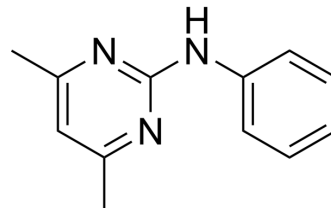


## Pyrimethanil

Cat. No.:	HY-B2033
CAS No.:	53112-28-0
Molecular Formula:	C <sub>12</sub> H <sub>13</sub> N <sub>3</sub>
Molecular Weight:	199.25
Target:	Fungal
Pathway:	Anti-infection
Storage:	4°C, protect from light * In solvent : -80°C, 6 months; -20°C, 1 month (protect from light)



### SOLVENT & SOLUBILITY

In Vitro	DMSO : 130 mg/mL (652.45 mM; Need ultrasonic)						
	Preparing Stock Solutions	Solvent Concentration	Mass	1 mg	5 mg	10 mg	
				1 mM	5.0188 mL	25.0941 mL	50.1882 mL
				5 mM	1.0038 mL	5.0188 mL	10.0376 mL
				10 mM	0.5019 mL	2.5094 mL	5.0188 mL
Please refer to the solubility information to select the appropriate solvent.							
In Vivo	1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: ≥ 3.25 mg/mL (16.31 mM); Clear solution						
	2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline) Solubility: 3.25 mg/mL (16.31 mM); Suspended solution; Need ultrasonic						
	3. Add each solvent one by one: 10% DMSO >> 90% corn oil Solubility: ≥ 3.25 mg/mL (16.31 mM); Clear solution						

### BIOLOGICAL ACTIVITY

Description	Pyrimethanil is an anilinopyrimidine and broad-spectrum contact fungicide for the control of Botrytis spp. on a wide variety of crops <sup>[1]</sup> . Pyrimethanil inhibits the biosynthesis of methionine and other amino acids in Botrytis cinerea. Pyrimethanil can be used for the research of fungal diseases prevention on fruit, vegetable and ornamental plants with mold infection <sup>[3]</sup> .
In Vitro	Pyrimethanil is a strobilurin fungicide belonging to the anilinopyrimidine class. Pyrimethanil (5 and 50 µg/L) elicits a range of toxic responses, has the potential to induce histological alterations in tissues of the Italian tree frog <i>H. intermedia</i> after a long term exposure to two environmentally relevant concentrations of Pyrimethanil <sup>[2]</sup> . Pyrimethanil decreases polygalacturonase, cellulase, proteinase and laccase activities in the medium of three day-old cultures. The pyrimethanil results in 50% reduction (IC <sub>50</sub> ) in total enzyme activities are approximately 0.25 µM for

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polygalacturonase, cellulase and proteinase, and approximately 1.0  $\mu$ M for laccase<sup>[3]</sup>.  
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

## REFERENCES

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- [1]. L Kanetis, et al. Characterization of genetic and biochemical mechanisms of fludioxonil and pyrimethanil resistance in field isolates of *Penicillium digitatum*. *Phytopathology*
- [2]. Petr Masner, et al. Possible methionine biosynthesis inhibition by pyrimidinamine fungicides. *Pesticide Science*
- [3]. Richard J. Milling, et al. Mode of action of the anilino-pyrimidine fungicide pyrimethanil. 2. Effects on enzyme secretion in *Botrytis cinerea*. Volume45, Issue1, September 1995.
- [4]. Salvatore D'Aquino, et al. Residue levels and effectiveness of pyrimethanil vs imazalil when using heated postharvest dip treatments for control of *Penicillium* decay on citrus fruit. *J Agric Food Chem*. 2006 Jun 28;54(13):4721-6.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

Tel: 609-228-6898

Fax: 609-228-5909

E-mail: [tech@MedChemExpress.com](mailto:tech@MedChemExpress.com)

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA