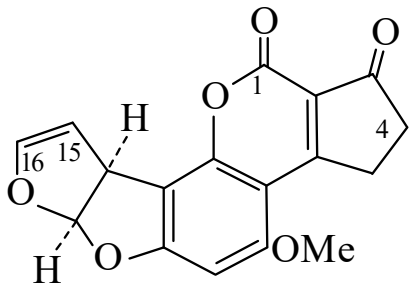
>>**Entry Name: Aflatoxin B_1**
ENTRY UNDER REVIEW
Synonym(s): 2,3,6*a*,9*a*-Tetrahydro-4-methoxycyclopenta[*c*]furo[3,2':4,5]furo[2,3-*h*][1]benzopyran-1,11-dione, 9Cl. Aflatoxin FB_1. Aflatoxin B



(_)-*form*

CAS Registry Number: 1162-65-8
Related CAS Registry Numbers(s): 42583-46-0

Molecular Formula: $C_{17}H_{12}O_6$
Molecular Weight: 312.278
Accurate Mass: 312.06339
Percentage Composition: C 65.39%; H 3.87%; O 30.74%
Solubility: BERDY SOL: Sol. MeOH, $CHCl_3$; poorly sol. hexane
UV: [neutral] λ_{max} 220 (ε 25600); 265 (ε 13400); 362 (ε 21800) (MeOH) (Berdy) [neutral] λ_{max} 223 (ε 25100); 265 (ε 13400); 362 (ε 21800) (EtOH) (Berdy)
Hazard & Toxicity: BERDY HAZD : LD_{50} (mus, orl) 1 mg/kg

Aldrich: 85620-7
Sigma: A6636
Supelco: R42-6050

>>**Variant:** (–)-form

Molecular Formula: $C_{17}H_{12}O_6$
Molecular Weight: 312.278
Accurate Mass: 312.06339
Percentage Composition: C 65.39%; H 3.87%; O 30.74%
Biological Source: Isol. from *Aspergillus flavus* and *Aspergillus parasiticus*
Use/Importance: Toxin causing Turkey X disease. One of the most potent carcinogens known in animals. Potential food containment esp. grains and nuts
Physical Description: Cryst. exhibiting blue fluor.
Melting Point: Mp 268-269 dec.°
Optical Rotation: $[\alpha]_D^{25}$ –562 (c, 0.115 in $CHCl_3$)
Hazard & Toxicity: Human and exp. carcinogen; LD_{50} (rat, orl) 5 mg/kg. Exp. reprod. and teratogenic effects. Hepatotoxic. Crystalline material, e.g. from preparative tlc plates, presents an inhalation hazard because the crystals develop electrostatic charge and cling to dust particles

>>**Derivative:** 15,16-Dihydro
Synonym(s): Aflatoxin B_2

CAS Registry Number: 7220-81-7

Molecular Formula: $C_{17}H_{14}O_6$
Molecular Weight: 314.294
Accurate Mass: 314.07904
Percentage Composition: C 64.97%; H 4.49%; O 30.54%
Biological Source: Metab. of *Aspergillus flavus*
Use/Importance: Mycotoxin
Physical Description: Yellow cryst. with blue fluor. (MeOH)
Melting Point: Mp 310 dec.°
Optical Rotation: $[\alpha]_D^{23}$ –492 (c, 0.1 in $CHCl_3$)
Solubility: BERDY SOL: Sol. MeOH, $CHCl_3$; poorly sol. hexane
UV: [neutral] λ_{max} 222 (ε 19600); 265 (ε 9200); 363 (ε 14700) (MeOH) (Berdy) [neutral] λ_{max} 220 (ε 20800); 265 (ε 12700); 363 (ε 24000) (EtOH) (Berdy)
Hazard & Toxicity: Human and exp. carcinogen. LD_{50} (dck, orl) 1.7 mg/kg. Hepatotoxic

Aldrich: 85621-5
Sigma: A9887
Supelco: R42-6040