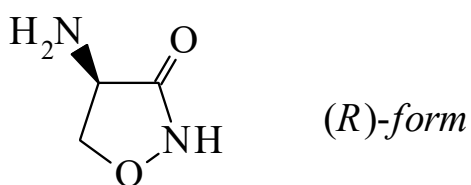




>>>**Entry Name:** 4-Amino-3-isoxazolidinone, 9CI, 8CI

**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



**CAS Registry Number:** 4834-58-6

**Related CAS Registry Numbers(s):** 339-72-0

**Molecular Formula:** C<sub>3</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub>

**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<sub>max</sub> 226 (ε 4140) (H<sub>2</sub>O) (Derep)

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

**CAS Registry Number:** 68-41-7

**Molecular Formula:** C<sub>3</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub>

**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:** [α]<sub>D</sub><sup>23</sup> +116 (c, 1.17 in H<sub>2</sub>O)

**Solubility:** Sol. H<sub>2</sub>O, alkalis

**Other Data:** Of limited clinical use due to toxicity

**Hazard & Toxicity:** CNS adverse effects reported when used therapeutically. LD<sub>50</sub> (mus, orl) 5290 mg/kg

**Aldrich:** 85857-9

**Fluka:** 30020

**Sigma:** C6880

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

**Molecular Formula:** C<sub>5</sub>H<sub>8</sub>N<sub>2</sub>O<sub>3</sub>

**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<sub>7</sub>H<sub>10</sub>N<sub>2</sub>O<sub>4</sub>

**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<sub>2</sub>CO)

**Melting Point:** Mp 121-122°

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

**Synonym(s):** Levycycloserine, INN, USAN

**CAS Registry Number:** 339-72-0

**Molecular Formula:** C<sub>3</sub>H<sub>6</sub>N<sub>2</sub>O<sub>2</sub>

**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]