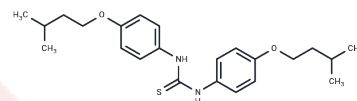


## Thiocarlide

## Chemical Properties

CAS No. :	910-86-1
Formula:	C <sub>23</sub> H <sub>32</sub> N <sub>2</sub> O <sub>2</sub> S
Molecular Weight:	400.58
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	Thiocarlide (isoxyl) is a thiourea derivative that was used in the 1960s to successfully treat tuberculosis (TB). It has considerable antimycobacterial activity in vitro and is effective against multi-drug resistant strains of Mycobacterium tuberculosis in the range of 1-10 µg/ml. [1] [2] At concentrations of 10 µM, isoxyl inhibits the synthesis of M. bovis during six hours of exposure which is similar to isoniazid (INH) and ethionamide (ETH), two other predominant anti-tuberculosis drugs. Unlike INH and ETH, isoxyl also partially inhibits the synthesis of fatty acids. Isoxyl shows no acute toxicity against primary macrophage cell cultures as demonstrated by diminution of redox activity.[2]
Targets(IC50)	Others,Antibacterial,Antibiotic

## Solubility Information

Solubility	DMSO: 30 mg/mL (74.89 mM),Sonication is recommended. Ethanol: 1 mg/mL (2.5 mM),Sonication is recommended. DMF: 30 mg/mL (74.89 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.4964 mL	12.4819 mL	24.9638 mL
5 mM	0.4993 mL	2.4964 mL	4.9928 mL
10 mM	0.2496 mL	1.2482 mL	2.4964 mL
50 mM	0.0499 mL	0.2496 mL	0.4993 mL

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

Phetsuksiri, B., Jackson, M., Scherman, H., et al. Unique mechanism of action of the thiourea drug isoxyl on mycobacterium tuberculosis. *The Journal of Biological Chemistry* 278(52), 53123-53130 (2003).

Phetsuksiri, B., Baulard, A.R., Cooper, A.M., et al. Antimycobacterial activities of isoxyl and new derivatives through the inhibition of mycolic acid synthesis. *Antimicrobial Agents and Chemotherapy* 43(5), 1042-1051 (1999).

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