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Produktinformation



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Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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Lieferung & Zahlungsart

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Zuschläge

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- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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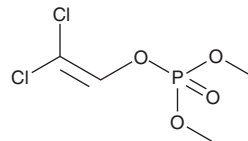
PRODUCT INFORMATION



Dichlorvos

Item No. 23727

CAS Registry No.: 62-73-7
Formal Name: phosphoric acid, 2,2-dichloroethenyl dimethyl ester
Synonyms: DDVP, Dichlorovinyl Dimethyl Phosphate, NSC 6738
MF: C₄H₇Cl₂O₄P
FW: 221.0
Purity: ≥98%
Supplied as: A solution in methanol
Storage: -20°C
Stability: ≥1 year



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

Laboratory Procedures

Dichlorvos is supplied as a solution in methanol. To change the solvent, simply evaporate the methanol under a gentle stream of nitrogen and immediately add the solvent of choice. Solvents such as chloroform and ethyl acetate purged with an inert gas can be used. Dichlorvos is also soluble in water.

Description

Dichlorvos is an organophosphate insecticide and inhibitor of acetylcholinesterase (AChE) and butyrylcholinesterase (BChE; IC₅₀s = 269 and 44 nM, respectively).¹ It also binds to the M₂ muscarinic receptor in rat heart homogenates.² Dichlorvos is lethal to 4-week old German cockroach (*B. germanica*) nymphs (LD₅₀ = 0.108 µg per insect) and silkworms (*B. mori*) in third instar (LC₅₀ = 6.63 mg/L) after 24 hours.^{3,4} It is lethal to zebrafish (*D. rerio*) embryos (LC₅₀ = 39.75 mg/L after 24 hours) and decreases swimming activity of larvae 6 days after fertilization when administered at a concentration of 25 mg/L in tank water.⁵ Dichlorvos (150 ppm for 80 weeks) also increases the incidence of benign and malignant neoplasms in male rats from 47 to 88% as compared to controls.⁶

References

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2. Silveira, C.L., Eldefrawi, A.T., and Eldefrawi, M.E. Putative M₂ muscarinic receptors of rat heart have high affinity for organophosphorus anticholinesterases. *Toxicol. Appl. Pharmacol.* **103(3)**, 474-481 (1990).
3. Qian, K., Wei, X., Zeng, X., *et al.* Stage-dependent tolerance of the German cockroach, *Blattella germanica* for dichlorvos and propoxu. *J. Insect Sci.* **10(1)**, 201 (2010).
4. Zhang, Z.-Y., Wang, D.-L., Chi, Z.-J., *et al.* Acute toxicity of organophosphorus and pyrethroid insecticides to *Bombyx mori*. *J. Econ. Entomol.* **101(2)**, 360-364 (2008).
5. Sişman, T. Dichlorvos-induced developmental toxicity in zebrafish. *Toxicol. Ind. Health* **26(9)**, 567-573 (2010).
6. Reuber, M.D. Carcinogenicity of dichlorvos. *Clin. Toxicol.* **18(1)**, 47-84 (1981).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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