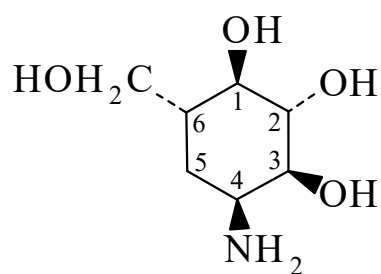




>>Entry Name: 4-Amino-6-hydroxymethyl-1,2,3-cyclohexanetriol

Synonym(s): 1-Amino-1,5,6-trideoxy-5-(hydroxymethyl)inositol, 9CI



Molecular Formula: C₇H₁₅NO₄

Molecular Weight: 177.2

Accurate Mass: 177.100109

Percentage Composition: C 47.45%; H 8.53%; N 7.90%; O 36.12%

General Statement: Aminocyclitol antibiotic

>>Variant: (1R,2S,3S,4S,6R)-form

Synonym(s): D-*chiro*-form. Validamine

CAS Registry Number: 32780-32-8

Molecular Formula: C₇H₁₅NO₄

Molecular Weight: 177.2

Accurate Mass: 177.100109

Percentage Composition: C 47.45%; H 8.53%; N 7.90%; O 36.12%

Biological Source: Constit. and hydrol. prod. of Validoxylamine G [HJZ22-K](#). Prod. by *Streptomyces hygroscopicus* ssp. *limoneus*

Biological Use/Importance: Glucosidase inhibitor

Physical Description: Syrup

Optical Rotation: [α]_D +56 (c, 0.38 in H₂O)

Solubility: BERDY SOL: Sol. H₂O, DMSO, MeOH; poorly sol. EtOH, hexane

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

>>Derivative: Hydrochloride

CAS Registry Number: 32780-31-7

Melting Point: Mp 229-232 dec.°

Optical Rotation: [α]_D +57.4 (1M HCl)

>>Variant: (1RS,2SR,3SR,4SR,6RS)-form

Synonym(s): (±)-Validamine

Molecular Formula: C₇H₁₅NO₄

Molecular Weight: 177.2

Accurate Mass: 177.100109

Percentage Composition: C 47.45%; H 8.53%; N 7.90%; O 36.12%

>>Derivative: N,O,O,O,O-Penta-Ac

Molecular Formula: C₁₇H₂₅NO₉

Molecular Weight: 387.386

Accurate Mass: 387.152934

Percentage Composition: C 52.71%; H 6.50%; N 3.62%; O 37.17%

Physical Description: Cryst. (as hydrochloride)

Melting Point: Mp 197-198° (hydrochloride)

References:

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Kameda, Y. *et al.*, *Chem. Comm.*, 1972, 746
Suami, T. *et al.*, *Carbohydr. Res.*, 1977, **58**, 240, (*synth, ±-form*)
Ogawa, S. *et al.*, *CA*, 1984, **100**, 192193, (*synth*)
Kameda, Y. *et al.*, *J. Antibiot.*, 1984, **37**, 1301, (*isol, struct*)
Yoshikawa, M. *et al.*, *Chem. Pharm. Bull.*, 1988, **36**, 4236; 1993, **41**, 1197, (*synth*)
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Tatsuka, K. *et al.*, *J. Antibiot.*, 2000, **53**, 430-435, (*synth, pmr*)