

Amoxicillin, USP Method with HPLC – AppNote

Robust Analysis of Amoxicillin, Antibiotic by HPLC

The USP Assay Monograph Method for Amoxicillin often yields poor Peak shapes and low Method reproducibility with L1 Columns based on ordinary Silica. In contrast, the Figures shown here illustrate the high degree of reproducibility obtained from use of the Cogent Bidentate C18 L1 Column, following the USP Assay Method.

Each figure shows a five run overlay of consecutive runs. Figure A shows the data obtained using the analyte concentration specified by the USP Assay Method. Figure B shows a lower concentration which is less likely to result in Column overload.

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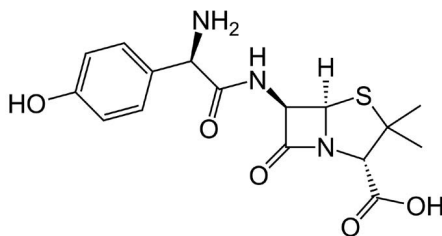
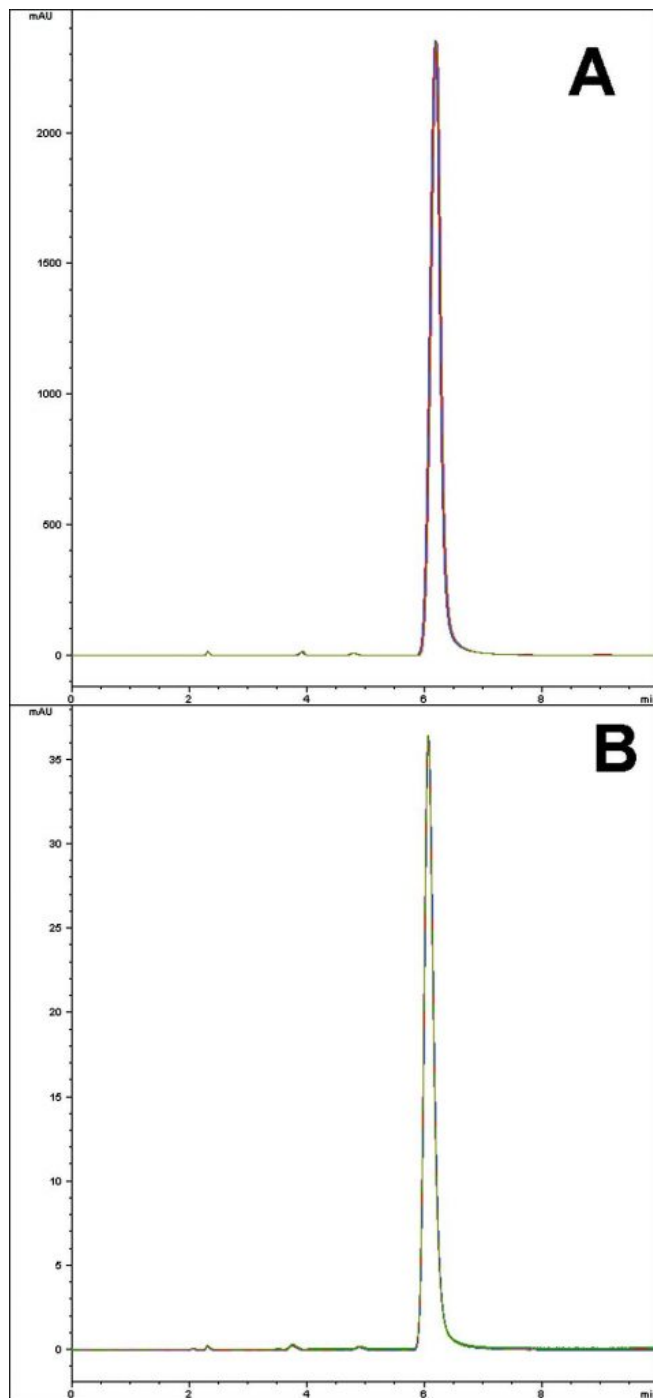
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Peaks:
Amoxicillin

Method Conditions

Column: Cogent Bidentate C18™, 4μm, 100Å

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Catalog No.: 40018-25P

Dimensions: 4.6 x 250mm

Mobile Phase: 3:97 Acetonitrile: Diluent (6.8 g/L monobasic Potassium Phosphate adjusted to pH 5.0 with 45% (w/w) Potassium Hydroxide)

Injection vol.: 10µL

Flow rate: 1.0mL / minute

Detection: UV @ 230nm

Sample Preparation:

Figure A: 1.2mg / mL Amoxicillin Trihydrate USP RS in the diluent.

Figure B: 0.012mg / mL Amoxicillin Trihydrate USP RS in the diluent.

t₀: 2.3 minutes

Note: Amoxicillin is a beta-lactam antibiotic used to treat a variety of bacterial infections. Its mechanism of action is by inhibition of the synthesis of bacterial cell walls.



Attachment

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