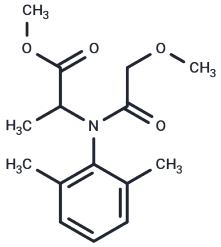
# Data Sheet (Cat.No.T20066)

TargetMol

## Metalaxyl

### Chemical Properties



CAS No. : 57837-19-1

Formula: C15H21NO4

Molecular Weight: 279.33

Storage: Store at low temperature
Powder: -20°C for 3 years | In solvent: -80°C for 1 year
Actual storage temperature shall be subject to the COA.

### Biological Description

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|---|---|
| Description | Metalaxyl (CGA 48988) is a widely used fungicide that inhibits protein synthesis in fungi, interferes with skeletal development in zebrafish embryos, and can be used to control plant diseases caused by oomycetous fungi. |
| Targets(IC50) | Antifungal |
| In vitro | Metalaxyl showed potent inhibition of pathogenic Aspergillus oryzae fungi isolated from a potato field in Serbia, with EC50 values ranging from 0.3 to 3.9 μg/mL.[1] |
| In vivo | In albino rats, Metalaxyl treatment induced dose-dependent bradycardia, with sustained bradycardia culminating in cardiac arrest at higher doses (250 and 300 mg/kg). In addition, acetylcholinesterase activity in the brain and heart of rats was not altered by Metalaxyl treatment. [2] |

### Solubility Information

| | |
|---|---|
| Solubility | DMSO: 80 mg/mL (286.4 mM),Sonication is recommended.<br>(< 1 mg/ml refers to the product slightly soluble or insoluble) |
| In vivo Formulation | 10% DMSO+40% PEG300+5% Tween 80+45% Saline: 3.3 mg/mL (11.81 mM),Sonication is recommended.<br>*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.* |

Preparing Stock Solutions

| | 1mg | 5mg | 10mg |
|---|---|---|---|
| 1 mM | 3.580 mL | 17.900 mL | 35.7999 mL |
| 5 mM | 0.716 mL | 3.580 mL | 7.160 mL |
| 10 mM | 0.358 mL | 1.790 mL | 3.580 mL |
| 50 mM | 0.0716 mL | 0.358 mL | 0.716 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

Rekanović E, et al. Toxicity of metalaxyl, azoxystrobin, dimethomorph, cymoxanil, zoxamide and mancozeb to Phytophthora infestans isolates from Serbia. J Environ Sci Health B. 2012;47(5):403-9.
Naidu KA, et al. Metalaxyl-induced bradycardia in rats: mediated by alpha-adrenoreceptors. J Toxicol Environ Health. 1988;23(4):495-8.
Yu W, et al. Simultaneous determination and risk assessment of metalaxyl and azoxystrobin in potato by liquid chromatography with tandem mass spectrometry. Environ Monit Assess. 2018 May 9;190(6):335.
Zhang Y, et al. Bio-preparation of (R)-DMPM using whole cells of Pseudochrobactrum asaccharolyticum WZZ003 and its application on kilogram-scale synthesis of fungicide (R)-metalaxyl. Biotechnol Prog. 2018 Jul;34(4):921-928.



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