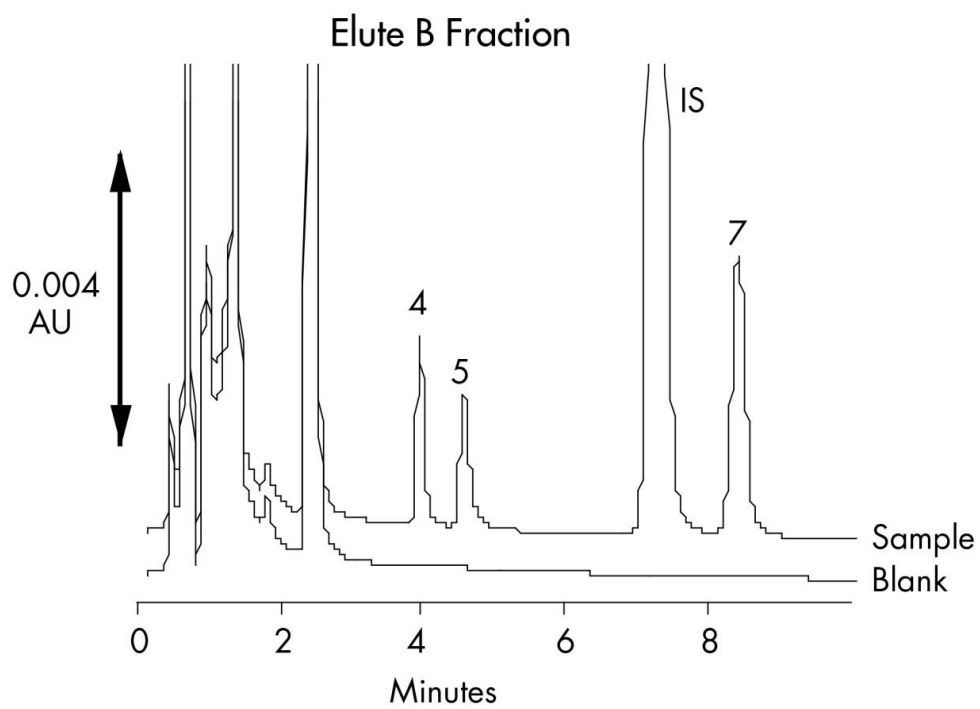
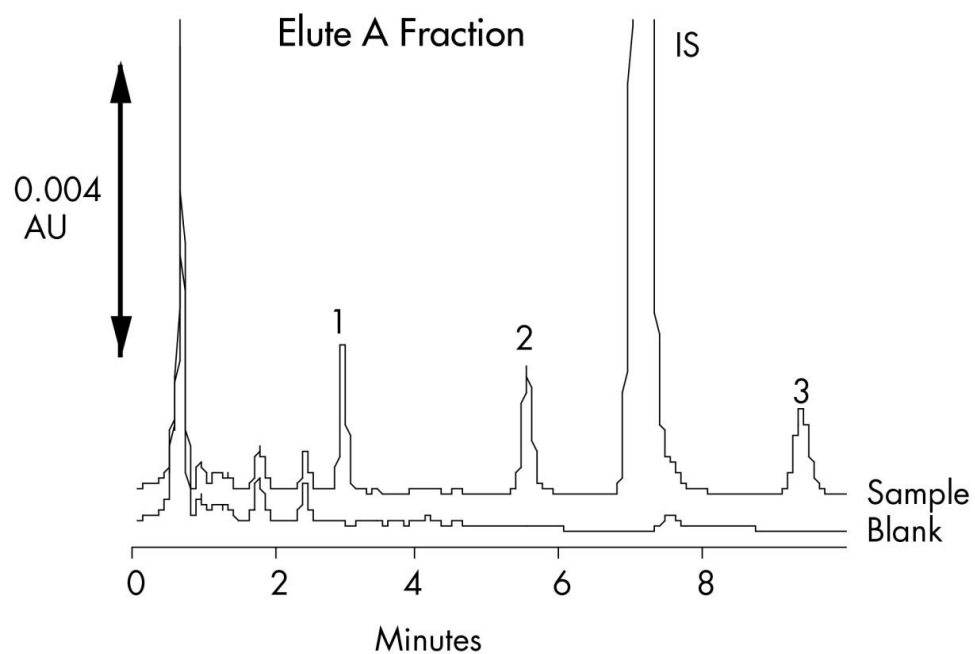
Oasis® MCX Extraction Cartridge, 1 cc/30 mg
Part Number 186000252



Results and Discussion

Compound	% Recovery (n=6)	%RSD (n=6)	[Conc.] µg/mL
Acetaminophen	103.4	0.55	2
Barbital	99.4	1.05	2
Toluamide	102.3	1.26	2
Amphetamine	96.8	1.35	4
Methamphetamine	90.4	4.01	4
Ranitidine	IS	—	50
Toluidine	96.4	1.32	4

HPLC Chromatogram of Elute 1 and Elute 2 Fraction



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