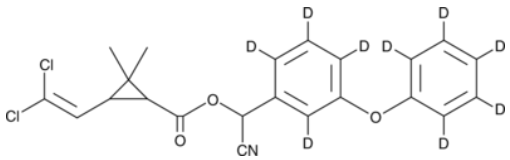
Product Data Sheet

Product Name: Cypermethrin-d9
Cat. No.: GC91132

Chemical Properties

Cas. No.			
Formula	$C_{22}H_{10}D_9Cl_2NO_3$	M.Wt	425.4
Solubility	Acetonitrile: Soluble,Chloroform: Slightly soluble,Methanol: 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

Cypermethrin-d_9 is intended for use as an internal standard for the quantification of cypermethrin by GC- or LC-MS. Cypermethrin is a type II pyrethroid insecticide.[1,2,3,4] It prolongs opening of sodium channels resulting in membrane depolarization and a conductance block of the insect nervous system, and point mutations in sodium channels induce cypermethrin-resistance in house flies, cockroaches, and mosquitos.[3] Cypermethrin (1-1.5 mg) reduces survival of ticks (*H. anatolicum*) *in vitro* in a concentration-dependent manner.[2] Topical administration of cypermethrin reduces the number of ticks on infested cattle. Cypermethrin (5 and 10 ppm) reduces survival of lice (*D. ovis*) in sheep fleece and prevents re-infestation in contact-challenged sheep for 7 and 19 weeks, respectively.[1] It induces developmental neurotoxicities in zebrafish, increasing mortality and edema and inducing body-axis curvature when used at concentrations ranging from 50 to 200 µg/L.[5] Cypermethrin (15 mg/kg twice weekly for 24 weeks) also induces Parkinson's disease-like neurodegeneration in rats, decreasing locomotor activity, dopamine production, and the number of

tyrosine droxylase positive (TH^+) neurons in the substantia nigra.[4] Formulations containing cypermethrin have been used in the control of insects in agriculture and on commercial and residential premises.