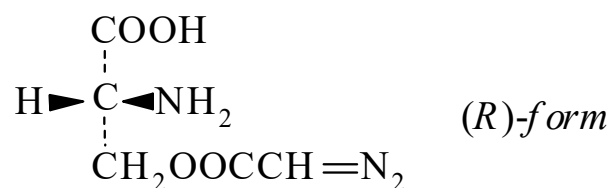




>>Entry Name: Azaserine, INN, USAN

Synonym(s): Serine diazoacetate ester, gCl. Serine *O*-diazoacetate. *O*-Diazoacetylserine



Molecular Formula: C₅H₇N₃O₄

Molecular Weight: 173.128

Accurate Mass: 173.043657

Percentage Composition: C 34.69%; H 4.08%; N 24.27%; O 36.97%

General Statement: Amino acid antibiotic

Use/Importance: Glutamine antagonist which inhibits purine biosynthesis; antifungal and antineoplastic agent

Solubility: BERDY SOL: Sol. H₂O; fairly sol. MeOH, Me₂CO, EtOH; poorly sol. EtOAc, hexane

UV: [neutral] λ_{max} 251 (ε 19650) (EtOH) (Derep) [neutral] λ_{max} 250 (E1%/1cm 1140) (pH 7 buffer) (Berdy) [base] λ_{max} 252 (E1%/1cm 1230) (NaOH) (Berdy) [neutral] λ_{max} 250 () (H₂O) (Berdy)

Hazard & Toxicity: Possible human carcinogen. LD₅₀ (rat, orl) 170 mg/kg. Exp. carcinogen and neoplastic agent. Exp. reprod. and teratogenic effects ; BERDY HAZD : LD₅₀ (mus, scu) 50 mg/kg , LD₅₀ (mus, ivn) 62 - 124 mg/kg

>>Variant: (*R*)-form

Synonym(s): D-form

Molecular Formula: C₅H₇N₃O₄

Molecular Weight: 173.128

Accurate Mass: 173.043657

Percentage Composition: C 34.69%; H 4.08%; N 24.27%; O 36.97%

Physical Description: Yellow cryst.

Melting Point: Mp 153-155 dec.°

Optical Rotation: [α]_D²⁶ +0.4 (c, 5.57 in H₂O)

>>Variant: (*S*)-form

Synonym(s): L-form. Antibiotic LL D05139α. CI 337. CN 15757. LL D05139α. NSC 742. P 165

CAS Registry Number: 115-02-6

Molecular Formula: C₅H₇N₃O₄

Molecular Weight: 173.128

Accurate Mass: 173.043657

Percentage Composition: C 34.69%; H 4.08%; N 24.27%; O 36.97%

Biological Source: Isol. from *Streptomyces fragilis*, *Glycomyces harbinensis*, *Actinoplanes deccanensis* and *Microtetraspora glauca*

Physical Description: Light yellow needles (EtOH aq.)

Melting Point: Mp 146-162 dec., 153-155° dec.°

Optical Rotation: [α]_D^{27.5} -0.5 (H₂O, pH 5.18). [α]_D²⁸ +9.7 (2M HCl)

UV: [acid] λ_{max} 0 (end) (ε) (pH 2/2 h) (Derep) [base] λ_{max} 250 (ε 15000) (pH 12) (Derep) [neutral] λ_{max} 250 (ε 15500) (MeOH) (Derep)

Other Data: Pharmacol. active isomer

Fluka: 11430

Sigma: A4142

>>Variant: (±)-form

Molecular Formula: C₅H₇N₃O₄

Molecular Weight: 173.128

Accurate Mass: 173.043657

Percentage Composition: C 34.69%; H 4.08%; N 24.27%; O 36.97%

Melting Point: Mp 153-155 dec.°

References: