

Produktinformation



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Diagnostik & molekulare Diagnostik



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PRODUCT INFORMATION



Pyridaben-d₁₃ Item No. 39259

CAS Registry No.: 2468638-05-1

Formal Name: 4-chloro-2-(1,1-dimethylethyl)-5-[[[4-

(1,1-dimethylethyl-d_o)phenyl-2,3,5,6-d₄]

methyl]thio]-3(2H)-pyridazinone

Synonym: Damanlin-d₁₃

MF: $C_{19}H_{12}CID_{13}N_2OS$

FW: 378.0

Chemical Purity: ≥98% (Pyridaben)

Deuterium

Incorporation: \geq 99% deuterated forms (d₁-d₁₃); \leq 1% d₀

Supplied as: A solid -20°C Storage: Stability: ≥4 years

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

Laboratory Procedures

Pyridaben-d₁₃ 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_{13} is supplied as a solid. A stock solution may be made by dissolving the pyridaben- d_{13} in the solvent of choice, which should be purged with an inert gas. Pyridaben-d₁₃ is slightly soluble in chloroform.

Description

Pyridaben is a METI acaricide that inhibits mitochondrial electron transport at complex I (METI; K_i = 0.36 nmol/mg protein in rat brain mitochondria). It is active against a variety of mites, inducing 100% mortality of C. malaccensis, D. farina, and T. putrescentia when administered via filter paper contact at doses of 25, 100, and 200 mg/m 3 , respectively. Pyridaben is toxic to rats when administered orally (LD $_{50}$ s = 570 and 1,100 for female and male rats, respectively) and via inhalation (LD₅₀s = 0.62 and 0.66 mg/L for female and male rats, respectively).³ Formulations containing pyridaben have been used in the control of mites in agriculture.

References

- 1. Navarro, A., Bández, 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).
- 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
- 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.

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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