Nonactin
Item No. 19468

CAS Registry No.: 6833-84-7
Synonyms: Ammonium Ionophore I, NSC 52141, NSC 56409
MF: \(C_{40}H_{64}O_{12}\)
FW: 736.9
Purity: \(\geq 95\%\)
Supplied as: A crystalline solid
Storage: -20°C
Stability: As supplied, 2 years from the QC date provided on the Certificate of Analysis, when stored properly

Laboratory Procedures

Nonactin is supplied as a crystalline solid. A stock solution may be made by dissolving the nonactin in the solvent of choice. Nonactin is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of nonactin in these solvents is approximately 1, 0.25, and 10 mg/ml, respectively.

Nonactin is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, nonactin should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Nonactin has a solubility of approximately 0.33 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Nonactin is a naturally occurring macrotetrolide antibiotic that acts as an ionophore for monovalent cations, including, \(K^+\), \(NH_4^+\), and \(Tl^+\).\(^1\)\(^-\)\(^3\) It is used to facilitate the movement of monovalent cations through natural and artificial membranes.\(^2\)\(^,\)\(^3\)

References