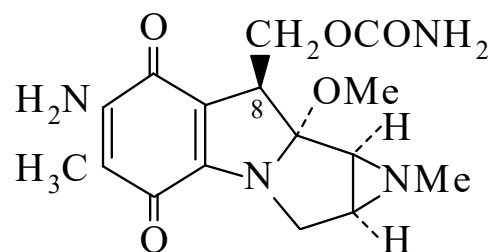




>>Entry Name: **Porfiromycin**, BAN, INN, USAN

Synonym(s): Methylmitomycin C. Mitiomycin D. NSC 56410



CAS Registry Number: 801-52-5

Molecular Formula: C₁₆H₂₀N₄O₅

Molecular Weight: 348.358

Accurate Mass: 348.143371

Percentage Composition: C 55.17%; H 5.79%; N 16.08%; O 22.96%

Source/Synthesis: Isol. from the fermentation broth of *Streptomyces ardens*

Use/Importance: Antibacterial and antineoplastic agent

Physical Description: Purple triclinic cryst.

Development Status: Discontinued

Melting Point: Mp 201-201.5 dec.°

Optical Rotation: $[\alpha]_D^{25} +275$ (c, 0.1 in MeOH)

Solubility: BERDY SOL: Fairly sol. H₂O, C₆H₆, CHCl₃, Me₂CO; poorly sol. Et₂O, hexane

Calculated Log P Data: Log P -2.18 (uncertain value) (calc)

UV: [neutral] $\lambda_{\max}$ 217 (ϵ 24600); 245 (sh) (ϵ 11000); 360 (ϵ 23000); 558 (ϵ 209) (MeOH) (Derep) [neutral] $\lambda_{\max}$ (MeOH) (Berdy)

Hazard & Toxicity: LD₅₀ (rat, orl) 68 mg/kg ; BERDY HAZD : LD₅₀ (mus, ipr) 20 mg/kg

Sigma: P9021

>>Derivative: O-De-Me

Synonym(s): **Mitomycin D**. 6-Amino-6-demethoxymitomycin B

CAS Registry Number: 10169-34-3

Molecular Formula: C₁₅H₁₈N₄O₅

Molecular Weight: 334.331

Accurate Mass: 334.127721

Percentage Composition: C 53.89%; H 5.43%; N 16.76%; O 23.93%

Source/Synthesis: From *Streptomyces caespitosus*, also semisynthetic

Use/Importance: Shows antileukaemic props.

Physical Description: Dark bluish-purple prisms (C₆H₆/MeOH)

Melting Point: Mp 234-236°

UV: [neutral] $\lambda_{\max}$ 217 (); 361 (); 558 () (MeOH) (Berdy)

>>Derivative: 8-Epimer

Synonym(s): **Mitomycin E**

CAS Registry Number: 74707-94-1

Molecular Formula: C₁₆H₂₀N₄O₅

Molecular Weight: 348.358

Accurate Mass: 348.143371

Percentage Composition: C 55.17%; H 5.79%; N 16.08%; O 22.96%

Source/Synthesis: Semisynthetic

Use/Importance: Shows antileukaemic props.

UV: [neutral] $\lambda_{\max}$ 217 (ϵ 17800); 361 (ϵ 19100); 558 (ϵ 215) (MeOH) (Berdy)

References:

- Webb, T. *et al.*, *J.A.C.S.*, 1962, **84**, 3185; 3187, (*struct*)
Carter, S.K., *Cancer Chemother. Rep.*, Suppl., 1968, **1**, 81, (*rev, pharmacol*)
v. Lear, G.E., *Tetrahedron*, 1970, **26**, 2587, (*struct, ms*)
Nakatsubo, F. *et al.*, *J.A.C.S.*, 1977, **99**, 8115, (*synth, ir, pmr*)
Iyengar, B.S. *et al.*, *J. Med. Chem.*, 1981, **24**, 975, (*analogs, props*)
Andrews, P.A. *et al.*, *J. Chromatogr.*, 1983, **262**, 231, (*hplc, ms*)
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, MLY000