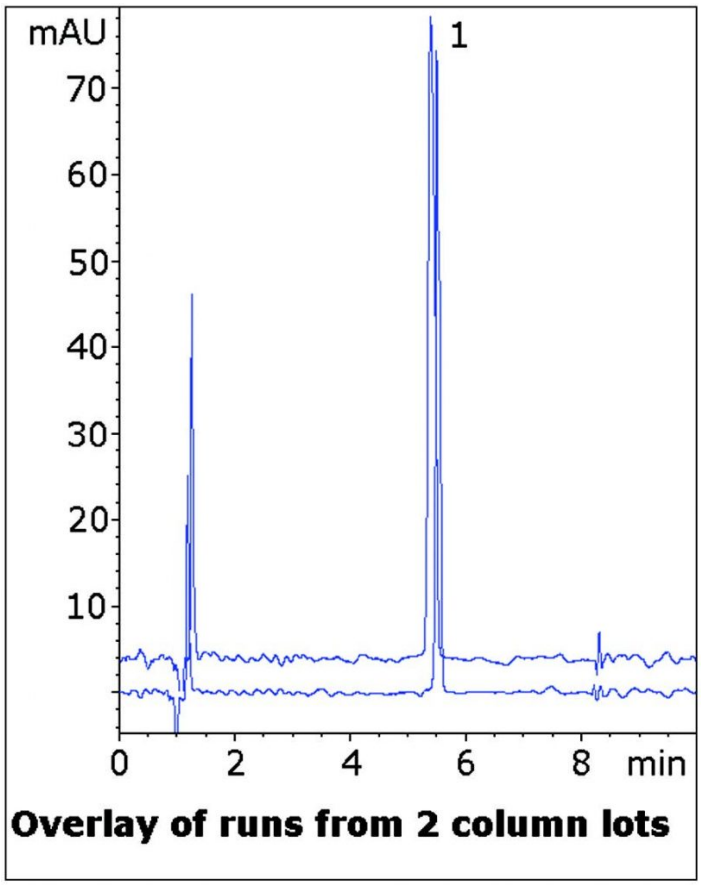
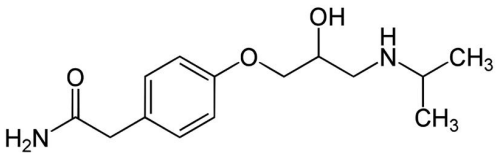
## Quick Analysis without Ion Pair Agents

The USP Assay Method for Atenolol uses Heptane Sulfonate and Dibutyl Amine in the Mobile Phase, which are slow to load and remove from a Reversed Phase HPLC Column. These reagents are added to improve the Peak Tailing, which must be not more than 2.0.

The Method in this Application Note is an improvement over the official USP Method as the Peak produced is very Symmetrical without the use of Ion Pair Agents. Also, the Method is LCMS compatible if transfer is desired. Data from two Column lots is shown to illustrate lot-to-lot consistency of this Method.




**Peak:**

Atenolol

## Method Conditions

**Column**: Cogent Diamond Hydride™, 4µm, 100Å

**Catalog No.**: 70000-7.5P

**Dimensions**: 4.6 x 75mm

**Mobile Phase**:

A: DI Water with 0.1% Formic Acid (v/v)



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B: Acetonitrile with 0.1% Formic Acid (v/v)

**Gradient**:

| Time *(minutes)* | %B |
|---|---|
| 0 | 90 |
| 1 | 90 |
| 6 | 40 |
| 7 | 90 |

**Post Time**: 3 minutes

**Injection vol.**: 2µL

**Flow rate**: 1.0mL / minute

**Detection**: UV @ 225nm

**Sample Preparation**: 25mg strength Atenolol tablet was ground and added to a 25mL volumetric flask. A portion of 50:50 Solvent A / Solvent B diluent was added and the flask was sonicated 10 minutes. It was then diluted to mark and mixed. A portion was filtered with a 0.45µm Nylon Syringe Filter (MicroSolv Tech Corp.) and diluted 1:10.

**$t_0$**: 0.9 minutes

***Note**: Atenolol is a selective ß1 receptor antagonist. It is used to treat various cardiovascular diseases such as hypertension. It is available by prescription under the trade name Tenormin®.*

COGENT HPLC Columns™

**Attachment**

**No 250 Atenolol Tablet Analyzed with HPLC pdf** 0.4 Mb Download File


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