K378
Kanamycin Monosulfate

Synonyms: O-3-Amino-3-deoxy-α-D-glucopyranosyl-(1→6)-O-[6-amino-6-deoxy-α-D-glucopyranosyl-(1→4)]-2-deoxy-D-Streptamine Monosulfate

CAS: 25389-94-0
Formula: C_{18}H_{36}N_{4}O_{11} • H_{2}SO_{4}
Mol. Weight: 582.6

Properties
Form: Powder
Appearance: White to Off-white Powder
Application: Plant Tissue Culture Antibiotic
Solubility: Soluble in Water
Storage Temp: Room Temperature
Other Notes: Plant Tissue Culture Tested

Application Notes
Kanamycin is an aminoglycoside antibiotic derived from *Streptomyces kanamyceticus*. Kanamycin has similar mode of action to those of gentamicin in which it inhibits protein synthesis and elicits miscoding by binding to the 30S subunit and sometimes the 50S subunit of the bacterial ribosome. Kanamycin is effective against Gram-positive and Gram-negative bacteria.²,³ It has been reported that cross-resistance occurs between kanamycin and neomycin, framycetin, and paraomomycin, and partial cross-resistance between kanamycin and streptomycin.²

It has been reported that the minimum inhibitory concentration (MIC) of kanamycin for *Staphylococcus aureus* is 3.5 mg/L and *Escherichia coli* is 4.5 mg/L.⁴

*PhytoTechnology Laboratories®* also carries kanamycin solution at 50 mg/mL (Product No. K586) and 100 mg/mL (Product No. K4751)

Please Note: While *PhytoTechnology Laboratories™* tests each lot of this product with two or more plant cell/ tissue culture lines, it is the sole responsibility of the purchaser to determine the appropriateness of this product for the specific plants that are being cultured and applications that are being used.

References
1. Merck 13, 5299