

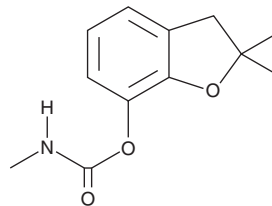
PRODUCT INFORMATION



Carbofuran

Item No. 25635

CAS Registry No.: 1563-66-2
Formal Name: 7-(N-methylcarbamate) 2,3-dihydro-2,2-dimethyl-7-benzofuranol
Synonyms: BAY 70143, NSC 167822
MF: C₁₂H₁₅NO₃
FW: 221.3
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

Carbofuran is supplied as a solid. A stock solution may be made by dissolving the carbofuran in the solvent of choice. Carbofuran is slightly soluble in methanol (warm) and chloroform.

Description

Carbofuran is a carbamate insecticide that inhibits acetylcholinesterase (AChE) in insects and mammals (K_{a5} = 9.4, 30, and 210 μ M for *M. domestica* brain, *A. mellifera* brain, and bovine erythrocyte AChE, respectively).¹ It also inhibits AChE from rat and human erythrocytes with IC_{50} values of 40 and 25 nM, respectively.² It is toxic to the housefly *M. domestica* (LD_{50} = 4.6 mg/kg) and fourth-instar larvae of the mosquito *C. pipiens* with an LC_{50} value of 0.054 ppm. Carbofuran is toxic to birds, rats (LD_{50} = 4-11 mg/kg), and other mammals including dogs, sheep, and cattle, and is considered an environmental toxin.^{1,3} Formulations containing carbofuran have been used in agriculture for the control of insects, nematodes, mites, and ticks.

References

1. Yu, C., Metcalf, R.L., and Booth, G.M. Inhibition of acetylcholinesterase from mammals and insects by carbofuran and its related compounds and their toxicities toward these animals. *J. Agric. Food Chem.* **20**(5), 923-926 (1972).
2. Rao, P.S., Roberts, G.H., Pope, C.N., *et al.* Comparative inhibition of rodent and human erythrocyte acetylcholinesterase by carbofuran and carbaryl. *Pestic. Biochem. Physiol.* **48**(2), 79-84 (1994).
3. Gupta, R.C. Carbofuran toxicity. *J. Toxicol. Environ. Health* **43**(4), 383-418 (1994).

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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