

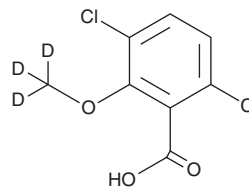
# PRODUCT INFORMATION



## Dicamba-d<sub>3</sub>

Item No. 45581

**CAS Registry No.:** 349553-95-3  
**Formal Name:** 3,6-dichloro-2-(methoxy-d<sub>3</sub>)-benzoic acid  
**MF:** C<sub>8</sub>H<sub>3</sub>Cl<sub>2</sub>D<sub>3</sub>O<sub>3</sub>  
**FW:** 224.1  
**Chemical Purity:** ≥98% (Dicamba)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>3</sub>); ≤1% d<sub>0</sub>  
**Supplied as:** A 1 mg/ml solution in methanol  
**Storage:** -20°C  
**Stability:** ≥4 years



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

### Laboratory Procedures

Dicamba-d<sub>3</sub> is intended for use as an internal standard for the quantification of dicamba by GC- or LC-MS. The accuracy of the sample weight in this vial is between 5% over and 2% under the amount shown on the vial. If better precision is required, the deuterated standard should be quantitated against a more precisely weighed unlabeled standard by constructing a standard curve of peak intensity ratios (deuterated versus unlabeled).

### Description

Dicamba is an herbicide.<sup>1</sup> It reduces mitochondrial membrane potential and inhibits ATP synthase in rat liver homogenates.<sup>2</sup> Dicamba increases the frequency of teratogenic effects in zebrafish embryos.<sup>3</sup> It has been found in surface water, ground water, and soil.<sup>1</sup> Formulations containing dicamba have been used in the management of broadleaf weeds.

### References

1. Caux, P.Y., Kent, R.A., Taché, M., *et al.* Environmental fate and effects of dicamba: A Canadian perspective. *Rev. Environ. Contam. Toxicol.* **133**, 1-58 (1993).
2. Peixoto, F., Vicente, J.A.F., and Madeira, V.M.C. The herbicide dicamba (2-methoxy-3,6-dichlorobenzoic acid) interacts with mitochondrial bioenergetic functions. *Arch. Toxicol.* **77(7)**, 403-409 (2003).
3. Felisbino, K., Kirsten, N., da Silva Milhorini, S., *et al.* Teratogenic effects of the dicamba herbicide in Zebrafish (*Danio rerio*) embryos. *Environ. Pollut.* **334:122187**, (2023).

#### 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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