Data Sheet (Cat.No.T37632)

TFM

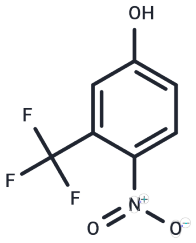
Chemical Properties

CAS No. : 88-30-2

Formula: C7H4F3NO3

Molecular Weight: 207.11

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	TFM is a piscicide.1It is toxic to sea lamprey (P. marinus) with LC50values ranging from 1.97 to 2.11 and 2.05 to 2.21 mg/L for sac and swim-up fry, respectively, 1.6 to 2.45 mg/L for juveniles, and 1.6 to 1.63 mg/L for adults. It is also toxic to juvenile lake sturgeon (A. fulvescens) less than 100 mm in size but not to a variety of other fish species. TFM (50 μM) uncouples oxidative phosphorylation by 22 and 28% in isolated sea lamprey and rainbow trout (O. mykiss) liver, respectively.2Formulations containing TFM have been used as lampricides in the control of larval sea lamprey populations.
Targets(IC50)	Others,Cytochromes P450

Solubility Information

Solubility	Ethanol: 30 mg/mL (144.85 mM),Sonication is recommended. PBS (pH 7.2): 5 mg/mL (24.14 mM),Sonication is recommended. DMSO: 30 mg/mL (144.85 mM),Sonication is recommended. DMF: 30 mg/mL (144.85 mM),Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	4.8284 mL	24.1418 mL	48.2835 mL
5 mM	0.9657 mL	4.8284 mL	9.6567 mL
10 mM	0.4828 mL	2.4142 mL	4.8284 mL
50 mM	0.0966 mL	0.4828 mL	0.9657 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

Boogaard, M.A., Bills, T.D., and Johnson, D.A.Acute toxicity of TFM and a TFM/niclosamide mixture to selected species of fish, including lake sturgeon (Acipenser fulvescens) and mudpuppies (Necturus maculosus), in laboratory and field exposuresJ. Great Lakes Res.29(Suppl 1)529-541(2003)

Birceanu, O., McClelland, G.B., Wang, Y.S., et al.The lampricide 3-trifluoromethyl-4-nitrophenol (TFM) uncouples mitochondrial oxidative phosphorylation in both sea lamprey (Petromyzon marinus) and TFM-tolerant rainbow trout (Oncorhynchus mykiss)Comp. Biochem. Physiol. C. Toxicol. Pharmacol.153(3)342-349(2011)

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