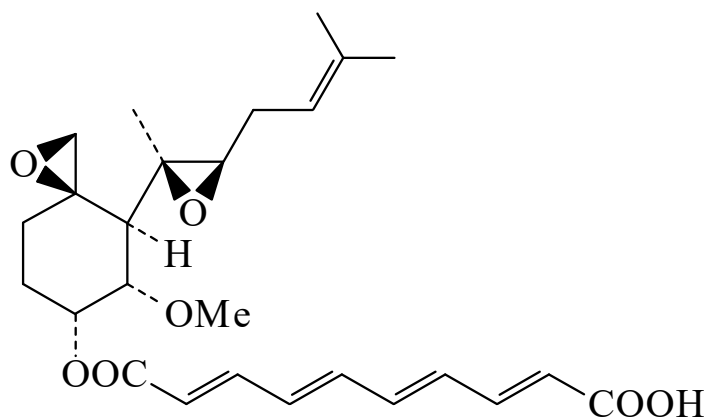




>>Entry Name: Fumagillin, BAN, INN

Synonym(s): Phagopedin sigma. Amebacilin. Fumidil. Fugillin. Amebex. Fumadil B. NSC 9168. U 5762



CAS Registry Number: 23110-15-8

Molecular Formula: C₂₆H₃₄O₇

Molecular Weight: 458.55

Accurate Mass: 458.230455

Percentage Composition: C 68.10%; H 7.47%; O 24.42%

Biological Source: Isol. from *Aspergillus fumigatus* H3 and *Penicillium nigricans*

Use/Importance: Antibiotic, with antiphage and amoebicidal props. Inhibits RNA synthesis of *Octosporea muscae-domesticae*. Of limited use for the treatment of drug-resistant intestinal amoebiasis

Physical Description: Yellow needles (MeOH aq.)

Melting Point: Mp 189-194°

Optical Rotation: $[\alpha]_D^{25} -26.6$ (MeOH)

Solubility: Sol. dil. alkalis; insol. hydrocarbons, H₂O; BERDY SOL: Sol. MeOH, bases, CHCl₃; fairly sol. H₂O; poorly sol. Et₂O, acids, hexane

Calculated Log P Data: Log P 2.63 (calc)

UV: [neutral] $\lambda_{\max}$ 239 (ϵ 6870); 320 (sh) (ϵ 48000); 336 (ϵ 68700); 352 (ϵ 61800) (EtOH) (Derep) [neutral] $\lambda_{\max}$ 239 (E1%/1cm 75); 336 (E1%/1cm 1464); 351 (E1%/1cm 1335) (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 239 (); 304 (); 322 (); 336 (); 351 () (EtOH) (Berdy)

Other Data: Best stored in dark, evac. ampoules at low temp.

Hazard & Toxicity: LD₅₀ (mus, orl) 2000 mg/kg. Exp. reprod. and teratogenic effects ; BERDY HAZD : LD₅₀ (mus, scu) 800 mg/kg , LD₅₀ (mus, orl) 2000 mg/kg

Sigma: F6771

>>Derivative: Dicyclohexylamine salt

Melting Point: Mp 147-148 dec.°

>>Derivative: Me ester

Molecular Formula: C₂₇H₃₆O₇

Molecular Weight: 472.577

Accurate Mass: 472.246105

Percentage Composition: C 68.62%; H 7.68%; O 23.70%

Physical Description: Needles (MeOH aq.)

Melting Point: Mp 151-152°

>>Derivative: Bis-2,4-dinitrophenylhydrazone

Melting Point: Mp 123-126°

>>Derivative: 2'Z-Isomer

Synonym(s): *cis*-Fumagillin

Molecular Formula: C₂₆H₃₄O₇

Molecular Weight: 458.55

Accurate Mass: 458.230455

Percentage Composition: C 68.10%; H 7.47%; O 24.42%

Biological Source: Prod. by *Penicillium* sp. F2757

Biological Use/Importance: Methionine aminopeptidase inhibitor

Physical Description: Amorph. yellow solid (as Me ester)

Optical Rotation: $[\alpha]_D +0.3$ (MeOH) (Me ester)