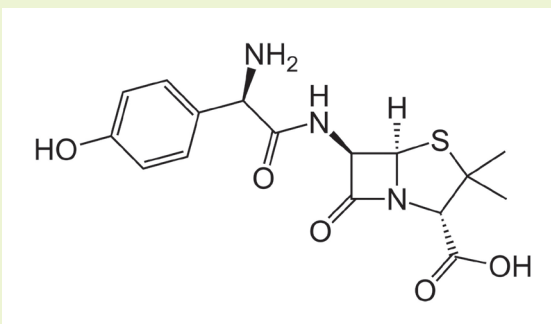
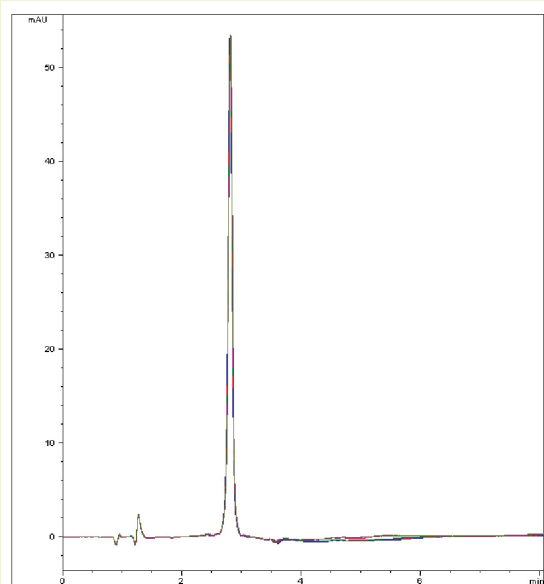


Amoxicillin

Orthogonal retention method to USP assay



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 Diamond Hydride™, 4μm, 100Å

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75 mm

Solvents: A: DI H₂O / 10 mM ammonium acetate

B: 90% acetonitrile / 10% DI H₂O / 10 mM ammonium acetate

Gradient:	time (min.)	%B
	0	100
	4	90
	5	100

Injection vol.: 2μL

Flow rate: 1.0 mL/min

Detection: UV 230 nm

Sample: Stock Solution: 1 mg/mL amoxicillin trihydrate USP RS in 50/50 A/B diluent.

Working Solution: A 100μL aliquot of the stock was diluted to 0.1 mg/mL using 900μL 50/50 A/B diluent.

Peak: Amoxicillin

t₀: 0.95 min

Discussion

The USP assay method for amoxicillin is performed in reversed phase. Analysis by an orthogonal retention mode is very useful and can be readily done by aqueous normal phase (ANP) using solvents common to both retention modes. A benefit of the ANP method is the more symmetrical peak shape obtained. This is important for compounds such as amoxicillin that can give poor peak shapes in reversed phase.