

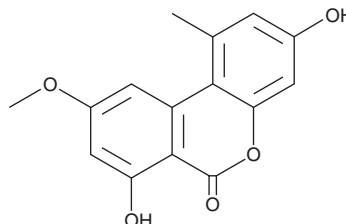
PRODUCT INFORMATION



Alternariol monomethyl ether

Item No. 11307

CAS Registry No.: 23452-05-3
Formal Name: 3,7-dihydroxy-9-methoxy-1-methyl-6H-dibenzo[b,d]pyran-6-one
Synonyms: AME, NSC 638262
MF: C₁₅H₁₂O₅
FW: 272.3
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

Alternariol monomethyl ether (AME) is supplied as a solid. A stock solution may be made by dissolving the AME in the solvent of choice, which should be purged with an inert gas. AME is soluble in organic solvents such as methanol and dichloromethane.

Description

AME is a mycotoxin originally isolated from *A. brassicae* extracts. AME is a common contaminant in cereal grains such as wheat, barley, and sorghum that is cytotoxic to bacterial (MIC = 500 µg/disc for *B. mycoides* in a bacterial halo assay) and mammalian cells (IC₅₀ = 120 µM in HCT116 cells).^{1,2} It inhibits human topoisomerase II and bacterial gyrase at initial inhibitory concentrations of 25 and 10 µM, respectively. AME selectively inhibits monoamine oxidase A (MOA-A; K_i = 0.34 µM).^{3,4} AME also provokes DNA damage that induces mitochondrial permeability transition pore-mediated activation of apoptosis.²

References

1. Pero, R.W., Posner, H., Blois, M., *et al.* Toxicity of metabolites produced by the "Alternaria". *Environ. Health Perspect.* **4**, 87-94 (1973).
2. Bensassi, F., Gallerne, C., el Dein, O.S., *et al.* Mechanism of Alternariol monomethyl ether-induced mitochondrial apoptosis in human colon carcinoma cells. *Toxicology* **290(2-3)**, 230-240 (2011).
3. Jarolim, K., Del Favero, G., Ellmer, D., *et al.* Dual effectiveness of *Alternaria* but not *Fusarium* mycotoxins against human topoisomerase II and bacterial gyrase. *Arch. Toxicol.* **91(4)**, 2007-2016 (2016).
4. Lee, H.W., Kim, Y.J., Nam, S.-J., *et al.* Potent selective inhibition of monoamine oxidase A by alternariol monomethyl ether isolated from *Alternaria brassicae*. *J. Microbiol. Biotechnol.* **27(2)**, 316-320 (2017).

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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