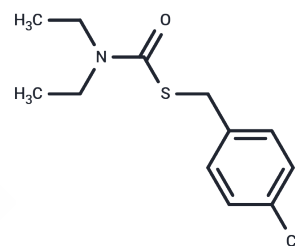


## Thiobencarb

## Chemical Properties

CAS No. :	28249-77-6
Formula:	C <sub>12</sub> H <sub>16</sub> ClNOS
Molecular Weight:	257.78
Storage:	Pure form: -20°C for 3 years   In solvent: -80°C for 1 year

Actual storage temperature shall be subject to the COA.



## Biological Description

Description	Thiobencarb (Siacarb), a thiocarbamate herbicide, is a cholinesterase inhibitor.
Targets(IC50)	Others,Cholinesterase (ChE)

## Solubility Information

Solubility	H <sub>2</sub> O: 30mg/L(22 oC),Sonication and heating to 60°C are recommended. DMSO: 60 mg/mL (232.76 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 (7.76 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	3.8793 mL	19.3964 mL	38.7928 mL
5 mM	0.7759 mL	3.8793 mL	7.7586 mL
10 mM	0.3879 mL	1.9396 mL	3.8793 mL
50 mM	0.0776 mL	0.3879 mL	0.7759 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

- Barman S, Das AC. Residual effect of pre-emergence herbicides on microbial activities in relation to mineralization of C, N and P in the Gangetic alluvial soil of West Bengal, India. *Environ Monit Assess.* 2015 Jul;187(7):465.
- Bhowmick S, Das R, Das AC. Effect of thiobencarb and pretilachlor on microorganisms in relation to mineralization of C and N in the Gangetic alluvial soil of West Bengal. *Environ Monit Assess.* 2014 Oct;186(10):6849-56.
- Mahmoudi M, et al. Kinetics of degradation and adsorption-desorption isotherms of thiobencarb and oxadiargyl in calcareous paddy fields. *Chemosphere.* 2013 May;91(7):1009-17.
- Shimasaki Y, et al. Thiobencarb herbicide reduces growth, photosynthetic activity, and amount of Rieske iron-sulfur protein in the diatom *Thalassiosira pseudonana*. *J Biochem Mol Toxicol.* 2013 Sep;27(9):437-44.

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