



>>Entry Name: *N*-Formyl-*N*-hydroxyglycine, 9Cl, 8Cl

Synonym(s): *N*-Formylhydroxyaminoacetic acid. Hadacidin. Asymmetrin

CAS Registry Number: 689-13-4

HOOCCH₂N(OH)CHO

Molecular Formula: C₃H₅NO₄

Molecular Weight: 119.077

Accurate Mass: 119.021859

Percentage Composition: C 30.26%; H 4.23%; N 11.76%; O 53.74%

General Statement: Amino acid antibiotic

Biological Source: Isol. from *Penicillium frequentans*. Also from other *Penicillium* spp. and *Byssoschlamys nivea*

Use/Importance: Antitumour agent and plant growth inhibitor

Physical Description: Unstable cryst. (Me₂CO/petrol)

Melting Point: Mp 119-120°

Solubility: BERDY SOL: Sol. H₂O, EtOH, Et₂O, Me₂CO, MeOH

UV: [neutral] λ_{max} 0 (end) (ε) (H₂O) (Derep) [neutral] λ_{max} (H₂O) (Berdy)

Hazard & Toxicity: LD₅₀ (rat, ipr) 5000 mg/kg. Exp. reprod. and teratogenic effects

>>Derivative: Mono-Na salt

Physical Description: Cryst. + 2H₂O (EtOH aq.)

Melting Point: Mp 191-193°

>>Derivative: Di-Na salt

Physical Description: Cryst.

>>Derivative: Me ester

Physical Description: Cryst. (Me₂CO/petrol)

Melting Point: Mp 71-72°

References:

Kaczka, E.A. *et al.*, *Biochemistry*, 1962, **1**, 340, (*synth*)

Stevens, R.L. *et al.*, *Biochemistry*, 1966, **5**, 74, (*biosynth*)

Shigeura, H.T., *Antibiotics (N.Y.)*, 1967, **1**, 451, (*rev*)

Schoenewaldt, E.F. *et al.*, *J.O.C.*, 1968, **33**, 4270, (*synth*)

Eng-Wilmot, D. *et al.*, *Acta Cryst. B*, 1981, **37**, 1207, (*cryst struct*)

Jahngen, E.G.E. *et al.*, *Synth. Commun.*, 1982, **12**, 601, (*synth*)

Kolasa, T., *Tetrahedron*, 1983, **39**, 1753, (*ir, pmr, conformn*)

Goto, G. *et al.*, *Chem. Pharm. Bull.*, 1986, **34**, 3202, (*synth*)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, FNO000