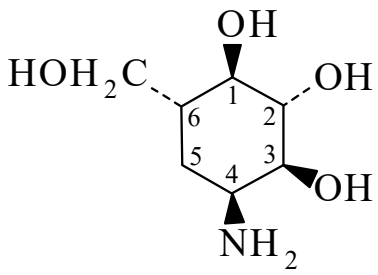
>>**Entry Name: 4-Amino-6-hydroxymethyl-1,2,3-cyclohexanetriol**
**Synonym(s):** 1-Amino-1,5,6-trideoxy-5-(hydroxymethyl)inositol, 9CI




**Molecular Formula:** $C_7H_{15}NO_4$
**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:** (1*R*,2*S*,3*S*,4*S*,6*R*)-form
**Synonym(s):** D-*chiro*-form. **Validamine**

**CAS Registry Number:** 32780-32-8

**Molecular Formula:** $C_7H_{15}NO_4$
**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:** $[\alpha]_D$ +56 (c, 0.38 in $H_2O$)
**Solubility:** BERDY SOL: Sol. $H_2O$, DMSO, MeOH; poorly sol. EtOH, hexane
**UV:** [neutral] $\lambda_{max}$ 0 (end) (ε ) ($H_2O$) (Derep) [neutral] $\lambda_{max}$ ($H_2O$) (Berdy)

>>**Derivative:** Hydrochloride

**CAS Registry Number:** 32780-31-7
**Melting Point:** Mp 229-232 dec.°
**Optical Rotation:** $[\alpha]_D$ +57.4 (1*M* HCl)

>>**Variant:** (1*RS*,2*SR*,3*SR*,4*SR*,6*RS*)-form
**Synonym(s):** (±)-Validamine

**Molecular Formula:** $C_7H_{15}NO_4$
**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:** $C_{17}H_{25}NO_9$
**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
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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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