



Biological Source: Isol. from *Micromonospora* sp. nov.

Biological Use/Importance: Antibacterial and cytotoxic agent

Melting Point: Mp 163-164 dec.° (as hydrochloride)

Optical Rotation: $[\alpha]_D^{23} +107$ (c, 0.2 in MeOH)

Solubility: BERDY SOL: Sol. MeOH, AcOH, acids, Py, CHCl₃; poorly sol. Et₂O, hexane, H₂O

UV: [neutral] $\lambda_{\max}$ 228 (E1%/1cm 640); 260 (E1%/1cm 410); 418 (E1%/1cm 179) (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 235 (E1%/1cm 605); 262 (E1%/1cm 400); 426 (E1%/1cm 160) (pH 7 buffer) (Berdy) [base] $\lambda_{\max}$ 510 (E1%/1cm 118) (NaOH) (Berdy)

>>**Derivative:** 11-Deoxy, 13-deoxo

Synonym(s): 11-Deoxy-13-deoxodaunorubicin

CAS Registry Number: 71800-92-5

Extra CAS Registry Numbers(s): 73890-45-6

Molecular Formula: C₂₇H₃₁NO₈

Molecular Weight: 497.544

Accurate Mass: 497.204969

Percentage Composition: C 65.18%; H 6.28%; N 2.82%; O 25.73%

Biological Source: Isol. from *Micromonospora* sp. nov.

Biological Use/Importance: Antibacterial and cytotoxic agent

Melting Point: Mp 140-150 dec.° (as hydrochloride)

Optical Rotation: $[\alpha]_D^{23} +122$ (c, 0.2 in MeOH)

Solubility: BERDY SOL: Sol. MeOH, AcOH, Py, acids, CHCl₃; poorly sol. Et₂O, hexane, H₂O

UV: [neutral] $\lambda_{\max}$ 228 (E1%/1cm 610); 260 (E1%/1cm 395); 418 (E1%/1cm 171) (MeOH) (Berdy) [neutral] $\lambda_{\max}$ 235 (E1%/1cm 550); 262 (E1%/1cm 400); 426 (E1%/1cm 140) (pH 7 buffer) (Berdy)

>>**Derivative:** 8-Deoxy, 7,8-didehydro

Synonym(s): 9,10-Anhydrodaunomycin. 9,10-Anhydrodaunorubicin. D 788-13. Antibiotic D 788-13

Molecular Formula: C₂₇H₂₇NO₉

Molecular Weight: 509.512

Accurate Mass: 509.168584

Percentage Composition: C 63.65%; H 5.34%; N 2.75%; O 28.26%

Biological Source: Prod. by *Streptomyces* sp. D788

Physical Description: Red-brown powder

Melting Point: Mp 155-160 dec.°

Optical Rotation: $[\alpha]_D +258$ (c, 0.01 in CHCl₃)

Solubility: BERDY SOL: Sol. MeOH, CHCl₃; poorly sol. H₂O, hexane

UV: [neutral] $\lambda_{\max}$ 234 (E1%/1cm 813); 254 (E1%/1cm 461); 293 (E1%/1cm 160); 492 (E1%/1cm 293) (MeOH) (Berdy)

>>**Derivative:** Aglycone

Synonym(s): 8-Acetyl-7,8,9,10-tetrahydro-6,8,10,11-tetrahydroxy-1-methoxy-5,12-naphthacenedione, 9Cl, 8Cl. Daunomycinone. Daunorubicinone. Leukaemomycinone

CAS Registry Number: 21794-55-8

Molecular Formula: C₂₁H₁₈O₈

Molecular Weight: 398.368

Accurate Mass: 398.10017

Percentage Composition: C 63.32%; H 4.55%; O 32.13%

Melting Point: Mp 213-214°

Optical Rotation: $[\alpha]_D^{20} +193$ (c, 0.1 in dioxan)

>>**Derivative:** Aglycone, tetra-Ac

CAS Registry Number: 32384-96-6

Molecular Formula: C₂₉H₂₆O₁₂

Molecular Weight: 566.517

Accurate Mass: 566.14243

Percentage Composition: C 61.48%; H 4.63%; O 33.89%

Melting Point: Mp 225°