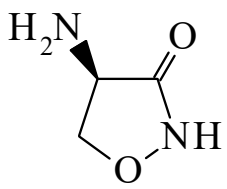
>>**Entry Name: 4-Amino-3-isoxazolidinone,** 9CI, 8CI
Synonym(s): Cycloserine, BAN, INN, USAN**.** Cyclomycin. Closina. Micoserina. Farmiserina. Orientomycin. Oxymycin. Antibiotic 106-7. Antibiotic 5915. Antibiotic 8217. Antibiotic 17452. Antibiotic E 733A. Antibiotic I 1431. Antibiotic K 300. Antibiotic NJ 21. Antibiotic PA 94. Antibiotic Ro 1-9213. Oxamycin. Seromycin. Orientmycin. Many other names



(*R*)-*form*

CAS Registry Number: 4834-58-6
Related CAS Registry Numbers(s): 339-72-0

Molecular Formula: $C_3H_6N_2O_2$
Molecular Weight: 102.093
Accurate Mass: 102.042928
Percentage Composition: C 35.29%; H 5.92%; N 27.44%; O 31.34%
UV: [neutral] λ_{max} 226 (ε 4140) (H_2O) (Derep)

>>**Variant:** (*R*)-form

CAS Registry Number: 68-41-7
Molecular Formula: $C_3H_6N_2O_2$
Molecular Weight: 102.093
Accurate Mass: 102.042928
Percentage Composition: C 35.29%; H 5.92%; N 27.44%; O 31.34%
Biological Source: Prod. by *Streptomyces garyphalus, Streptomyces orchidaceus, Streptomyces lavendulae* and *Streptomyces nagasakiensis*
Use/Importance: Shows antibiotic activity primarily against mycobacteria. Tuberculostatic
Physical Description: Cryst.
Melting Point: Mp 155-156 dec.°
Optical Rotation: $[\alpha]_D^{23}$+116 (c, 1.17 in H_2O)
Solubility: Sol. H_2O, alkalis
Other Data: Of limited clinical use due to toxicity
Hazard & Toxicity: CNS adverse effects reported when used therapeutically. LD_{50} (mus, orl) 5290 mg/kg

Aldrich: 85857-9
Fluka: 30020
Sigma: C6880

>>**Derivative:** *N*-Ac

Molecular Formula: $C_5H_8N_2O_3$
Molecular Weight: 144.13
Accurate Mass: 144.053493
Percentage Composition: C 41.67%; H 5.59%; N 19.44%; O 33.30%
Physical Description: Needles
Melting Point: Mp 179-180°

>>**Derivative:** *N*,*N*'-Di-Ac

Molecular Formula: $C_7H_{10}N_2O_4$
Molecular Weight: 186.167
Accurate Mass: 186.064058
Percentage Composition: C 45.16%; H 5.41%; N 15.05%; O 34.38%
Physical Description: Chunky needles (Me_2CO)
Melting Point: Mp 121-122°

>>**Variant:** (*S*)-form
Synonym(s): Levcycloserine, INN, USAN

CAS Registry Number: 339-72-0
Molecular Formula: $C_3H_6N_2O_2$
Molecular Weight: 102.093
Accurate Mass: 102.042928
Percentage Composition: C 35.29%; H 5.92%; N 27.44%; O 31.34%
Use/Importance: Enzyme inhibitor used in the treatment of Gaucher's disease
Melting Point: Mp 146 dec.°
Optical Rotation: [α]