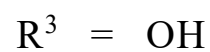
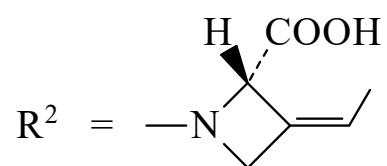
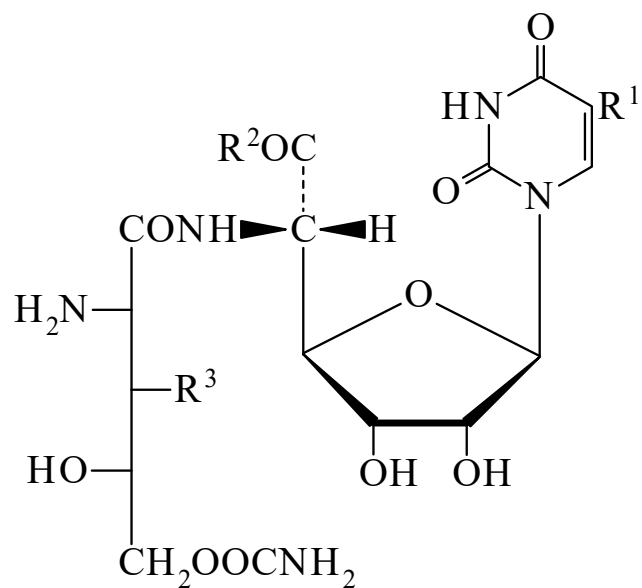




>>Entry Name: Polyoxin A



**CAS Registry Number:** 19396-03-3

**Molecular Formula:** C<sub>23</sub>H<sub>32</sub>N<sub>6</sub>O<sub>14</sub>

**Molecular Weight:** 616.538

**Accurate Mass:** 616.197654

**Percentage Composition:** C 44.81%; H 5.23%; N 13.63%; O 36.33%

**Biological Source:** Produced by *Streptomyces cacaoi* var. *asoensis*

**Use/Importance:** Antifungal antibiotic. Used as agricultural fungicide

**Physical Description:** Cryst.

**Optical Rotation:**  $[\alpha]_D^{20} -30$  (c, 1.02 in H<sub>2</sub>O)

**Solubility:** BERDY SOL: Sol. H<sub>2</sub>O; poorly sol. MeOH, hexane

**pKa Value:** pK<sub>a1</sub> 3; pK<sub>a2</sub> 7.3; pK<sub>a3</sub> 9.6

**UV:** [acid]  $\lambda_{\text{max}}$  262 (E1%/1cm 142) (HCl) (Berdy) [base]  $\lambda_{\text{max}}$  264 (E1%/1cm 103) (NaOH) (Berdy) [neutral]  $\lambda_{\text{max}}$  262 (E1%/1cm 102) (H<sub>2</sub>O) (Berdy)

**Hazard & Toxicity:** LD<sub>50</sub> (mus, ivn) 200 mg/kg ; BERDY HAZD : LD<sub>50</sub> (mus, ivn) 800 - 1200 mg/kg

**References:**

Isono, K. *et al.*, *Agric. Biol. Chem.*, 1966, **30**, 813; 1967, **31**, 190, (*struct, isol, props*)

Isono, K. *et al.*, *J.A.C.S.*, 1969, **91**, 7490; 1978, **100**, 3937, (*struct, ir, uv, nmr, biosynth, cmr*)

Hanessian, S. *et al.*, *Tet. Lett.*, 1993, **34**, 4153, (*struct*)