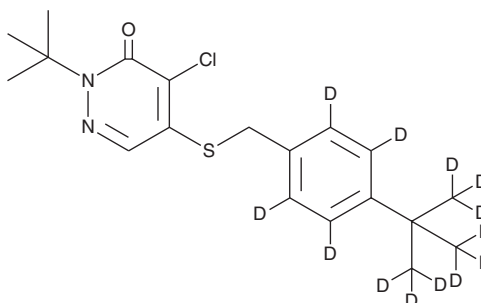


# PRODUCT INFORMATION



## Pyridaben-d<sub>13</sub> Item No. 39259

**CAS Registry No.:** 2468638-05-1  
**Formal Name:** 4-chloro-2-(1,1-dimethylethyl)-5-[[[4-(1,1-dimethylethyl-d<sub>9</sub>)phenyl-2,3,5,6-d<sub>4</sub>]methyl]thio]-3(2H)-pyridazinone  
**Synonym:** Damanlin-d<sub>13</sub>  
**MF:** C<sub>19</sub>H<sub>12</sub>ClD<sub>13</sub>N<sub>2</sub>OS  
**FW:** 378.0  
**Chemical Purity:** ≥98% (Pyridaben)  
**Deuterium Incorporation:** ≥99% deuterated forms (d<sub>1</sub>-d<sub>13</sub>); ≤1% d<sub>0</sub>  
**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

Pyridaben-d<sub>13</sub> is intended for use as an internal standard for the quantification of pyridaben (Item No. 25821) 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).

Pyridaben-d<sub>13</sub> is supplied as a solid. A stock solution may be made by dissolving the pyridaben-d<sub>13</sub> in the solvent of choice, which should be purged with an inert gas. Pyridaben-d<sub>13</sub> is slightly soluble in chloroform.

### Description

Pyridaben is a METI acaricide that inhibits mitochondrial electron transport at complex I (METI; K<sub>i</sub> = 0.36 nmol/mg protein in rat brain mitochondria).<sup>1</sup> It is active against a variety of mites, inducing 100% mortality of *C. malaccensis*, *D. farinae*, and *T. putrescentiae* when administered via filter paper contact at doses of 25, 100, and 200 mg/m<sup>3</sup>, respectively.<sup>2</sup> Pyridaben is toxic to rats when administered orally (LD<sub>50</sub>s = 570 and 1,100 for female and male rats, respectively) and via inhalation (LD<sub>50</sub>s = 0.62 and 0.66 mg/L for female and male rats, respectively).<sup>3</sup> Formulations containing pyridaben have been used in the control of mites in agriculture.

### References

1. Navarro, A., Báñez, M.J., Gómez, C., *et al.* Effects of rotenone and pyridaben on complex I electron transfer and on mitochondrial nitric oxide synthase functional activity. *J. Bioenerg. Biomembr.* **42**(5), 405-412 (2010).
2. Takahashi, M., Shono, T., and Umehara, T. Efficacy of pyridaben against three kinds of mites, *Cheyletus malaccensis*, *Dermatophagoides farinae* and *Tyrophagus putrescentiae*. *Jpn. J. Sanit. Zool.* **41**(3), 257-260 (1990).
3. Igarashi, H. and Sakamoto, S. Summary of toxicity studies with pyridaben. *J. Pest. Scien.* **19**(4), S243-S251 (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.

#### WARRANTY AND LIMITATION OF REMEDY

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