

Note d'application

## Beta Blockers in Rat 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

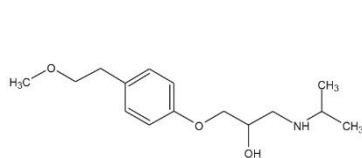
This application brief demonstrates the analysis of beta blockers in rat plasma using XTerra Columns.

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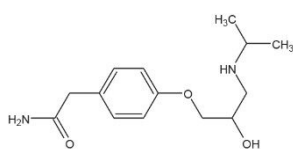
## Introduction

The compounds analyzed in this study are:

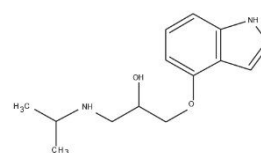
1. Atenolol
2. Pindolol
3. Metoprolol



Metoprolol



Atenolol



Pindolol

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## Experimental

### Conditions

Column:	XTerra MS C <sub>18</sub> 4.6 x 20 mm, 2.5 μm
Part number:	186001889
Mobile phase A:	0.1% TFA in H <sub>2</sub> O
Mobile phase B:	ACN
Flow rate:	3.0 mL/min
Injection volume:	20 μL
Sample concentration:	0.1 mg/mL of atenolol 0.05 mg/mL of pindolol 0.1

mg/mL of metoprolol

Temperature:

Ambient

Detection:

UV @ 220 nm

Instrument:

Alliance 2695, 2996 PDA

### Gradient Table

Time (min)	Profile	
	%A	%B
0.0	100	0
4.0	20	80

### Protein Precipitation Procedure

Analytes\*:

- Atenolol (10 mg/mL in MeOH)
- Pindolol (5 mg/mL in MeOH/H<sub>2</sub>O)
- Metoprolol (10 mg/mL in MeOH)

\*prepared in strong conc. to spike into plasma

Spiked Plasma Sample:

- 50 µL of Atenolol
- 50 µL of Metoprolol
- 50 µL of Pindolol
- 4750 µL of Rat Plasma

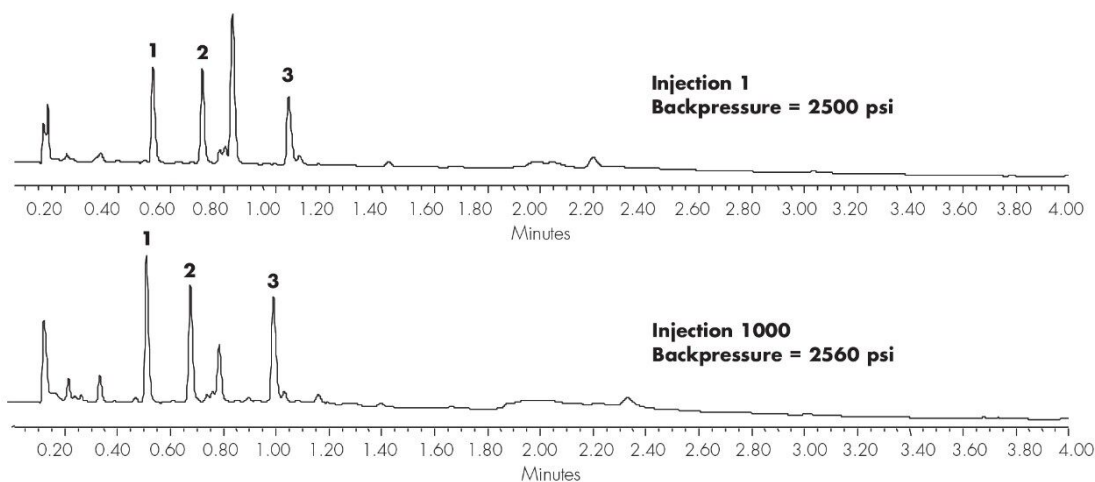
- 100  $\mu\text{L}$  of  $\text{H}_3\text{PO}_4$
- 5000  $\mu\text{L}$  total sample volume

#### Protein Precipitation:

- Multiple samples prepared from 5000  $\mu\text{L}$  spiked plasma
  - 350  $\mu\text{L}$  of Spiked Plasma sample
  - 1000  $\mu\text{L}$  of acetonitrile
  - 1350  $\mu\text{L}$  total sample volume
- Samples were centrifuged at 3000 RPM for 30 minutes
- Supernatant transferred to culture tube and evaporated
- Sample reconstituted in 350  $\mu\text{L}$  water and injected

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## Results and Discussion



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## Featured Products

Alliance HPLC System <<https://www.waters.com/534293>>

2998 Photodiode Array (PDA) Detector <<https://www.waters.com/1001362>>

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