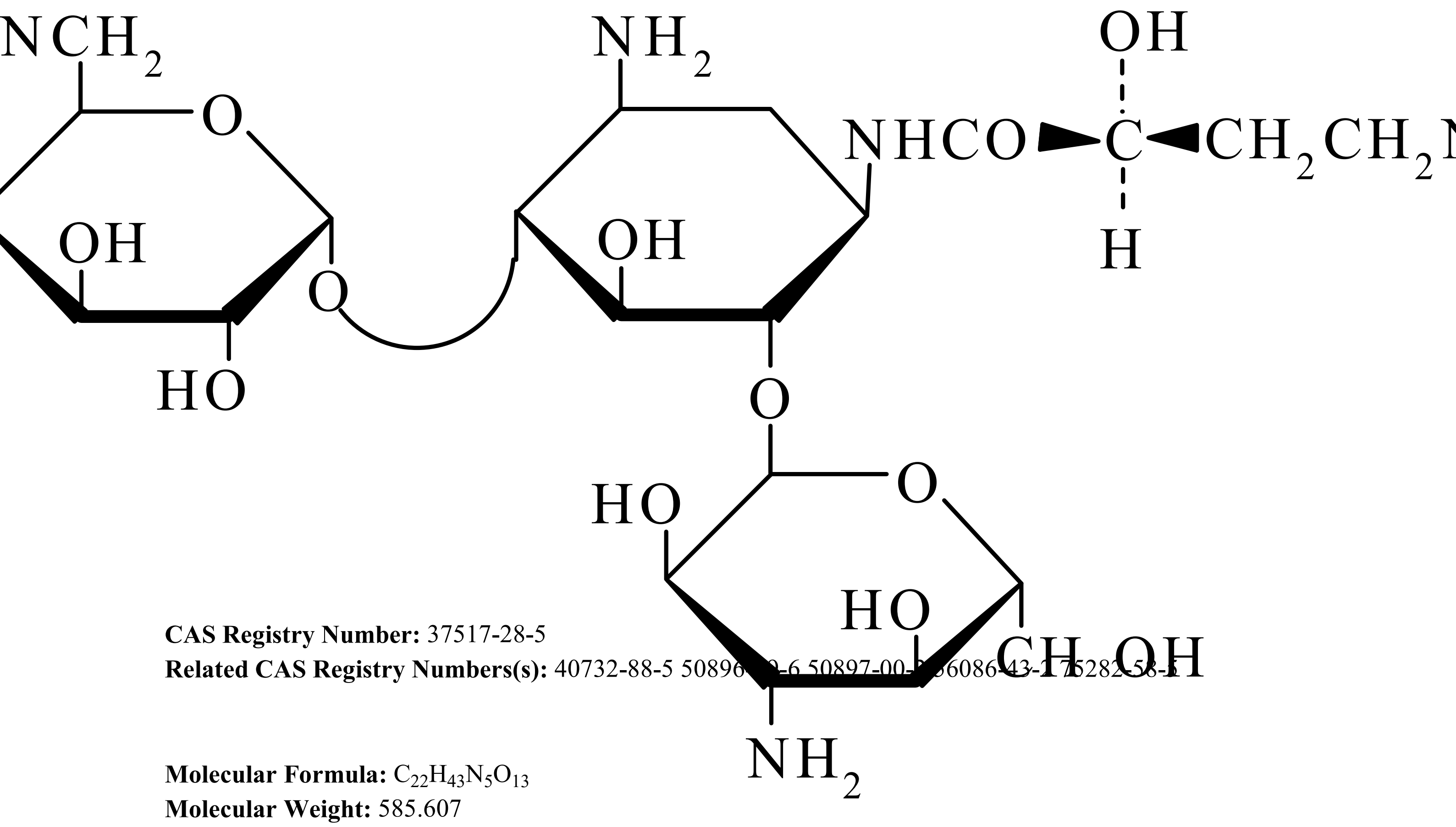
>>**Entry Name: Amikacin,** BAN, INN, USAN

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-[illegible]-6 50897-00-[illegible] [illegible]6086-43-[illegible] 75282-58-5

Molecular Formula: $C_{22}H_{43}N_5O_{13}$

Molecular Weight: 585.607

Accurate Mass: 585.28574

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

Source/Synthesis: Semisynthetically derived from Kanamycin A CJR88-R

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

Physical Description: Cryst. + $6H_2O$ (MeOH/2-propanol)

Melting Point: Mp 203-204 dec.°

Optical Rotation: $[\alpha]_D^{23}$+99 (c, 1 in H_2O)

Solubility: BERDY SOL: Sol. H_2O, MeOH; poorly sol. butanol, hexane

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

UV: [neutral] λ_{max} (H_2O) (Berdy)

Hazard & Toxicity: Main adverse effects are ototoxicity and nephrotoxicity. LD_{50} (mus, ipr) 750 mg/kg. Exp. fetotoxic and teratogenic effects ; BERDY HAZD : LD_{50} (mus, ivn) 340 mg/kg , LD_{50} (mus, ivn) 560 mg/kg

Fluka: 6568

Sigma: A3650