

# PRODUCT INFORMATION



## Alternariol

Item No. 11306

CAS Registry No.: 641-38-3

Formal Name: 3,7,9-trihydroxy-1-methyl-6H-dibenzo[b,d]pyran-6-one

Synonyms: AOH, NSC 638263

MF:  $C_{14}H_{10}O_5$

FW: 258.2

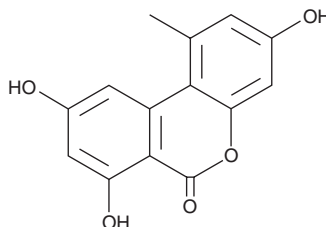
Purity:  $\geq 95\%$

UV/Vis.:  $\lambda_{max}$ : 257, 289, 301, 342 nm

Supplied as: A crystalline solid

Storage:  $-20^{\circ}\text{C}$

Stability:  $\geq 4$  years



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

### Laboratory Procedures

Alternariol is supplied as a crystalline solid. A stock solution may be made by dissolving the alternariol in the solvent of choice, which should be purged with an inert gas. Alternariol is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of alternariol in ethanol is approximately 0.5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Alternariol is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, alternariol should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. Alternariol has a solubility of approximately 0.5 mg/ml in a 1:1 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Alternariol is a mycotoxin, a toxic secondary fungal metabolite, produced by *Alternaria* molds. It is cytotoxic, fetotoxic, teratogenic, mutagenic, and genotoxic.<sup>1</sup> It induces cytochrome P450 1A1 expression and apoptosis in mouse hepatoma cells (20-40  $\mu\text{M}$ ).<sup>2</sup> Alternariol, whose synthesis is inhibited by light, naturally occurs on fruits, vegetables, and cereals, such as apples, tomatoes, and wheat.<sup>3</sup>

### References

1. Siegel, D., Troyanov, S., Noack, J., *et al.* Alternariol. *Acta Crystallogr. Sect. E Structure Rep. Online* **66**(Pt 6), o1366 (2010).
2. Schreck, I., Deigendesch, U., Burkhardt, B., *et al.* The *alternaria* mycotoxins alternariol and alternariol methyl ether induce cytochrome P450 1A1 and apoptosis in murine hepatoma cells dependent on the aryl hydrocarbon receptor. *Arch. Toxicol.* **86**(4), 625-632 (2011).
3. Häggblom, P. and Unestam, T. Blue light inhibits mycotoxin production and increases total lipids and pigmentation in *Alternaria alternata*. *Appl. Environ. Microbiol.* **38**(6), 1074-1077 (1979).

#### 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

Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 12/14/2022

#### CAYMAN CHEMICAL

1180 EAST ELLSWORTH RD  
ANN ARBOR, MI 48108 · USA

PHONE: [800] 364-9897  
[734] 971-3335

FAX: [734] 971-3640

CUSTSERV@CAYMANCHEM.COM  
WWW.CAYMANCHEM.COM