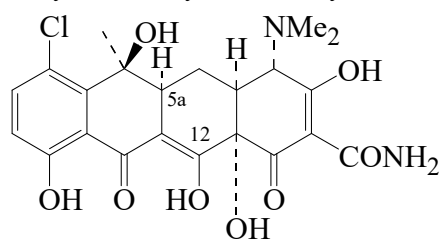




>>Entry Name: Aureomycin

Synonym(s): Chlorotetracycline. **Chlortetracycline**, BAN, INN. Biomycin. Duomycin. Aureocycline. Aureomykoin. Many other names



CAS Registry Number: 57-62-5

Molecular Formula: C₂₂H₂₃ClN₂O₈

Molecular Weight: 478.885

Accurate Mass: 478.114295

Percentage Composition: C 55.18%; H 4.84%; Cl 7.40%; N 5.85%; O 26.73%

General Statement: Tetracycline antibiotic

Biological Source: Isol. from *Streptomyces aureofaciens*, *Streptomyces alboflavus*, *Streptomyces psammoticus* and *Streptomyces sayamaensis*

Use/Importance: Widely used antiprotozoal and antibacterial antibiotic used in undulant fever, pneumonia, sinusitis and bacterial endocarditis

Physical Description: Golden-yellow cryst.

Melting Point: Mp 168-169°

Optical Rotation: $[\alpha]_D^{23}$ -275 (MeOH)

Solubility: Sl. sol. H₂O, EtOH, C₆H₆; insol. Et₂O; BERDY SOL: Sol. acids, bases, MeOH, Py, EtOH; fairly sol. butanol, Me₂CO, C₆H₆, EtOAc; poorly sol. H₂O, Et₂O, hexane

Calculated Log P Data: Log P -1.04 (calc)

UV: [acid] $\lambda_{\max}$ 230 (ϵ 20800); 265 (ϵ 21100); 370 (ϵ 13800) (0.1N HCl) (Derep) [base] $\lambda_{\max}$ 255 (ϵ); 285 (ϵ); 345 (ϵ) (0.1N NaOH) (Derep) [neutral] $\lambda_{\max}$ 230 (ϵ 20000); 275 (ϵ 21000); 368 (ϵ 14000) (H₂O) (Derep) [neutral] $\lambda_{\max}$ 228 (E1%/1cm 700); 272 (E1%/1cm 690); 368 (E1%/1cm 380) (H₂O) (Berdy) [acid] $\lambda_{\max}$ 224 (E1%/1cm 639); 261 (E1%/1cm 648); 373 (E1%/1cm 372) (HCl) (Berdy) [base] $\lambda_{\max}$ 256 (); 286 (); 350 () (NAOH) (Berdy)

Hazard & Toxicity: Gastrointestinal and other adverse effects reported when used therapeutically. LD₅₀ (dog, ivn) 150 mg/kg. LD₅₀ (mus, orl) 1500 mg/kg. Exp. reprod. effects ; BERDY HAZD : LD₅₀ (mus, ivn) 134 mg/kg , LD₅₀ (mus, ipr) 200 mg/kg , LD₅₀ (mus, scu) 3500 mg/kg

Sigma: C8131

>>Derivative: Hydrochloride

Synonym(s): Chlortetracycline hydrochloride, USAN. Aureocort. Trimorate. NSC 13252

CAS Registry Number: 64-72-2

Physical Description: Yellow cryst.

Melting Point: Mp 210 dec.°

Optical Rotation: $[\alpha]_D^{23}$ -240 (H₂O)

Hazard & Toxicity: LD₅₀ (rat, orl) approx. 10000mg/kg. LD₅₀ (mus, ivn) 101 mg/kg. Exp. reprod. effects

Aldrich: 27180-2

Fluka: 26430

Sigma: C4881

>>Derivative: Sulfate

Synonym(s): Chlortetracycline bisulfate, USAN

>>Derivative: Compd. with N,N'-dibenzylethylenediamine (2:1)

Synonym(s): Dibiomycin

CAS Registry Number: 1111-27-9

>>Derivative: $\Delta^{5a,11a}$ -Isomer, 12-ketone

Synonym(s): 7-Chloro-5a(11a)-didehydrotetracycline. 7-Chloro-5a(11a)-dehydrotetracycline

Molecular Formula: C₂₂H₂₁ClN₂O₈

Molecular Weight: 476.869

Accurate Mass: 476.098645

Percentage Composition: C 55.41%; H 4.44%; Cl 7.43%; N 5.87%; O 26.84%

Biological Source: Prod. by *Streptomyces aureofaciens*

Physical Description: Yellow cryst. (as hydrochloride)

Optical Rotation: $[\alpha]_D$ +15.5 (HCl aq.)

UV: [neutral] $\lambda_{\max}$ 221 (ϵ 27500); 251 (ϵ 23000); 375 (ϵ 4300) (MeOH) [neutral] $\lambda_{\max}$ 221 (ϵ 27500); 251 (ϵ 23000); 375 (ϵ 4300) (MeOH) (Berdy)