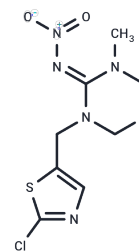


Thiamethoxam

Chemical Properties

CAS No. :	153719-23-4
Formula:	C ₈ H ₁₀ ClN ₅ O ₃ S
Molecular Weight:	291.71
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	Thiamethoxam ((E)-thiamethoxam) is an insecticide of broad-spectrum neonicotinoids.
Targets(IC50)	Others
In vitro	Among the different treatments, The mean half-life of thiamethoxam was 3.7days in the water column with concentrations of <0.8µg/L in the majority of mesocosms [1].
In vivo	Thiamethoxam does harm honey bee visual learning and increases abnormal behaviors [2].

Solubility Information

Solubility	DMSO: 262.5 mg/mL (899.87 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 mg/mL (6.86 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

	1mg	5mg	10mg
1 mM	3.4281 mL	17.1403 mL	34.2806 mL
5 mM	0.6856 mL	3.4281 mL	6.8561 mL
10 mM	0.3428 mL	1.714 mL	3.4281 mL
50 mM	0.0686 mL	0.3428 mL	0.6856 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

Lobson C, et al. Fate of thiamethoxam in mesocosms and response of the zooplankton community. *Sci Total Environ.* 2018 Oct 1;637-638:1150-1157.

Ludicke JC, et al. Thiamethoxam impairs honey bee visual learning, alters decision times, and increases abnormal behaviors. *Ecotoxicol Environ Saf.* 2020 Apr 15;193:110367.

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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481