



Neomycin B Sulfate, EvoPure[®]

PRODUCT DATA SHEET

issue date 01/06/2020

Product Name: Neomycin B Sulfate, EvoPure[®]

Product Number: N019

CAS Number: 4146-30-9

Molecular Formula: $C_{23}H_{46}N_6O_{13} \cdot xH_2SO_4$ (lot specific)

Molecular Weight: 614.64 (Free base)

Form: Powder

Appearance: White Powder

Source: *Streptomyces Fradiae*

pH: 5.7-7.5

Storage Conditions: -20°C

Description: Neomycin B Sulfate, EvoPure[®] is the highly purified sulfate salt of Neomycin B, which is the major component found in Neomycin. Neomycin B is ~ 90% more active than Neomycin A and ~ 65% more active than Neomycin C, its stereoisomer. Highly pure Neomycin compounds can be used in cell culture, upstream biopharma, and cancer research.

For more Neomycin products, [click here](#).

Custom manufacturing and testing: We are able to prepare custom Neomycin components for your unique specifications. Additionally, we offer additional testing including endotoxin content, arsenic content, cell line testing, spectral analysis, and more. For more information, please [contact us](#).

Mechanism of Action: Aminoglycosides target the 30S ribosomal subunit resulting in an inability to read mRNA ultimately producing a faulty or nonexistent protein.

Spectrum: Neomycin is a broad-spectrum antibiotic, however, it is mostly used against Gram-negative bacteria.

Microbiology Applications Neomycin can be used for gene selection, via exploiting the resistance gene (NPT II) (Aragão, 2009).

Neomycin is commonly used in clinical *in vitro* microbiological antimicrobial susceptibility tests (panels, discs, and MIC strips) against Gram-positive and Gram-negative microbial isolates. Medical microbiologists use AST results to recommend antibiotic treatment options. Representative effective ranges include:

- *Pseudomonas aeruginosa* 0.5 µg/mL – 64 µg/mL
- *Haemophilus influenzae* 1.6 µg/mL – 6.3 µg/mL

For a representative list of Neomycin MIC values, [click here](#).

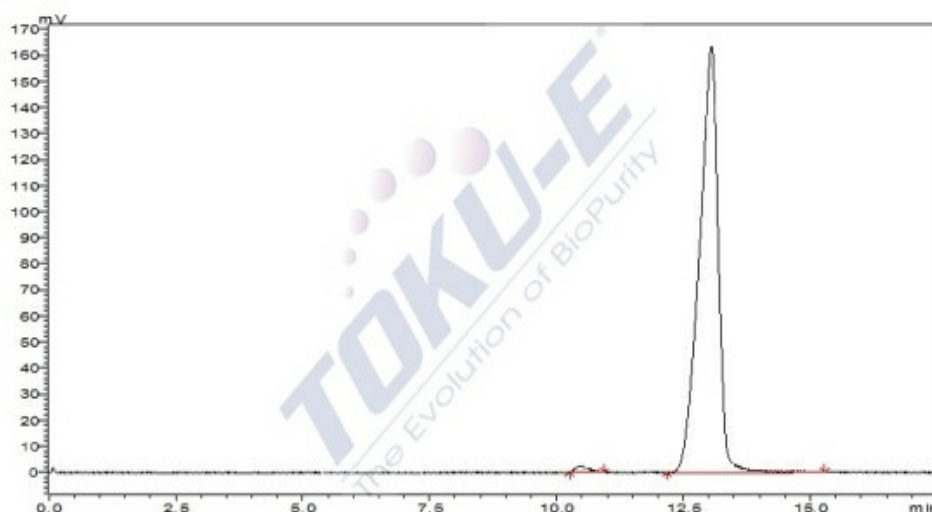
Neomycin Sulfate can be used for food testing in TSN agar to select for *Clostridium perfringens* and inhibit growth of *Enterobacteria* and *Clostridium bifermentans*.

Plant Biology Applications

Neomycin is commonly used in negative selections for plants which have been successfully been transformed with a plasmid conferring resistance via *Agrobacterium* mediated transformation.

Technical Data:

HPLC chromatogram showing single fraction of Neomycin B Sulfate, EvoPure®



References:

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- Tsuji K and Robertson JH (1969) Comparative study of responses to Neomycins B and C by microbiological and gas-liquid chromatographic assay methods. *App. Microbiol.* 18(3):396-398
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- Yuan L and HongPing W (2006) Rapid analysis of native Neomycin components on a portable capillary electrophoresis system with potential gradient detection. *Analytic. Bioanalyt. Chemi.* 385(8):1575-1579

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