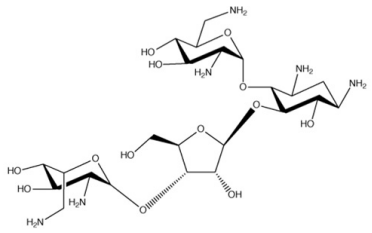
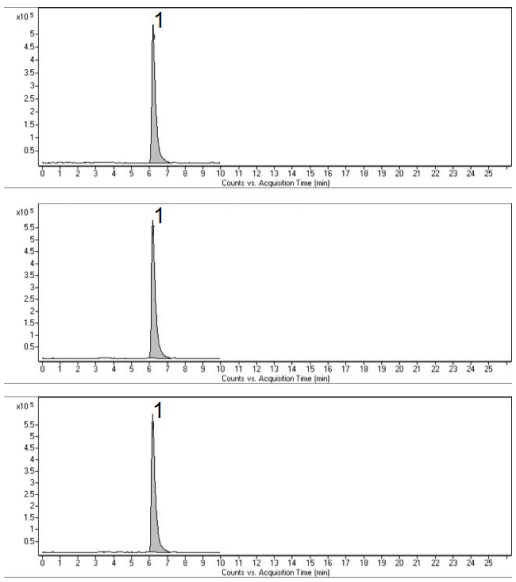
Neomycin Sulfate

Overcoming difficulties in retention and detection of antibiotic



Neomycin B



Three Replicate Injections

Notes: 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 prevent infections. It was discovered by biochemist and microbiologist Selman Waksman and colleagues.

Method Conditions

Column: **Cogent Diamond Hydride™**, 4µm, 100Å

Catalog No.: 70000-05P-2

Dimensions: 2.1 x 50 mm

Solvents: A: DI H_2O/ 0.1% Formic Acid (v/v)
B: Acetonitrile/ 0.1% Formic Acid (v/v)

Gradient:

time (min.)	%B
0	90
0.5	90
4	10
5	10
6	90
10	90

Injection vol.: 5µL

Flow rate: 0.3 mL/min

Detection: ESI – POS - Agilent 6210 MSD TOF mass spectrometer

Sample: 0.1 mg/mL Neomycin sulfate reference standard solution in Solvent A diluent

Peaks: 1. Neomycin 615.3196 m/z $(M+H)^+$

Discussion

Neomycin presents a number of challenges to routine chromatographic analysis. Firstly, it lacks chromophores and therefore is difficult to detect using conventional HPLC techniques. Second, 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 MS detection 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.

MANUFACTURED BY:
MICROSOLV TECHNOLOGY CORPORATION

9158 Industrial Blvd NE
Leland, NC 28451

p: 1.732.380.8900
f: 1.910.769.9435

customers@mtc-usa.com
www.Cogent-HPLC.com