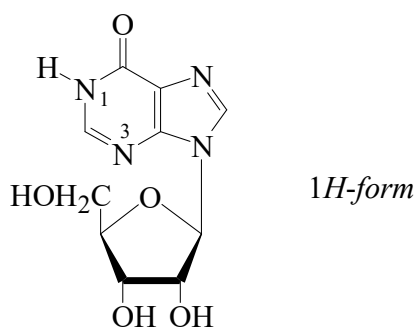




>>Entry Name: Inosine, 9CI, INN, JAN

ENTRY UNDER REVIEW

Synonym(s): 1,9-Dihydro-9-β-D-ribofuranosyl-6*H*-purin-6-one, 9CI. 9-β-D-Ribofuranosylhypoxanthine, 8CI. Hypoxanthine riboside. Hypoxanthosine. **Aminosin**‡. Inosie. Oxiamine. Trophicardyl. Carnine



CAS Registry Number: 58-63-9

Related CAS Registry Numbers(s): 35908-31-7

Molecular Formula: C₁₀H₁₂N₄O₅

Molecular Weight: 268.229

Accurate Mass: 268.080771

Percentage Composition: C 44.78%; H 4.51%; N 20.89%; O 29.82%

Biological Source: Present in meat extracts and sugar beet. Also prod. by microorganisms, e.g. *Bacillus subtilis*, *E. coli*, *Saccharomyces cerevisiae*, *Fusarium* spp. A minor constit. of *t*-RNA's

Use/Importance: Activates cellular functions. Cardiotonic. Suggested to be capable of forming base pairs with Adenine [HFN72-P](#), Cytosine [HDR44-O](#) or Uracil [BTP40-U](#) thus contributing to genetic code degeneracy by causing stable mispairings. Used to treat cardiac disorders

Melting Point: Mp 215 dec.°

Optical Rotation: $[\alpha]_D^{18} -49.2$ (c, 0.9 in H₂O)

pKa Value: p*K*_{a1} 1.5; p*K*_{a2} 8.85; p*K*_{a3} 12.5 (25°)

Calculated Log P Data: Log P -3.76 (calc)

Other Data: λ_{max} 248.5 nm (ε 12 200) (pH 6)

Hazard & Toxicity: Probable mutagen. Exp. reprod. effects (very high dose) LD₅₀ (mus, ivn) 3000 mg/kg

Aldrich: I-640-7

Fluka: 57470

Sigma: I1024

Supelco: 44-2620

>>Derivative: Salt with 1-(dimethylamino)-2-propanol 4-acetamidobenzoate

Synonym(s): Inosine **pranobex**, BAN, JAN. Inosiplex. Isoprinosine. Methisoprinol. Prinosine. Immunovir. Many other names

CAS Registry Number: 36703-88-5

Use/Importance: Antiviral, immunostimulant. Used in the treatment of HIV infection

>>Derivative: 5'-Phosphate

>>Derivative: 5'-Diphosphate

CAS Registry Number: 86-04-4

Extra CAS Registry Numbers(s): 71672-86-1

Molecular Formula: C₁₀H₁₄N₄O₁₁P₂

Molecular Weight: 428.188

Accurate Mass: 428.013435

Percentage Composition: C 28.05%; H 3.30%; N 13.08%; O 41.10%; P 14.47%

Melting Point: Mp 230-231° (dec.) (as tri-Na salt)

>>Derivative: 5'-Triphosphate

Synonym(s): Inosine 5'-(tetrahydrogen triphosphate). Inosine triphosphate. ITP

CAS Registry Number: 132-06-9