

Quizalofop-p-ethyl

Chemical Properties

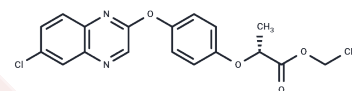
CAS No. : 100646-51-3

Formula: C₁₉H₁₇ClN₂O₄

Molecular Weight: 372.80

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	Quizalofop-p-ethyl ((R)-Quizalofop ethyl) is a selective post-emergent herbicide for use on annual and perennial weeds, acting as an acetyl-CoA carboxylase (ACCase) inhibitor leading to weed death.
Targets(IC50)	Others,Acetyl-CoA Carboxylase
In vitro	Quizalofop-p-ethyl (0.5-5mg/L, 3-6 days) interferes with photosynthesis in <i>Microcystis aeruginosa</i> by downregulating photosynthesis-related genes <i>psaB</i> and <i>psbD1</i> , and upregulates <i>mcyH</i> expression, thereby promoting the synthesis and release of microcystin-LR (MC-LR)[1].
In vivo	Quizalofop-p-ethyl (0.5-5mg/L, 6 days) significantly inhibits the growth of <i>M. aeruginosa</i> , reducing its chlorophyll a and protein content. Short-term exposure (0.5-5mg/L, 24-48h) increases MDA content and enhances SOD and CAT activities, triggering oxidative stress responses in algal cells[1].

Solubility Information

Solubility	DMSO: 80 mg/mL (214.59 mM),Sonication is recommended. H ₂ O: < 0.1 mg/mL (insoluble),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	2.6824 mL	13.412 mL	26.824 mL
5 mM	0.5365 mL	2.6824 mL	5.3648 mL
10 mM	0.2682 mL	1.3412 mL	2.6824 mL
50 mM	0.0536 mL	0.2682 mL	0.5365 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

Yu X, et al. Effects of the herbicides quizalofop-p-ethyl and quizalofop-ethyl on the physiology, oxidative damage, synthesis, and release of microcystin-LR in *Microcystis aeruginosa*[J]. *Science of The Total Environment*, 2021, 776: 146036.

Doganlar ZB. Quizalofop-p-ethyl-induced phytotoxicity and genotoxicity in *Lemna minor* and *Lemna gibba*. *J Environ Sci Health A Tox Hazard Subst Environ Eng*. 2012;47(11):1631-43.

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