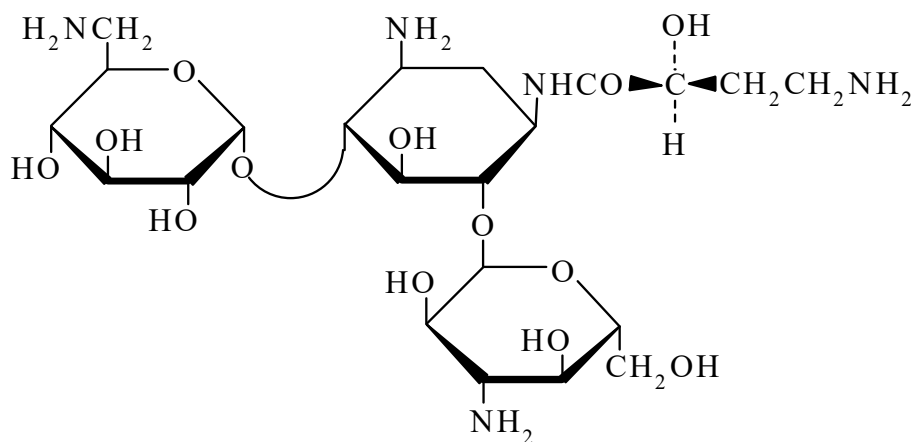




>>Entry Name: Amikacin, BAN, INN, USAN

Synonym(s): 1-*N*-(4-Amino-2-hydroxybutyryl)kanamycin. Amikin. Akim. Biclin. Chemacin. Flexelite. Negasin. Antibiotic BB-K8. BB-K8. Many other names



CAS Registry Number: 37517-28-5

Related CAS Registry Numbers(s): 40732-88-5 50896-99-6 50897-00-2 56086-43-2 75282-58-5

Molecular Formula: C₂₂H₄₃N₅O₁₃

Molecular Weight: 585.607

Accurate Mass: 585.28574

Percentage Composition: C 45.12%; H 7.40%; N 11.96%; O 35.52%

General Statement: Aminoglycoside antibiotic

Source/Synthesis: Semisynthetically derived from Kanamycin A [CJR88-R](#)

Use/Importance: Shows antimicrobial activity incl. synergism with third-generation cephalosporins

Physical Description: Cryst. + 6H₂O (MeOH/2-propanol)

Melting Point: Mp 203-204 dec.°

Optical Rotation: [α]_D²³+99 (c, 1 in H₂O)

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

Calculated Log P Data: Log P -9.09 (uncertain value) (calc)

UV: [neutral] λ_{max} (H₂O) (Berdy)

Hazard & Toxicity: Main adverse effects are ototoxicity and nephrotoxicity. LD₅₀ (mus, ipr) 750 mg/kg. Exp. fetotoxic and teratogenic effects ; BERDY HAZD : LD₅₀ (mus, ivn) 340 mg/kg , LD₅₀ (mus, ivn) 560 mg/kg

Fluka: 6568

Sigma: A3650

>>Derivative: Sulfate (1:2)

Synonym(s): Amikacin sulfate, JAN, USAN. Biklin. Novamin

CAS Registry Number: 39831-55-5

Physical Description: Amorph.

Melting Point: Mp 220-230 dec.°

Optical Rotation: [α]_D²²+74 (H₂O)

Fluka: 6569

Sigma: A1774

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