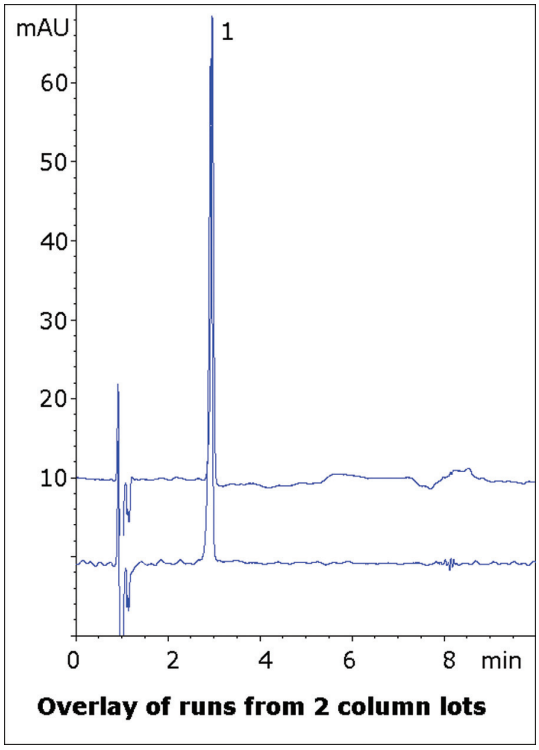
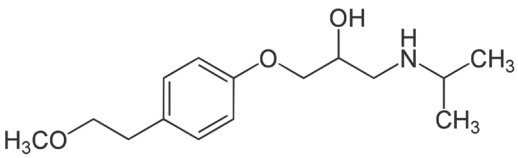
Metoprolol Tartrate

Excellent peak shape for organic amine



Overlay of runs from 2 column lots



Metoprolol

Note: Metoprolol is a selective ß$_1$ receptor blocker. It is used to treat various cardio-vascular 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.

Method Conditions

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

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75 mm

Mobile Phase: A: DI H_2O / 0.1% TFA (v/v)
B: Acetonitrile / 0.1% TFA (v/v)

Gradient:

time (min.)	%B
0	95
1	95
6	50
7	95

Post Time: 3 min

Injection vol.: 1µL

Flow rate: 1.0 mL/min

Detection: UV 215 nm

Sample: 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.

Peak: 1. Metoprolol

t_0: 0.9 min

Discussion

This assay method is easy to perform and gives a well-retained analyte peak.Tailing is often an issue with organic amines such as this compound using conventional HPLC columns, but the Cogent Diamond Hydride produces a very symmetrical peak. An overlay of injections from two stationary phase lots is shown in the figure to illustrate lot-to-lot consistency. The method is suitable for routine assay for metoprolol tartrate formulations.

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