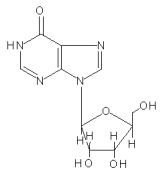

Formula: C10H12N4O5

MW: 268.23

CAS: 58-63-9

TNP NUMBER: TNP00441

MDL NUMBER: MFCD00437674

IUPAC: 9-[3,4-dihydroxy-5-(hydroxymethyl)oxolan-2-yl]hydropurin-6-one

Smiles: c1nc2c(c([nH]1)=O)ncn2C1OC(C(C1O)O)CO

Inosine 99%, In meet and meet extracts

THERAPEUTIC CATEGORY: Activates cellular functions

ACCEPTORS: 5

DONORS: 4

ROTATION BONDS: 5

N+O: 9

Chiral Centers: 4

LogP: -3.28

LogS: -1.84

LIPINSKI: 4

Monograph Number: 0004998

Title: Inosine

CAS Registry Number: 58-63-9

Additional Names: Hypoxanthine riboside; 9-b-D-ribofuranosylhypoxanthine; hypoxanthosine

Trademarks: Inosie (Morishita); Oxiamine (Made); Ribonosine (Toyo Jozo); Trophicardyl

Molecular Formula: C10H12N4O5

Molecular Weight: 268.23.

Percent Composition: C 44.78%, H 4.51%, N 20.89%, O 29.82%

Literature References: In meat and meat extracts, in sugar beets. Prepd from adenosine by incubation with purified adenosine deaminase from intestine: Kalckar, J. Biol. Chem. 167, 445 (1947); also by the action of sodium nitrite and acetic acid on adenosine: Levene, Jacobs, Ber. 43, 3161 (1910); by the use of barium nitrite and H2SO4: Reiff et al., US 3049536 (1962 to Zellstoff-Fabrik Waldhof). Fermentation method: Motozaki et al., US 3111459 (1963 to Ajinomoto). Structure: Bredereck, Ber. 66, 198 (1933); Z. Physiol. Chem. 223, 61 (1934); Gulland, Holiday, J. Chem. Soc. 1936, 765.

Derivative Type: Dihydrate

Properties: Long rectangular plates from water, mp 90. Anhydrous needles from 80% alc, dec 218 (rapid heating). [a]D18 -49.2 (c = 0.9 in H2O). [a]20white -73 (0.5 g + 2 ml N NaOH + 3 ml H2O). 100 ml of the satd water soln at 20 contain 1.6 g inosine. Absorption spectrum: Kalckar, loc. cit. uv max (pH 6.0): 248.5 nm (e 12200). Boiling with 0.1N H2SO4 yields hypoxanthin and D-ribose.

Melting point: mp 90

Optical Rotation: [a]D18 -49.2 (c = 0.9 in H2O); [a]20white -73 (0.5 g + 2 ml N NaOH + 3 ml H2O)

Absorption maximum: uv max (pH 6.0): 248.5 nm (e 12200)

Therap-Cat: Activates cellular functions.

Synonyms: Atorel;beta-D-Ribofuranoside, hypoxanthine-9;beta-Inosine;HXR;Hypoxanthine D-riboside;Hypoxanthine, 9-beta-D-ribofuranosyl-;hypoxanthined-riboside;hypoxanthinenucleoside

CAS:58-63-9

MF:C10H12N4O5

MW:268.23

EINECS:200-390-4

Product Categories:Nucleotides and Nucleosides;Antivirals for Research and Experimental Use;Biochemistry;Nucleosides and their analogs;Nucleosides, Nucleotides & Related Reagents;Nucleic acids;Bases & Related Reagents;Nucleotides Inosine

Chemical Properties: mp 222-226 C (dec.)(lit.) alpha -49.2 (c=1,H2O 18 C) bp 226 C (dec.) refractive index -52 (C=1, H2O) storage temp. Store at RT. solubility H2O: 0.5 M, clear, colorless Water Solubility 2.1 g/100 mL (20 C) Merck 14,4975 BRN 624889

CAS DataBase Reference: 58-63-9(

CAS DataBase Reference:) NIST Chemistry ReferenceInosine(58-63-9) EPA Substance Registry SystemInosine(58-63-9) Xi Risk Statements 36/37/38 Safety Statements 24/25-36-26 WGK Germany 2 RTECS NM7460000 F 10 Inosine Inosine

Usage And Synthesis:

Chemical Properties: White crystalline powder Inosine