

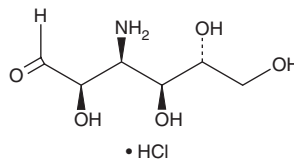
PRODUCT INFORMATION



Kanosamine (hydrochloride)

Item No. 16623

CAS Registry No.: 57649-10-2
Formal Name: 3-amino-3-deoxy-D-glucose, monohydrochloride
MF: C₆H₁₃NO₅ • HCl
FW: 215.6
Purity: ≥98%
Supplied as: A crystalline solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Kanosamine (hydrochloride) is supplied as a crystalline solid. A stock solution may be made by dissolving the kanosamine (hydrochloride) in the solvent of choice, which should be purged with an inert gas. Kanosamine (hydrochloride) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of kanosamine (hydrochloride) in ethanol is approximately 5 mg/ml and approximately 25 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of kanosamine (hydrochloride) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of kanosamine (hydrochloride) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

Description

Kanosamine, a constituent of kanamycin, is an antibiotic produced by *Streptomyces* and *Bacillus* that can inhibit cell wall synthesis in plant-pathogenic oomycetes (MIC = 25 µg/ml for *P. medicaginis* M2913) and certain fungi as well as some bacterial species (MIC = 400 µg/ml for *S. aureus*).^{1,2} It has been explored as an alternative and/or supplement to synthetic pesticides and genetic resistance of crop plants for the management of plant disease.^{1,2}

References

1. Milner, J.L., Silo-Suh, L., Lee, J.C., *et al.* Production of kanosamine by *Bacillus cereus* UW85. *Appl. Environ. Microbiol.* **62(8)**, 3061-3065 (1996).
2. Dolak, L.A., Castle, T.M., Dietz, A., *et al.* 3-Amino-3-deoxyglucose produced by a *Streptomyces* sp. *J. Antibiot. (Tokyo)* **33(8)**, 900-901 (1980).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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