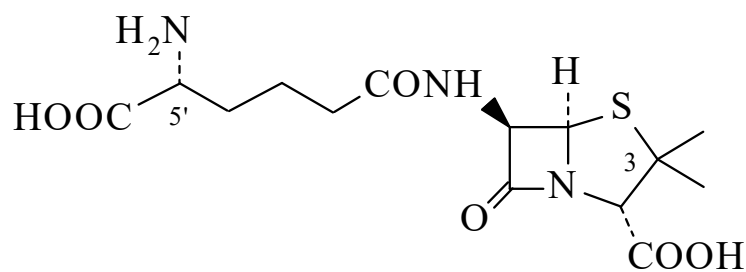




>>Entry Name: Penicillin N

Synonym(s): 6-(5-Amino-5-carboxyvaleramido)penicillanic acid. δ -(α -Aminoadipoyl)penicillin. **Adicillin**, BAN, INN. Addicillin. Intermetin. Salmotin. Synnematin B. Cephalosporin N (incorr.)



CAS Registry Number: 525-94-0

Molecular Formula: C₁₄H₂₁N₃O₆S

Molecular Weight: 359.402

Accurate Mass: 359.115107

Percentage Composition: C 46.79%; H 5.89%; N 11.69%; O 26.71%; S 8.92%

Biological Source: Isol. from fungi and streptomycetes including *Cephalosporium acremonium* and *Streptomyces clavuligerus*. Also from *Cephalosporium salmosynnematum*, *Cephalosporium chrysogenum*, *Paecilomyces persicinus* and *Emericillopsis minima*

Development Status: Discontinued

pKa Value: pK_{a1} 2.8; pK_{a2} 3.2; pK_{a3} 9.8

Calculated Log P Data: Log P -3.31 (calc)

Hazard & Toxicity: LD₅₀ (mus, ipr) 5000 mg/kg

>>Derivative: Ba salt

Physical Description: Powder

Optical Rotation: [α]_D²⁰ +187 (c, 0.6 in H₂O)

Solubility: Sol. H₂O

>>Derivative: 5'-Epimer

Synonym(s): Isopenicillin N. Penicillin M

CAS Registry Number: 58678-43-6

Biological Source: From *Penicillium chrysogenum* and *Streptomyces tokunonensis*

Use/Importance: Less biol. active than Penicillin N

UV: [neutral] $\lambda_{\max}$ (H₂O) (Berdy)

>>Derivative: 5'-Epimer, 5'-N-Ac

Synonym(s): N-Acetylpenicillin N

CAS Registry Number: 84713-89-3

Molecular Formula: C₁₆H₂₃N₃O₇S

Molecular Weight: 401.44

Accurate Mass: 401.125672

Percentage Composition: C 47.87%; H 5.77%; N 10.47%; O 27.90%; S 7.99%

Biological Source: From *Streptomyces tokunonensis*

Use/Importance: Active against β -lactam sensitive *E. coli*

>>Derivative: 3-De- α -Me

Synonym(s): Norpenicillin N. Antibiotic 13285A2

Molecular Formula: C₁₃H₁₉N₃O₆S

Molecular Weight: 345.376

Accurate Mass: 345.099457

Percentage Composition: C 45.21%; H 5.54%; N 12.17%; O 27.79%; S 9.28%

Biological Source: From *Streptomyces* sp.