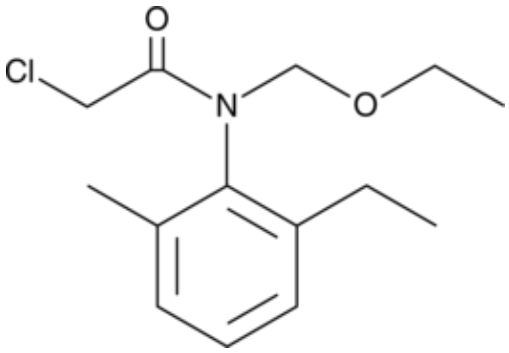
Product Data Sheet

Product Name: Acetochlor
Cat. No.: GC46782

Chemical Properties

Cas. No.	34256-82-1		
SMILES	CC1=CC=CC(CC)=C1N(COCC)C(CCl)=O		
Formula	C14H20ClNO2	M.Wt	269.8
Solubility	Chloroform: Slightly Soluble,DMSO: Slightly Soluble,Water: Slightly Soluble	Storage	Store at -20°C
General tips	For obtaining a higher solubility , please warm the tube at 37 °C and shake it in the ultrasonic bath for a while.Stock solution can be stored below -20°C for several months.		
Shipping Condition	Evaluation sample solution : ship with blue ice All other available size: ship with RT , or blue ice upon request.		

Structure



Background

Acetochlor is an herbicide that completely inhibits shoot growth of oat (*A. sativa*) and mustard (*S. alba*) plants when used at a concentration of 2 kg/hectare. [1] It accelerates thyroid hormone-induced metamorphosis of and alters thyroid hormone-responsive gene expression in *X. laevis*.[2] *In vivo*, acetochlor induces formation of thyroid, bone, stomach, and nasal tumors in rats as well as liver and lung tumors in mice.[3] Acetochlor also induces pericardial edema, thrombosis, circulation defects, and a reduction in the number of cardiomyocytes in zebrafish larvae when administered in tank water at the maximum non-lethal concentration (MNLC) of 9.6 µg/ml.[4]

Caution: Product has not been fully validated for medical applications. For research use only.
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1.Jablonkai, I.Alkylating reactivity and herbicidal activity of chloroacetamidesPest. Manag. Sci.59(4)443-450(2003) 2.Crump, D., Werry, K., Veldhoen, N., et al.Exposure to the herbicide acetochlor alters thyroid hormone-dependent gene expression and metamorphosis in Xenopus LaevisEnviron. Health Perspect.110(12)1199-1205(2002) 3.Hurley, P.M.Mode of carcinogenic action of pesticides inducing thyroid follicular cell tumors in rodentsEnviron. Health Perspect.106(8)437-445(1998) 4.Liu, H., Chu, T., Chen, L., et al.In vivo cardiovascular toxicity induced by acetochlor in zebrafish larvaeChemosphere181600-608(2017)

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