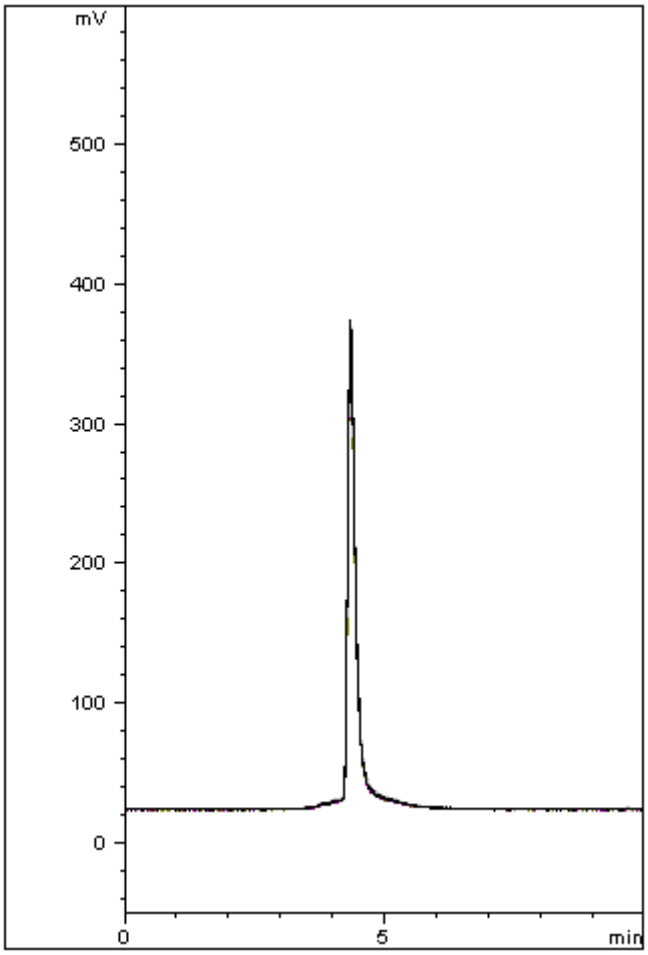
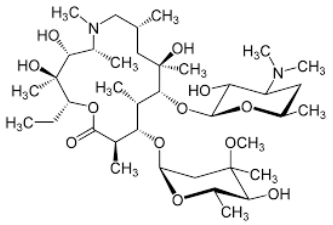
Azithromycin Analyzed with HPLC ELSD – AppNote

Retention of Macrolide Antibiotic

Azithromycin has weak UV absorbance and typical asymmetric peak profile with low Column efficiency in many HPLC-UV methods. This ELSD Method shows good retention and peak shape along with excellent sensitivity. This method is very reproducible with %RSD values less than 0.1%, as shown in the 10 injection overlay below.





Peak:

Azithromycin

Method Conditions

Column: Cogent Bidentate C8™, 4µm, 100Å

Catalog No.: 40008-10P

Dimensions: 4.6mm x 100mm

Mobile Phase:

A: Isopropanol

B: Acetonitrile / 0.1% Triethylamine (TEA) (v/v)

Gradient:

Time *(minutes)*	%B
0	100
1	100
2	85
3	85
4	100
5	100

Flow rate: 1.0 mL/minute

Detection: ELSD *(Evaporative Light Scattering Detector)* Gain: 9; Temperature: 80°C;

Injection vol.: 1µL

Sample Preparation: Reference standards *(1 mg/mL)* in diluent of 50:50 Acetonitrile / DI Water (v/v)

t_0: 1.50 Minutes

K': 2

Note: Azithromycin is a semi-synthetic macrolide Antibiotic of the Azalide class. Azithromycin inhibits bacterial protein synthesis by binding to the 50S ribosomal subunit of the bacterial 70S ribosome.

Note 2: Capacity is determined using the following equation: $k = (t_R\text{-}t_O)/t_O$

- t_R = *Retention Time of an Analyte Peak*
- t_O = *Retention Time of non-Retained Peak*

Printed from the Chrom Resource Center

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Date: 03-05-2024