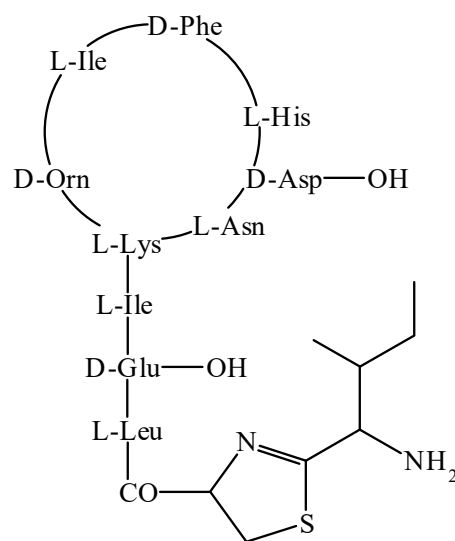




>>Entry Name: Bacitracin A

ENTRY UNDER REVIEW

Synonym(s): Bacilliquin



CAS Registry Number: 22601-59-8

Related CAS Registry Numbers(s): 1405-87-4 1405-89-6

Molecular Formula: C₆₆H₁₀₃N₁₇O₁₆S

Molecular Weight: 1422.71

Accurate Mass: 1421.748943

Percentage Composition: C 55.72%; H 7.30%; N 16.74%; O 17.99%; S 2.25%

General Statement: Cyclic peptide antibiotic

Biological Source: Major component of the polypeptide antibiotic *Bacitracin*, BAN, INN, JAN, USAN elaborated by *Bacillus licheniformis* and *Bacillus subtilis*

Use/Importance: Permitted food additive for animal and human consumption

Biological Use/Importance: Shows prolyl endopeptidase inhibitory activity. Shows broad-spectrum activity, used clinically as topical agent.

Physical Description: Hygroscopic amorph. powder

Optical Rotation: $[\alpha]_D^{23} +5$ (c, 0.1 in 0.02M HCl)

Solubility: BERDY SOL: Sol. H₂O, HCONH₂, 2-propanol, Py, EtOH, MeOH; fairly sol. Me₂CO, butanol, dioxan; poorly sol. EtOAc, hexane

UV: [acid] $\lambda_{\max}$ 270 (ϵ) (12M HCl) (Derep) [neutral] $\lambda_{\max}$ 252 (ϵ 3550) (EtOH) (Derep) [neutral] $\lambda_{\max}$ 254 (E1%/1cm 21.4) (H₂O) (Berdy)

Other Data: Non toxic in human fibroblast cells. Coml. prod. contains small quantities of other components

Hazard & Toxicity: Nephrotoxic effects and hypersensitivity reactions reported from therapeutic use (intramuscular administration). LD₅₀ (rat, ipr) 190 mg/kg. LD₅₀ (gpg, orl) 2000 mg/kg (Bacitracin) ; BERDY HAZD : LD₅₀ (mus, ivn) 360 mg/kg , LD₅₀ (mus, ipr) 200 - 640 mg/kg , LD₅₀ (mus, scu) 1300 - 2500 mg/kg

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