**PRODUCT INFORMATION**

Idarubicin (hydrochloride)
Item No. 14176

**PRODUCT INFORMATION**

**CAS Registry No.:** 57852-57-0
**Formal Name:** (7S,9S)-9-acetyl-7-\{(3-amino-2,3,6-trideoxy-\alpha-L-lyxo-hexopyranosyl)oxy\}-7,8,9,10-tetrahydro-6,9,11-trihydroxy-5,12-naphthacenedione, monohydrochloride

**Synonyms:** 4-Demethoxydaunorubicin, 4-DMD, NSC 256439

**MF:** C_{26}H_{27}NO_{9} • HCl
**FW:** 534.0
**Purity:** ≥98%

UV/Vis: \(\lambda_{\text{max}}\): 252, 287, 482 nm

**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**

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

Idarubicin (hydrochloride) is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, idarubicin (hydrochloride) should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Idarubicin (hydrochloride) has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

**Description**

Idarubicin is a 4-demethoxy analog of the leukemia therapeutic daunorubicin (Item No. 14159). Both are anthracycline antibiotics which intercalate in DNA and inhibit topoisomerase II, resulting in cancer cell cytotoxicity at low concentrations (IC_{50} = 20-120 nM for idarubicin).\(^1\)\(^-\)\(^3\) Idarubicin is effective in combination therapy for the treatment of different types of leukemia.\(^4\)\(^,\)\(^5\)

**References**