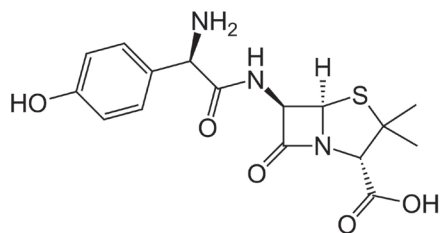
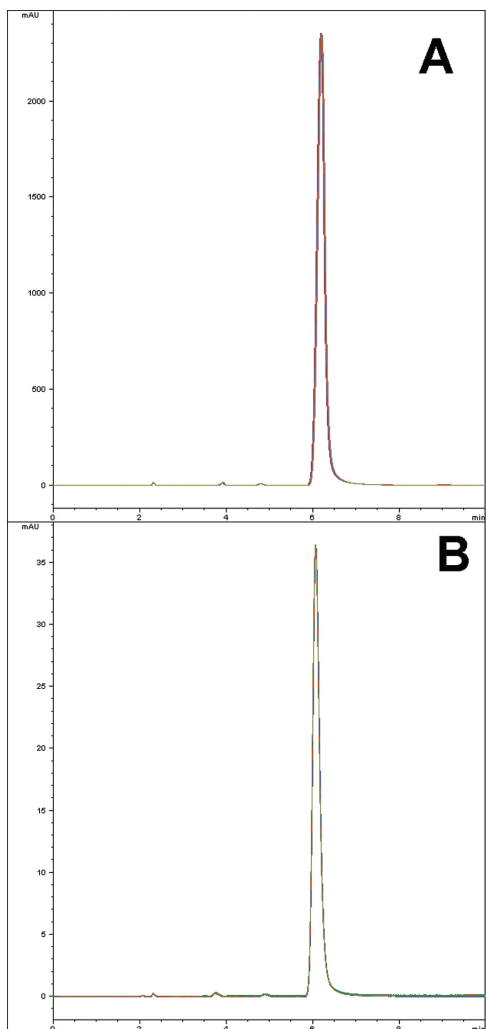


Amoxicillin

Robust USP assay analysis



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.

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.: 10µL

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.