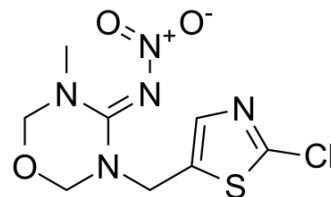


## Thiamethoxam

Cat. No.:	HY-B0833
CAS No.:	153719-23-4
Molecular Formula:	C <sub>8</sub> H <sub>10</sub> ClN <sub>5</sub> O <sub>3</sub> S
Molecular Weight:	291.71
Target:	Others
Pathway:	Others
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 250 mg/mL (857.02 mM; Need ultrasonic)			
		Solvent Concentration	Mass	
			1 mg	5 mg
			10 mg	
Preparing Stock Solutions	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	1.7140 mL	3.4281 mL
Please refer to the solubility information to select the appropriate solvent.				
In Vivo	1. Add each solvent one by one: <b>10% DMSO &gt;&gt; 40% PEG300 &gt;&gt; 5% Tween-80 &gt;&gt; 45% saline</b> Solubility: ≥ 2.08 mg/mL (7.13 mM); Clear solution			
	2. Add each solvent one by one: <b>10% DMSO &gt;&gt; 90% (20% SBE-β-CD in saline)</b> Solubility: ≥ 2.08 mg/mL (7.13 mM); Clear solution			
	3. Add each solvent one by one: <b>10% DMSO &gt;&gt; 90% corn oil</b> Solubility: ≥ 2.08 mg/mL (7.13 mM); Clear solution			

### BIOLOGICAL ACTIVITY

Description	Thiamethoxam is a broad spectrum neonicotinoid insecticide <sup>[1][2]</sup> .
In Vitro	The mean half-life of thiamethoxam among the different treatments was 3.7 days in the water column with concentrations of <0.8 µg/L in the majority of mesocosms by 56 days <sup>[1]</sup> .
In Vivo	Thiamethoxam impairs honey bee visual learning, alters decision times, and increases abnormal behaviors <sup>[2]</sup> .

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## REFERENCES

- [1]. 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.
- [2]. 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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**Caution: Product has not been fully validated for medical applications. For research use only.**

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