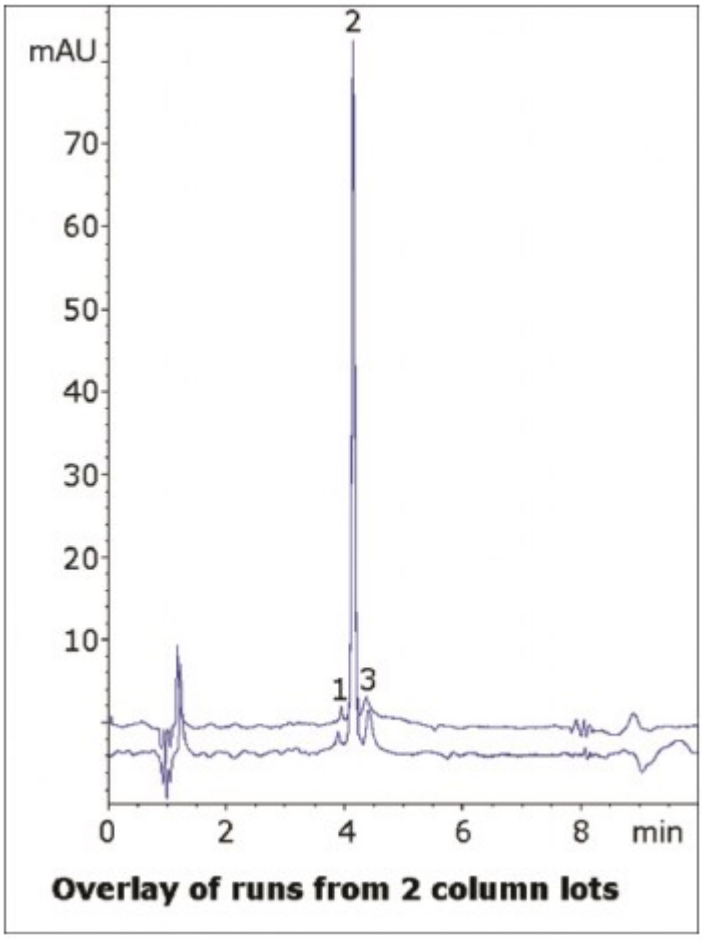
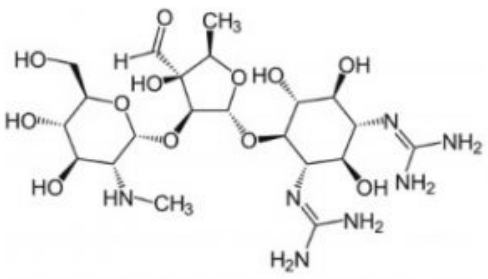
Retention of a Highly Polar Antibiotic

Streptomycin is very polar and difficult to retain with Reversed Phase methods using conventional Columns. In this Method, retention is achieved with Separation of the Streptomycin from two impurities found in the Standard Solution. Furthermore, the numerous amine groups do not cause tailing of Peak shape as with standard silica-based Columns.

Data from two Column lots shown in the figure illustrates the reproducibility of the Method and it robustness.





Peaks:

1. Impurity
2. Streptomycin
3. Impurity

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Method Conditions

Column: Cogent Diamond Hydride™, 4µm, 100A

Catalog No.: 70000-7.5P

Dimensions: 4.6 x 75mm

Mobile Phase:

A: DI Water / 0.1% Trifluoroacetic Acid (v/v)

B: Acetonitrile/ 0.1% Trifluoroacetic Acid (v/v)

Gradient:

Time *(minutes)*	%B
0	95
1	95
6	40
7	95

Post Time: 3 minutes

Injection Vol.: 1µL

Flow Rate: 1.0mL / minute

Detection: UV @ 205nm

Sample Preparation: 1.0mg / mL Streptomycin Sulfate reference standard in Solvent A diluent.

t_0: 0.9 minutes

Note: *Streptomycin is an aminoglycoside antibiotic derived from the Actinobacterium Streptomyces Griseus. Streptomycin was isolated in 1943 and was the first antibiotic to treat tuberculosis.*

COGENT HPLC Columns™

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