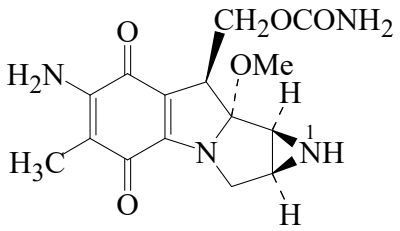
>>**Entry Name: Mitomycin C,** JAN
Synonym(s): Mitomycin, BAN, INN, USAN**.** Mitomycin S. Mitiromycin E. Ametycine. Mitocin C. Mutamycin. NSC 26980



CAS Registry Number: 50-07-7
Related CAS Registry Numbers(s): 52081-33-1

Molecular Formula: $C_{15}H_{18}N_4O_5$
Molecular Weight: 334.331
Accurate Mass: 334.127721
Percentage Composition: C 53.89%; H 5.43%; N 16.76%; O 23.93%

Biological Source: Isol. from *Streptomyces verticillatus*
Use/Importance: Antineoplastic antibiotic
Physical Description: Deep blue-violet cryst.
Melting Point: Mp 360°
Solubility: Sol. H_2O, MeOH, Me_2CO; BERDY SOL: Sol. MeOH, $CHCl_3$, acids; fairly sol. H_2O, C_6H_6, Et_2O; poorly sol. hexane
Calculated Log P Data: Log P –3.04 (uncertain value) (calc)
UV: [neutral] λ_{max} 217 (ε 24600); 245 (sh) (ε 11000); 360 (ε 23000); 558 (ε 209) (MeOH) (Derep) [neutral] λ_{max} 216 (ε 21880); 254 (); 360 (ε 21400); 420 (); 555 (ε 235) (MeOH) (Berdy) [neutral] λ_{max} 216 (E1%/1cm 742); 360 (E1%/1cm 742); 560 (E1%/1cm 0.06) (H_2O) (Berdy)
Other Data: λ_{max} 216, 360 and 560 nm. Mitomycin S was shown to be a mixt. of Mitomycin C with NaCl. Struct. revised in 1983
Hazard & Toxicity: Adverse systemic effects reported when used therapeutically incl. bone-marrow depression, gastrointestinal, renal, pulmonary and cardiac toxicity. A possible human carcinogen. LD_{50} (rat, orl) 30 mg/kg. Exp. carcinogen. Exp. reprod. and teratogenic effects ; BERDY HAZD : LD_{50} (mus, ivn) 5 mg/kg , LD_{50} (mus, ipr) 9 mg/kg

Aldrich: 85549-9
Sigma: M4287

>>**Derivative:** *N*-Me

>>**Derivative:** N^1-(3-Oxobutyl)
Synonym(s): Antibiotic MMC 4. MMC 4. *N*-(3-Oxobutyl)mitomycin C

CAS Registry Number: 183997-07-1
Molecular Formula: $C_{19}H_{24}N_4O_6$
Molecular Weight: 404.422
Accurate Mass: 404.169586
Percentage Composition: C 56.43%; H 5.98%; N 13.85%; O 23.74%
Biological Source: Prod. by *Streptoverticillium* sp. A1143
Biological Use/Importance: Antitumour agent
Physical Description: Red-violet cryst.
Optical Rotation: $[\alpha]_D$ +270 (MeOH)
Solubility: BERDY SOL: Sol. MeOH, EtOAc; poorly sol. H_2O
UV: [neutral] λ_{max} 216 (); 360 () (MeOH) [neutral] λ_{max} 216 (E1%/1cm 547); 360 (E1%/1cm 505) (MeOH) (Berdy)

>>**Derivative:** Stereoisomer

CAS Registry Number: 87139-12-6
Molecular Formula: $C_{15}H_{18}N_4O_5$
Molecular Weight: 334.331
Accurate Mass: 334.127721
Percentage Composition: C 53.89%; H 5.43%; N 16.76%; O 23.93%
Biological Source: Prod. by *Streptomyces caespitosus* and *Micromonospora* sp.
Use/Importance: Active against gram-positive and -negative bacteria
Physical Description: Cryst.
Melting Point: Mp 120° (grad. dec.)
Optical Rotation: $[\alpha]_D^{26}$+34.7 (c, 0.3 in $CHCl_3$)
Solubility: BERDY SOL: Sol. MeOH, Me_2CO; poorly sol. H_2O, hexane
UV: [neutral] λ_{max} 243 (ε 5000); 344 (ε 6300) (MeOH) (Berdy)