

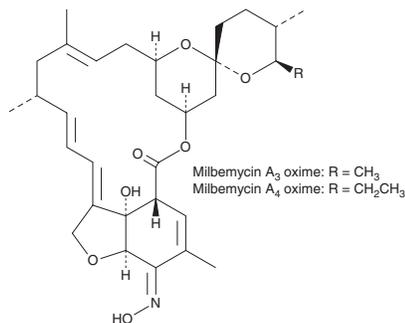
# PRODUCT INFORMATION



## Milbemycin oxime

Item No. 17164

**CAS Registry No.:** 129496-10-2  
**Formal Name:** oxime milbemycin  
**MF:**  $2C_{31}H_{43}NO_7$  (A3:80%) and  $2C_{32}H_{45}NO_7$  (A4:20%)  
**FW:** 2,194.8  
**Purity:**  $\geq 95\%$   
**UV/Vis.:**  $\lambda_{max}$ : 246 nm  
**Supplied as:** A crystalline solid  
**Storage:**  $-20^{\circ}C$   
**Stability:**  $\geq 4$  years



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

### Laboratory Procedures

Milbemycin oxime is supplied as a crystalline solid. A stock solution may be made by dissolving the milbemycin oxime in the solvent of choice, which should be purged with an inert gas. Milbemycin oxime is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of milbemycin oxime is approximately 20 mg/ml in ethanol and approximately 15 mg/ml in DMSO and DMF.

Milbemycin oxime is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, milbemycin oxime should first be dissolved in ethanol and then diluted with the aqueous buffer of choice. Milbemycin oxime has a solubility of approximately 0.3 mg/ml in a 1:2 solution of ethanol:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Milbemycin oxime is a semisynthetic macrocyclic lactone prepared by the oxidation and oximation of an 80:20 ratio of milbemycin A3 and A4 (Item No. 17155). Like other milbemycin/ivermectins, it can potentiate glutamate and GABA-gated chloride-channel opening and is used as a nematocide and insecticide in veterinary medicine.<sup>1,2</sup>

### References

1. Duke, S.O., Cantrell, C.L., Meepagala, K.M., *et al.* Natural toxins for use in pest management. *Toxins (Basel)* **2(8)**, 1943-1962 (2010).
2. Bienhoff, S.E., Kok, D.J., Roycroft, L.M., *et al.* Efficacy of a single oral administration of milbemycin oxime against natural infections of *Ancylostoma braziliense* in dogs. *Vet. Parasitol.* **195(1-2)**, 102-105 (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.

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