

# ANALYSIS OF BETA BLOCKERS USING XBRIDGE SHIELD RP18

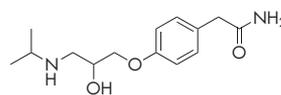
## TEST CONDITIONS:

Column: XBridge™ Shield RP18 4.6 X 100 mm, 3.5 µm  
 Part Number 186003044  
 Mobile Phase A: H<sub>2</sub>O  
 Mobile Phase B: MeOH  
 Mobile Phase C: 100 mM NH<sub>4</sub>HCO<sub>3</sub>, pH 9.0  
 Flow Rate: 1.0 mL/min  
 Gradient:

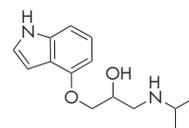
Time (min)	Profile		
	%A	%B	%C
0.0	85	5	10
3.0	55	35	10
10.0	55	35	10
11.0	85	5	10
15.0	85	5	10

Injection Volume: 10 µL  
 Sample Concentration and Diluent: 10 µg/mL in H<sub>2</sub>O  
 Temperature: 30 °C  
 Detection: UV @ 280  
 Sampling Rate: 5 points/second  
 Time Constant: 1.0  
 Needle Wash: 5/95 MeOH/H<sub>2</sub>O  
 Instrument: Alliance® 2695 with 2996 PDA

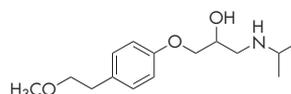
## COMPOUNDS:



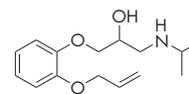
1. Atenolol



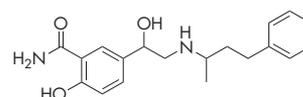
2. Pindolol



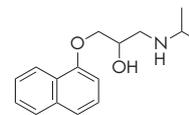
3. Metoprolol



5. Oxprenolol



6. Labetolol

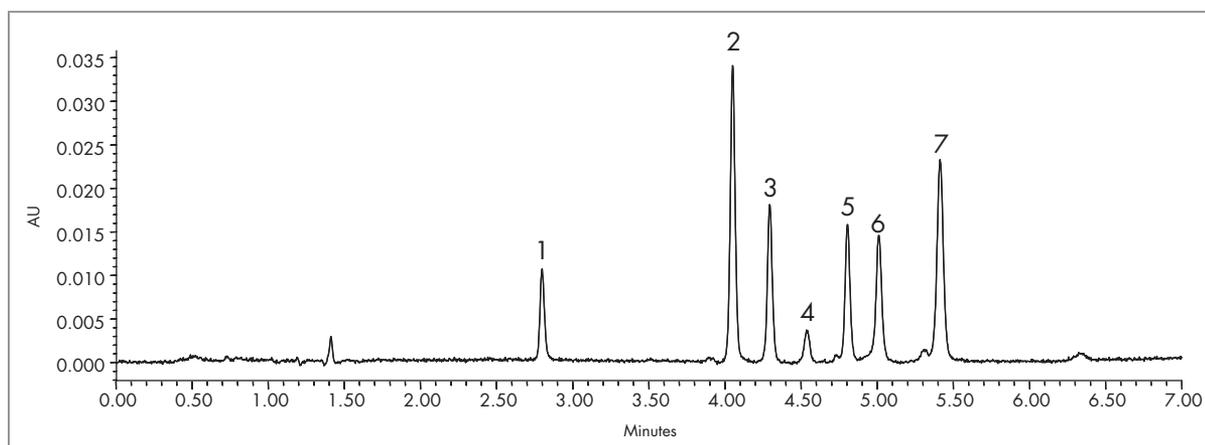


7. Propranolol

## System Suitability Parameters

	Retention Time (min)	USP Tailing Factor	Width at 4.4%	USP Resolution
Atenolol	2.799	1.14	0.070	
Pindolol	4.051	1.04	0.080	22.81
Metoprolol	4.295	1.02	0.081	4.24
Oxprenolol	4.805	1.07	0.079	8.77
Labetolol	5.011	0.92	0.112	3.27
Propranolol	5.414	1.02	0.102	5.69

Beta blockers are a class of drugs used for the management of cardiac arrhythmias, congestive heart failure, angina and cardioprotection after myocardial infarction. They were once commonly prescribed for hypertension, before being replaced by more effective drugs.



### Compounds:

1. Atenolol
2. Pindolol
3. Metoprolol
4. Impurity of Labetolol
5. Oxprenolol
6. Labetolol
7. Propranolol

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