

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

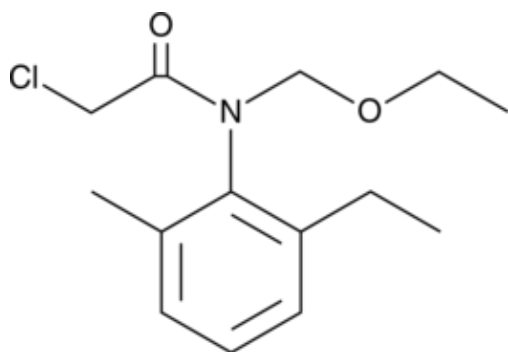
Formula C₁₄H₂₀ClNO₂ M.Wt 269.8

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 Laevis*Environ. 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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