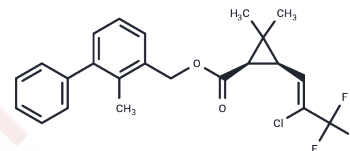


## Bifenthrin

## Chemical Properties

CAS No. : 82657-04-3  
 Formula: C<sub>23</sub>H<sub>22</sub>ClF<sub>3</sub>O<sub>2</sub>  
 Molecular Weight: 422.87  
 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	Bifenthrin is a synthetic pyrethroid insecticide. Bifenthrin induces cell death in bovine mammary epithelial cells through ROS generation, disruption of calcium homeostasis, and alteration of the MAPK signaling cascade. Bifenthrin induces apoptosis by inducing cell-cycle arrest.
Targets(IC50)	Apoptosis, Sodium Channel
In vitro	Bifenthrin. gambiae, and C. quinquefasciatus, with LD50 values of 0.15 ng/mg and 0.16 ng/mg, respectively; contact of filter paper treated with bifenthrin with the tarsus of C. quinquefasciatus and A. gambiae at concentrations of 0.5% and 0.125%, respectively, resulted in 100% mortality [1].

## Solubility Information

Solubility	DMSO: 80 mg/mL (189.18 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: 3.3 mg/mL (7.8 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

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	<b>1mg</b>	<b>5mg</b>	<b>10mg</b>
1 mM	2.3648 mL	11.824 mL	23.6479 mL
5 mM	0.473 mL	2.3648 mL	4.7296 mL
10 mM	0.2365 mL	1.1824 mL	2.3648 mL
50 mM	0.0473 mL	0.2365 mL	0.473 mL

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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

Hougard JM, et al. Bifenthrin: a useful pyrethroid insecticide for treatment of mosquito nets. J Med Entomol. 2002 May;39(3):526-33.

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