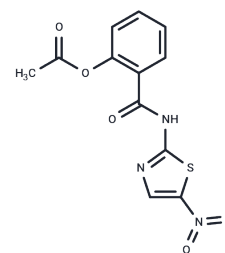


## Nitazoxanide

## Chemical Properties

CAS No. :	55981-09-4
Formula:	C <sub>12</sub> H <sub>9</sub> N <sub>3</sub> O <sub>5</sub>
Molecular Weight:	307.28
Storage:	Powder: -20°C for 3 years   In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Nitazoxanide (NSC-697855) is a synthetic benzamide with antiprotozoal activity. Nitazoxanide exerts its antiprotozoal activity by interfering with the pyruvate ferredoxin/flavodoxin oxidoreductase dependent electron transfer reaction.
Targets(IC50)	Parasite, Autophagy, Influenza Virus
In vitro	In a model of abiotic piglet diarrhea, oral administration of Nitazoxanide (250 mg/kg/day) was effective in reducing the survival of parasites within the host organism.
In vivo	Nitazoxanide effectively inhibits the growth of a broad spectrum of protozoans and helminths, such as <i>Blastocystis hominis</i> , <i>Entamoeba histolytica</i> , and <i>Trichomonas vaginalis</i> , without exhibiting cytotoxicity. It demonstrates inhibitory concentrations against <i>E. histolytica</i> (IC <sub>50</sub> =0.017 mg/mL, IC <sub>90</sub> =0.776 mg/mL), <i>G. intestinalis</i> (IC <sub>50</sub> =0.004 mg/mL, IC <sub>90</sub> =0.067 mg/mL), and <i>T. vaginalis</i> (IC <sub>50</sub> = 0.034 mg/mL, IC <sub>90</sub> =2.046 mg/mL).

## Solubility Information

Solubility	Ethanol: < 1 mg/mL (insoluble or slightly soluble), H <sub>2</sub> O: < 1 mg/mL (insoluble or slightly soluble), DMSO: 247.5 mg/mL (805.45 mM), Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
In vivo Formulation	10% DMSO+40% PEG300+5% Tween 80+45% Saline: 2.5 mg/mL (8.14 mM), Sonication is recommended. <i>Please add the solvents sequentially, clarifying the solution as much as possible before adding the next one. Dissolve by heating and/or sonication if necessary. Working solution is recommended to be prepared and used immediately. The formulation provided above is for reference purposes only. In vivo formulations may vary and should be modified based on specific experimental conditions.</i>

### Preparing Stock Solutions

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	1mg	5mg	10mg
1 mM	3.2544 mL	16.2718 mL	32.5436 mL
5 mM	0.6509 mL	3.2544 mL	6.5087 mL
10 mM	0.3254 mL	1.6272 mL	3.2544 mL
50 mM	0.0651 mL	0.3254 mL	0.6509 mL

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Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

### Reference

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- Fox LM, et al. Clin Infect Dis, 2005, 40(8), 1173-1180.
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- Korba BE, et al. Antiviral Res, 2008, 77(1), 56-63.
- Cedillo-Rivera R, et al. J Eukaryot Microbiol, 2002, 49(3), 201-208.

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