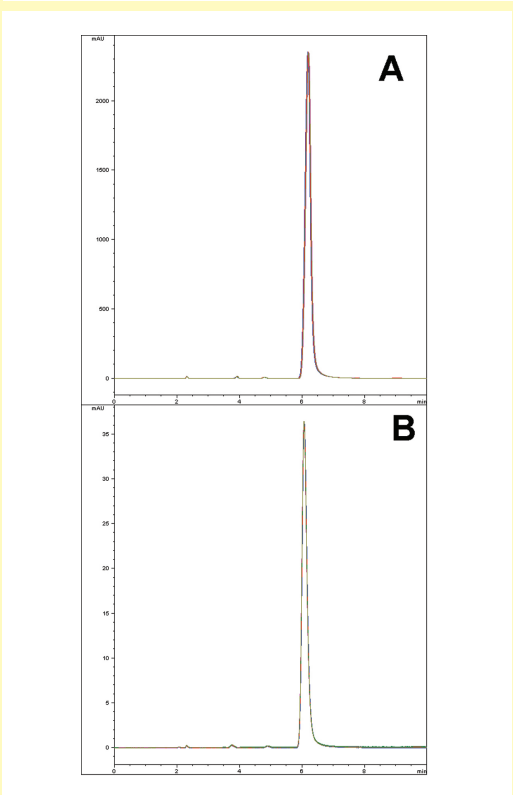
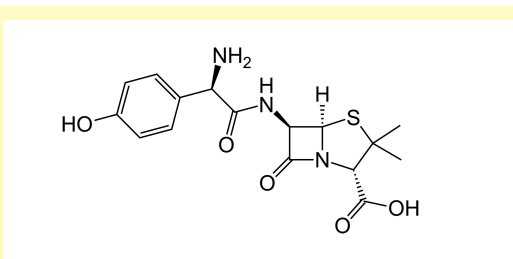


Amoxicillin

Robust USP Assay Analysis



Notes: 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.

Method Conditions

Column: Cogent Bidentate C18™, 4µm, 100Å
Catalog No.: 40018-25P
Dimensions: 4.6 x 250 mm
Mobile Phase: 3: 97 acetonitrile: diluent
Diluent: 6.8 g/L monobasic potassium phosphate adjusted to pH 5.0 with 45% (w/w) potassium hydroxide

Injection Vol.: 10 microL
Flow Rate: 1.0 mL/min
Detection: UV 230 nm
Sample:

Figure A: 1.2 mg/mL amoxicillin trihydrate USP RS in diluent.

Figure B: 0.012 mg/mL amoxicillin trihydrate USP RS in diluent.

Peak: Amoxicillin
t₀: 2.3 min

Discussion

The USP assay method for amoxicillin often yields poor peak shapes and low method reproducibility with L1 columns based on type B silica. In contrast, the figures shown here illustrate the high degree of reproducibility obtained from use of a 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.

Cat. No.	Description
40018-25P	Cogent Bidentate C18™ HPLC Column, 100A, 4µm, 4.6mm x 250mm