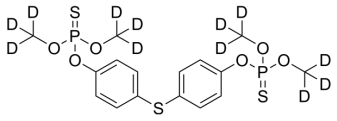
Temephos-d12

Cat. No.:	HY-B1120S
CAS No.:	1219795-39-7
Molecular Formula:	$C_{16}H_8D_{12}O_6P_2S_3$
Molecular Weight:	478.54
Target:	Parasite
Pathway:	Anti-infection
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Temephos-d_{12} is the deuterium labeled Temephos[1]. Temefos is an organophosphate larvicide, used to treat water infested with disease-carrying insects including mosquitoes, midges, and black fly larvae. Temefos affects the central nervous system through inhibition of cholinesterase, results in death before reaching the adult stage[2][3].
In Vitro	Stable heavy isotopes of hydrogen, carbon, and other elements have been incorporated into drug molecules, largely as tracers for quantitation during the drug development process. Deuteration has gained attention because of its potential to affect the pharmacokinetic and metabolic profiles of drugs[1]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Russak EM, et al. Impact of Deuterium Substitution on the Pharmacokinetics of Pharmaceuticals. Ann Pharmacother. 2019 Feb;53(2):211-216.

[2]. Thirugnanam M, et al. Environmental impact of mosquito pesticides: influence of temefos on the brain acetylcholinesterase of killifish. Environ Physiol Biochem. 1975;5(6):451-9.

[3]. Wirth MC, et al. Selection and characterization of temephos resistance in a population of Aedes aegypti from Tortola, British Virgin Islands. J Am Mosq Control Assoc. 1999 Sep15(3):315-20.

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