

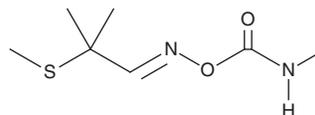
# PRODUCT INFORMATION



## Aldicarb

Item No. 18466

**CAS Registry No.:** 116-06-3  
**Formal Name:** O-[(methylamino)carbonyl]oxime-2-methyl-2-(methylthio)-propanal  
**Synonyms:** NSC 379586,  
2-methyl-2-(methylthio)-Propionaldehyde,  
UC21149  
**MF:** C<sub>7</sub>H<sub>14</sub>N<sub>2</sub>O<sub>2</sub>S  
**FW:** 190.3  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 248 nm  
**Supplied as:** A crystalline 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

Aldicarb is supplied as a crystalline solid. A stock solution may be made by dissolving the aldicarb in the solvent of choice, which should be purged with an inert gas. Aldicarb is slightly soluble in DMSO and methanol.

### Description

Aldicarb is a carbamate pesticide.<sup>1</sup> It is an acetylcholinesterase (AChE) inhibitor with an IC<sub>50</sub> value of 5 μM.<sup>2</sup> Aldicarb induces mortality in the two-spotted spider mite (*T. urticae*) with an LC<sub>50</sub> value of 21 ppm in a slide-dip assay and in the nematode (*M. exigua*) with an LC<sub>50</sub> value of 24 μg/L.<sup>3,4</sup> It has been used to study CREB and acetylcholine signaling.<sup>5</sup> Formulations containing aldicarb have been used as pesticides in agriculture.

### References

1. Baron, R.L. A carbamate insecticide: a case study of aldicarb. *Environ. Health Perspect.* **102(Suppl. 11)**, 23-27 (1994).
2. Smulders, C.J., Bueters, T.J., Van Kleef, R.G., *et al.* Selective effects of carbamate pesticides on rat neuronal nicotinic acetylcholine receptors and rat brain acetylcholinesterase. *Toxicol. Appl. Pharmacol.* **193(2)**, 139-146 (2003).
3. Knowles, C.O., Errampalli, D.D., and E-Sayed, G.N. Comparative toxicities of selected pesticides to bulb mite (Acari: Acaridae) and twospotted spider mite (Acari: Tetranychidae). *J. Econ. Entomol.* **81(6)**, 1586-1591 (1988).
4. Nunes, A.d.S. Organic substances for nematode control in coffee plants. *Master's thesis diss., Federal University de Lavras* <http://www.sbicafe.ufv.br/handle/123456789/6738> (2008).
5. Suo, S. and Ishiura, S. Dopamine modulates acetylcholine release via octopamine and CREB signaling in *Caenorhabditis elegans*. *PLoS One* **8(8)**, (2013).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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