

## Fractionation of Acidic and Neutral from Basic Drugs in Plasma

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Waters Corporation

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

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### Abstract

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

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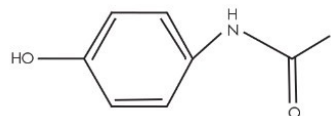
### Introduction

The compounds used in this study are -

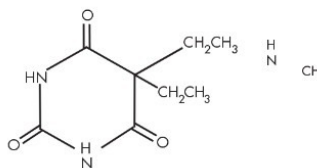
1. Acetaminophen
  2. Barbitol
  3. *p*-Toluamide
  4. Amphetamine
  5. Methamphetamine
-

6. *m*-Toluidine

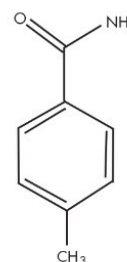
7. Ranitidine (I.S.)



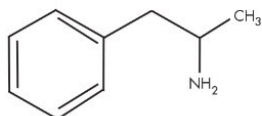
ACETAMINOPHEN



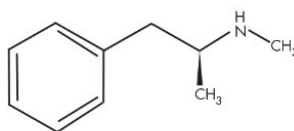
BARBITAL



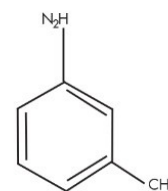
TOLUAMIDE



AMPHETAMINE



METHAMPHETAMINE



TOLUIDINE

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## Experimental

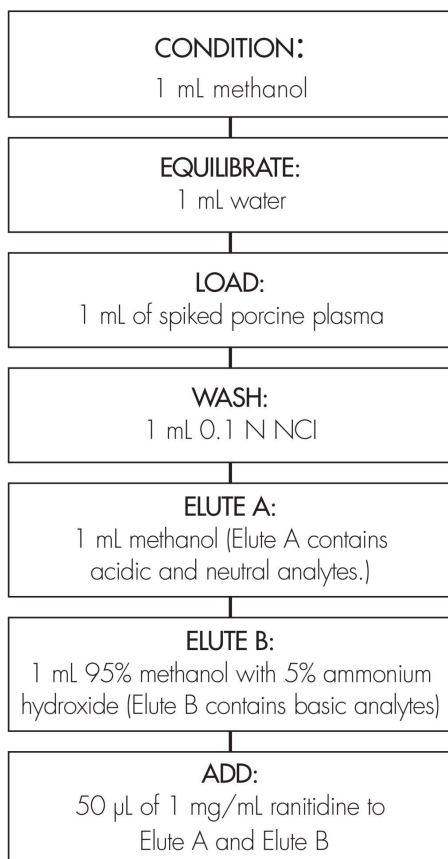
### LC Conditions

|               |   |
|---------------|---|
| Column:       | Symmetry Shield RP <sub>8</sub> , 4.6 x 75 mm, 3.5 µm |
| Guard column: | Symmetry Shield RP <sub>8</sub> , 3.9 x 20 mm, 3.5 µm |
| Part numbers: | Column WAT094263, Guard 186000704                     |

|               |   |
|---------------|---|
| Mobile phase: | 5% CH <sub>3</sub> OH/95% 20 mM K <sub>2</sub> HPO <sub>4</sub> /KH <sub>2</sub> PO <sub>4</sub> , 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

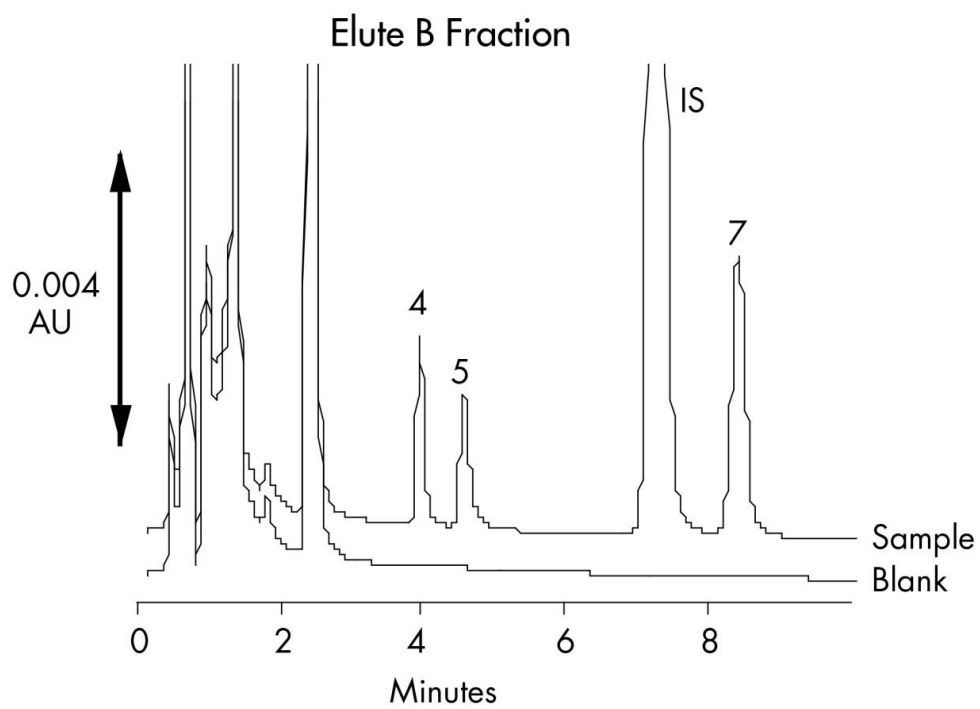
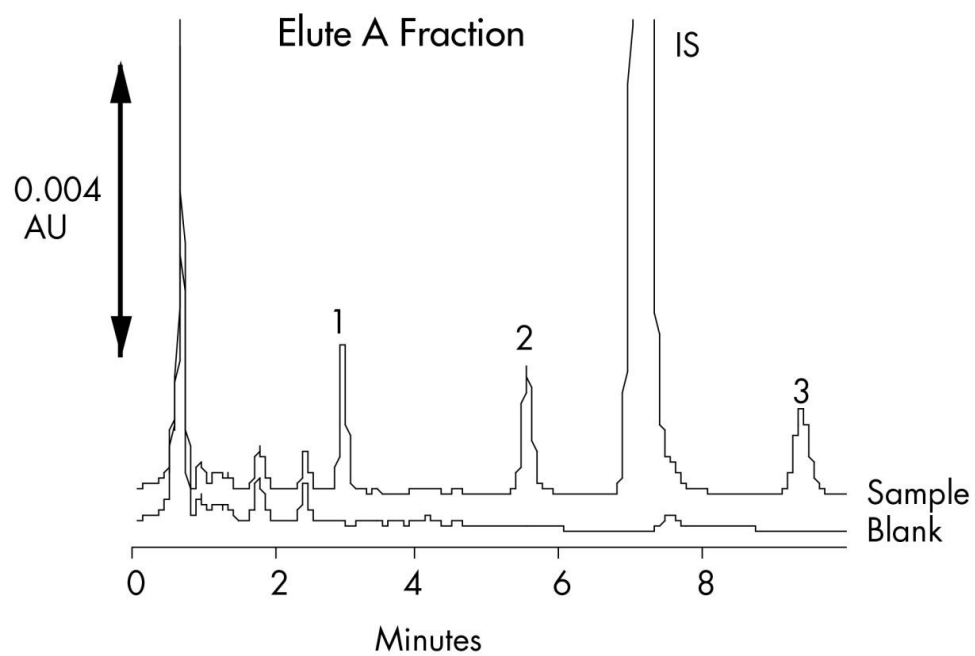


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## Results and Discussion

| Compound        | % Recovery<br>(n=6) | %RSD<br>(n=6) | [Conc.]<br>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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## Featured Products

WA31764.87, June 2003

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