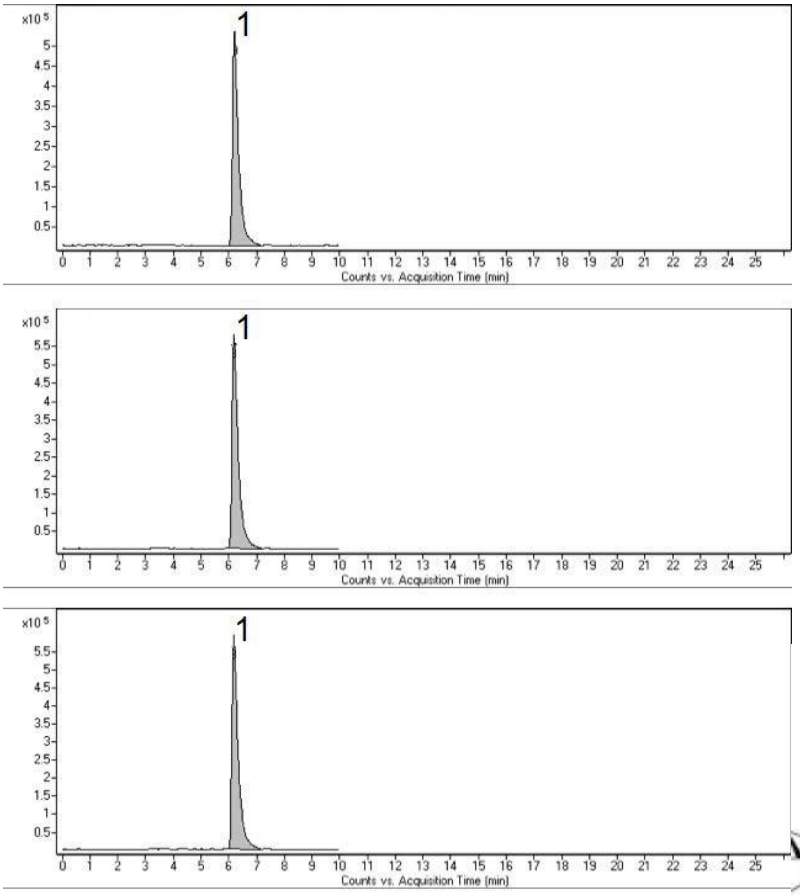
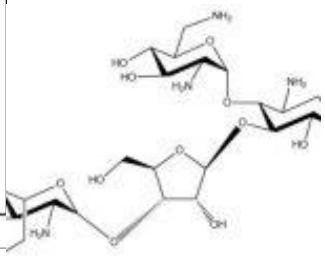
Neomycin Sulfate Analyzed with LCMS - AppNote

Neomycin presents a number of challenges to routine Chromatographic Analysis. It lacks Chromophores and therefore is difficult to detect using conventional HPLC techniques and retention in traditional Reversed Phase mode may not be viable due to its high polarity. However, use of the Cogent Diamond Hydride Column in conjunction with a Mass Spec helps circumvent these issues. The presented data illustrates how the Compound can be both readily retained, with good run-to-run precision, and adequately detected using Mass Spectrometry.



Three Replicate Injections



Neomycin B

Peak:

Neomycin 615.3196 n/z (M+H)+

Method Conditions:

Column: Cogent Diamond Hydride™, 4µm, 100Å
Catalog No.: 70000-05P-2
Dimensions: 2.1 x 50 mm
Mobile Phase:
A: DI Water / 0.1% Formic Acid

B: Acetonitrile / 0.1% Formic Acid

Gradient:

Time (minutes)	%B
0	90
0.5	90
4	10
5	10
6	90
10	90

Injection Volume: 5µL
Flow Rate: 0.3 mL/minute
Detection: ESI - POS - Agilent 6210 MSD TOF Mass Spectrometer
Sample Preparation: 0.1 mg/mL Neomycin Sulfate Reference Standard Solution in Solvent A Diluent

Note: *Neomycin is aminoglycoside compound that is used as an antibiotic in various types of topical formulations. It is a component of the popular topical cream Neosporin®, used to pre-vent infections. It was discovered by biochemist and microbiologist Selman Waksman and colleagues.*

Attachment

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