Tizoxanide
Item No. 13693

CAS Registry No.: 173903-47-4
Formal Name: 2-hydroxy-N-(5-nitro-2-thiazolyl)-benzamide
Synonym: NSC 697856
MF: C_{10}H_{7}N_{3}O_{4}S
FW: 265.3
Purity: ≥95%
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

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

Tizoxanide is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, tizoxanide should first be dissolved in DMF and then diluted with the aqueous buffer of choice. Tizoxanide has a solubility of approximately 0.1 mg/ml in a 1:9 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Tizoxanide is an active metabolite of the antiparasitic nitazoxanide (Item No. 13692).^1^ Tizoxanide is formed from nitazoxanide via deacetylation of nitazoxanide in the stomach. It is active against M. tuberculosis (MIC = 16 μg/ml). It also reduces the growth of the disease-causing parasites L. mexicana and T. cruzi in vitro (IC_{50} = 6.2 and 17.5 μM, respectively), inhibits influenza A replication (EC_{50} = 0.3-1 μM), and inhibits hepatitis B and hepatitis C virus replication (EC_{50} = 0.15 μM for both).^2^-^4^  

References