

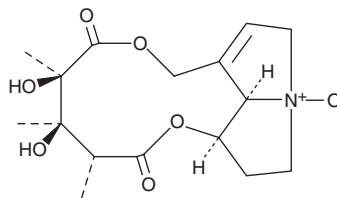
PRODUCT INFORMATION



Monocrotaline N-oxide

Item No. 45707

CAS Registry No.: 35337-98-5
Formal Name: 4,5,8,10,12,13,13aR,13bR-octahydro-4,5-dihydroxy-3R,4S,5S-trimethyl-2H-[1,6]dioxacycloundecino[2,3,4-gh]pyrrolizine-2,6(3H)-dione, 11-oxide
Synonym: McN
MF: C₁₆H₂₃NO₇
FW: 341.4
Purity: ≥98%
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

Monocrotaline N-oxide is supplied as a solid. A stock solution may be made by dissolving the monocrotaline N-oxide in the solvent of choice, which should be purged with an inert gas. Monocrotaline N-oxide is slightly soluble (0.1-1 mg/ml) in DMSO.

Monocrotaline N-oxide is slightly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

Description

Monocrotaline N-oxide is a metabolite of monocrotaline (Item No. 16666).¹ It is formed from monocrotaline by the cytochrome P450 (CYP) isoform CYP3A. However, monocrotaline N-oxide can be converted back to monocrotaline by human liver microsomes and intestinal bacteria.^{2,3} Unlike the toxic monocrotaline metabolite monocrotaline pyrrole, monocrotaline N-oxide is not toxic to rats.⁴

References

1. Wang, Y.P., Yan, J., Beger, R.D., *et al.* Metabolic activation of the tumorigenic pyrrolizidine alkaloid, monocrotaline, leading to DNA adduct formation in vivo. *Cancer Lett.* **226**(1), 27-35 (2005).
2. Wang, Y.P., Yan, J., Fu, P.P., *et al.* Human liver microsomal reduction of pyrrolizidine alkaloid N-oxides to form the corresponding carcinogenic parent alkaloid. *Toxicol. Lett.* **155**(3), 411-420 (2005).
3. Tang, J., Wang, Z., Akao, T., *et al.* Human intestinal bacteria mediate reduction of the n-oxides of isoline and monocrotaline to the corresponding parent alkaloids. *Asian J. Chem.* **25**(4), 2027-2030 (2013).
4. Bruner, L.H., Carpenter, L.J., Hamlow, P., *et al.* Effect of a mixed function oxidase inducer and inhibitor on monocrotaline pyrrole pneumotoxicity. *Toxicol. Appl. Pharmacol.* **85**(3), 416-427 (1986).

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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