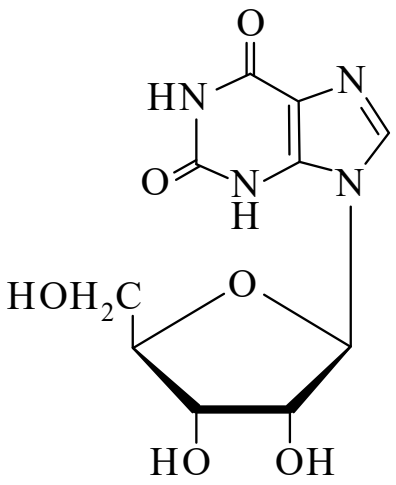
>>**Entry Name: Xanthosine,** 8CI

Synonym(s): 3,9-Dihydro-9-β-D-ribofuranosyl-1*H*-purine-2,6-dione, 9CI. 9-β-D-Ribofuranosylxanthine



CAS Registry Number: 146-80-5
Related CAS Registry Numbers(s): 5968-90-1

Molecular Formula: $C_{10}H_{12}N_4O_6$
Molecular Weight: 284.228
Accurate Mass: 284.075686
Percentage Composition: C 42.26%; H 4.26%; N 19.71%; O 33.77%

Physical Description: Prismatic cryst. (H_2O)
Optical Rotation: $[\alpha]_D^{30}$ –51.2 (c, 8.0 in 0.3*M* NaOH)
Solubility: Spar. sol. cold H_2O; v. sol. hot H_2O
pKa Value: pK_{a1} 5.67; pK_{a3} 12.85 (25°)
Other Data: λ_{max} 253 nm (ε 8 790) (H_2O). Dec. on heating with no distinct melting range

>>**Derivative:** 3'-Phosphate
Synonym(s): 3'-Xanthylic acid, 9CI, 8CI

CAS Registry Number: 21089-32-7

Molecular Formula: $C_{10}H_{13}N_4O_9P$
Molecular Weight: 364.208
Accurate Mass: 364.042018
Percentage Composition: C 32.98%; H 3.60%; N 15.38%; O 39.54%; P 8.50%
Melting Point: Mp 200° (as brucine salt)
Optical Rotation: $[\alpha]_D^{20}$ –61.66 (c, 5.0 in NaOH)

>>**Derivative:** 5'-Phosphate
Synonym(s): Xanthosine 5'-(dihydrogen phosphate), 9CI. 5'-Xanthylic acid, 8CI. Xanthosine monophosphate. Xanthosine 5'-phosphate. XMP

CAS Registry Number: 523-98-8
Extra CAS Registry Numbers(s): 25899-70-1

Molecular Formula: $C_{10}H_{13}N_4O_9P$
Molecular Weight: 364.208
Accurate Mass: 364.042018
Percentage Composition: C 32.98%; H 3.60%; N 15.38%; O 39.54%; P 8.50%
Use/Importance: Inhibitor of isoforms I and II of human inosine 5'-monophosphate dehydrogenase
Physical Description: No phys. props. reported

>>**Derivative:** 5'-Triphosphate

CAS Registry Number: 6253-56-1
Extra CAS Registry Numbers(s): 50801-64-4 90011-94-2

Molecular Formula: $C_{10}H_{15}N_4O_{15}P_3$
Molecular Weight: 524.168
Accurate Mass: 523.974682
Percentage Composition: C 22.91%; H 2.88%; N 10.69%; O 45.79%; P 17.73%
Physical Description: No phys. props. reported