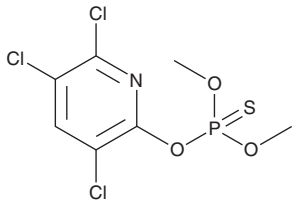
PRODUCT INFORMATION

Chlorpyrifos-methyl

Item No. 24227

CAS Registry No.: 5598-13-0
Formal Name: phosphorothioic acid O,O-dimethyl O-(3,5,6-trichloro-2-pyridinyl) ester
Synonym: OMS-1155
MF: $C_7H_7Cl_3NO_3PS$
FW: 322.5
Purity: ≥98%
Supplied as: A solid
Storage: -20°C
Stability: ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Chlorpyrifos-methyl is supplied as a solid. A stock solution may be made by dissolving the chlorpyrifos-methyl in the solvent of choice, which should be purged with an inert gas. Chlorpyrifos-methyl is slightly soluble in chloroform.

Description

Chlorpyrifos-methyl is an organophosphate insecticide that induces 100, 100, 63, and 97.3% mortality of the adult stored-grain pests *L. bostrychophila*, *L. decolor*, *L. entomophila*, and *L. paeta*, respectively, when applied to grain at a dose of 10 mg/kg.[1] It also reduces the number of live progeny produced by *L. bostrychophila*, *L. decolor*, *L. entomophila*, and *L. paeta* by 100, 100, 30.4, and 41.1%, respectively, when applied to grain at a dose of 2.5 mg/kg. Chlorpyrifos-methyl (3 µM) reduces outgrowth of axon-like processes in mouse N2a neuroblastoma cells.[2] Administration of chlorpyrifos-methyl (4-100 mg/kg) to pregnant female mice decreases *H19* gene methylation in sperm as well as decreases anogenital distance and increases thymus and epididymis weights and serum testosterone levels in male offspring.[3]

References

1. Nayak, M.K. and Daglish, G.J. Combined treatments of spinosad and chlorpyrifos-methyl for management of resistant psocid pests (Psocoptera: *Liposcelididae*) of stored grain. *Pest Manag. Sci.* **63(1)**, 104-109 (2007).
2. Sachana, M., Flaskos, J., and Hargreaves, A.J. Effects of chlorpyrifos and chlorpyrifos-methyl on the outgrowth of axon-like processes, tubulin, and GAP-43 in N2a Cells. *Toxicol. Mech. Methods* **15(6)**, 405-410 (2005).
3. Shin, H.S., Seo, J.H., Jeong, S.H., *et al.* Effect on the *H19* gene methylation of sperm and organs of offspring after chlorpyrifos-methyl exposure during organogenesis period. *Environ. Toxicol.* **30(12)**, 1355-1363 (2015).

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