

Beta Blockers in Rat Plasma

Waters Corporation



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

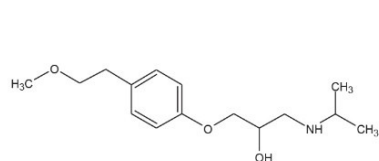
Abstract

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

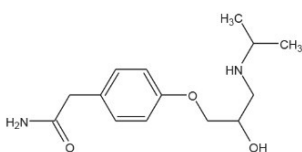
Introduction

The compounds analyzed in this study are:

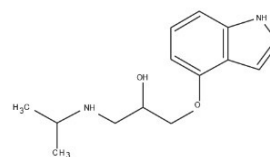
1. Atenolol
2. Pindolol
3. Metoprolol



Metoprolol



Atenolol



Pindolol

Experimental

Conditions

Column:	XTerra MS C ₁₈ 4.6 x 20 mm, 2.5 μm
Part number:	186001889
Mobile phase A:	0.1% TFA in H ₂ 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/H₂O)
- Metoprolol (10 mg/mL in MeOH)

*prepared in strong conc. to spike into plasma

Spiked Plasma Sample:

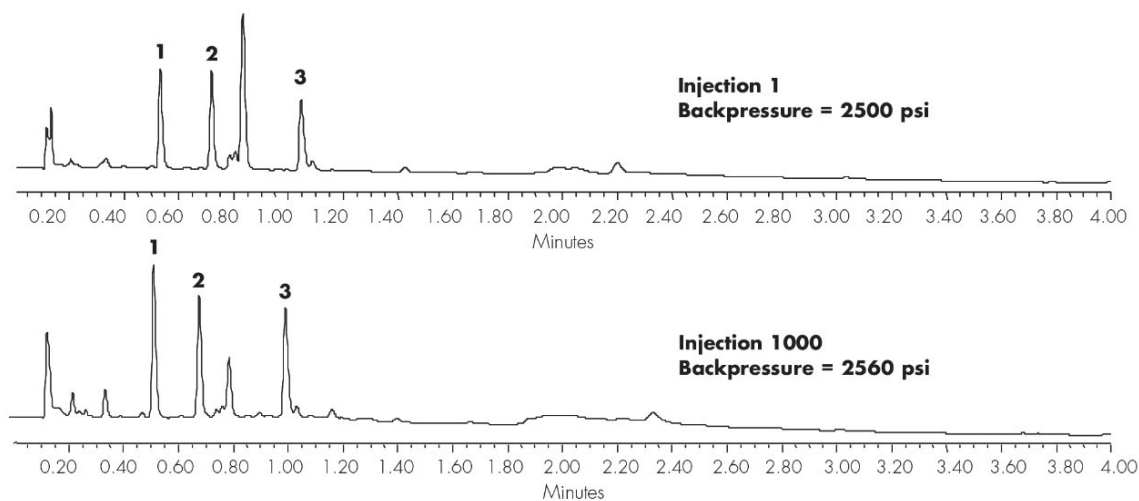
- 50 µL of Atenolol
 - 50 µL of Metoprolol
 - 50 µL of Pindolol
 - 4750 µL of Rat Plasma
-

- 100 μL of H_3PO_4
- 5000 μL total sample volume

Protein Precipitation:

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

Results and Discussion



Featured Products

- Alliance HPLC System <<https://www.waters.com/534293>>
- 2998 Photodiode Array (PDA) Detector <<https://www.waters.com/1001362>>



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