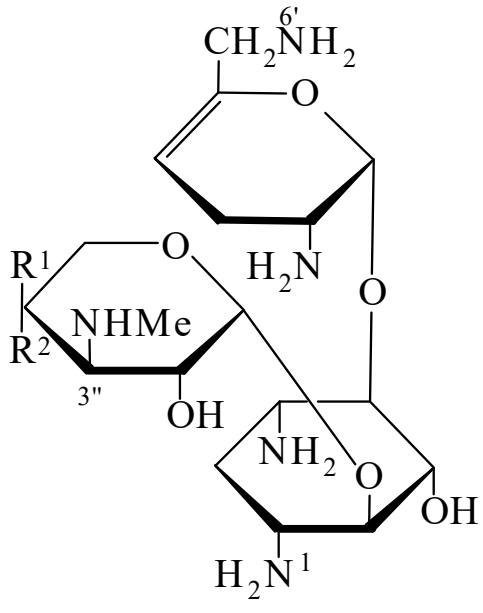
>>**Entry Name: Sisomicin,** INN, USAN
**Synonym(s): Sissomicin,** BAN**.** Rickamicin. Antibiotic 6640. Many other names



$R^1 = OH, R^2 = CH_3$

**CAS Registry Number:** 32385-11-8
**Related CAS Registry Numbers(s):** 79056-20-5

AF4400

**Molecular Formula:** $C_{19}H_{37}N_5O_7$
**Molecular Weight:** 447.531
**Accurate Mass:** 447.2693
**Percentage Composition:** C 50.99%; H 8.33%; N 15.65%; O 25.03%

**Biological Source:** Isol. from *Micromonospora inyoensis*
**Use/Importance:** Shows broad-spectrum activity. Similar to Gentamicins
**Physical Description:** Cryst. + $1H_2O$ (EtOH)
**Melting Point:** Mp 198-201°
**Optical Rotation:** $[\alpha]_D^{26}$+189 (c, 0.3 in $H_2O$)
**Solubility:** BERDY SOL: Sol. $H_2O$; fairly sol. MeOH, $CHCl_3$; poorly sol. $Me_2CO$, hexane
**Calculated Log P Data:** Log P –4.65 (uncertain value) (calc)
**UV:** [neutral] $\lambda_{max}$ ($H_2O$) (Berdy)
**Hazard & Toxicity:** Renal and otological effects reported when used therapeutically. $LD_{50}$ (mus, scu) 288 mg/kg. Exp. reprod. effects ; BERDY HAZD : $LD_{50}$ (mus, ivn) 34 mg/kg , $LD_{50}$ (mus, ipr) 221 mg/kg , $LD_{50}$ (mus, scu) 288 mg/kg

>>**Derivative:** Sulfate (1:2.5)
**Synonym(s): Sisomicin sulfate,** JAN, USAN**.** Siseptin

**CAS Registry Number:** 53179-09-2
**Hazard & Toxicity:** $LD_{50}$ (rat, scu) 500 mg/kg; $LD_{50}$ (mus, scu) 272 mg/kg

**Sigma:** S8757

>>**Derivative:** Penta-Ac

**Molecular Formula:** $C_{20}H_{39}N_5O_7$
**Molecular Weight:** 461.557
**Accurate Mass:** 461.28495
**Percentage Composition:** C 52.05%; H 8.52%; N 15.17%; O 24.26%
**Physical Description:** Amorph. powder
**Melting Point:** Mp 185-190°
**Optical Rotation:** $[\alpha]_D^{26}$+194.6 (MeOH)