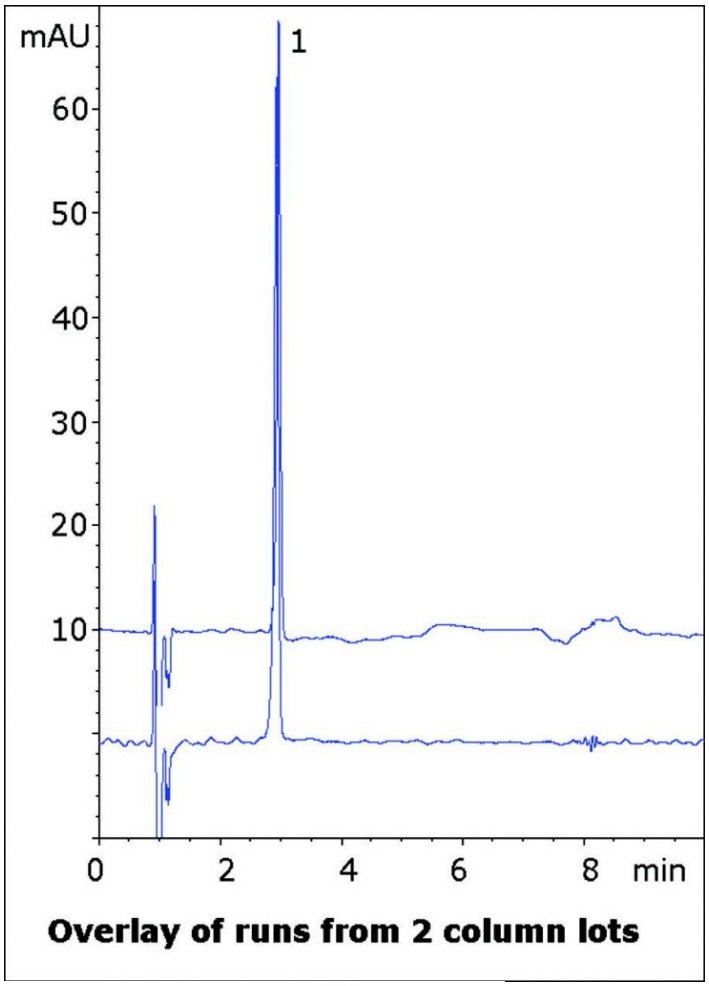
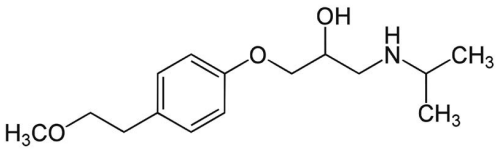
Metoprolol Tartrate Analyzed with HPLC – AppNote

Excellent Peak Shape for an Organic Amine

This Assay is easy to perform with a well-retained analyte Peak. Since Peak Tailing can often be an issue with organic amines, such as this compound, using conventional HPLC Columns it is notable that this Method produces a very Symmetrical Peak.

In the Chromatogram below, an overlay of injections from two lots of Columns is shown to illustrate Robustness and Precision of the Method which is suitable for routine assay of Metoprolol Tartrate Formulations.





Peak:

Metoprolol

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% Trifluoroacetic Acid (TFA) v/v

B: Acetonitrile with 0.1% Trifluoroacetic Acid (TFA) v/v

Gradient:

Time *(minutes)*	%B
0	95
1	95
6	50
7	95

Post Time: 3 minutes

Injection vol.: 1µL

Flow rate: 1.0mL / minute

Detection: UV @ 215nm

Sample Preparation: 1mg Metoprolol Tartrate USP Reference Standard was dissolved in 1mL of 50:50 Solvent A / Solvent B. This stock solution was diluted 1:10 for HPLC injections using the same diluent.

t_0: 0.9 minutes

Note: *Metoprolol is a selective ß1 receptor blocker. It is used to treat various cardiovascular conditions such as hypertension. Various trade names for the drug are available such as Lopressor® and Toprol®. It is sometimes found in combination formulations with hydrochlorothiazide.*

Attachment

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