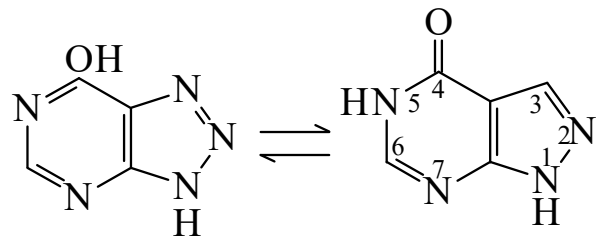
>>**Entry Name: 1*H*-Pyrazolo[3,4-*d*]pyrimidin-4-ol**

Synonym(s): 4-Hydroxypyrazolo[3,4-*d*]pyrimidine. 1,5-Dihydro-4*H*-pyrazolo[3,4-*d*]pyrimidin-4-one, 9CI. 1*H*-Pyrazolo[3,4-*d*]pyrimidin-4(5*H*)-one. **Allopurinol,** BAN, INN, JAN, USAN**.** Aloral. Aluline. Caplenal. Cosuric. Lederpur. Lopurin. Zyloprim. Zyloric. BW 56 158. NSC 1390. Many other names



CAS Registry Number: 315-30-0
Related CAS Registry Numbers(s): 17795-21-0

Molecular Formula: $C_5H_4N_4O$
Molecular Weight: 136.113
Accurate Mass: 136.038511
Percentage Composition: C 44.12%; H 2.96%; N 41.16%; O 11.75%
Use/Importance: Xanthine oxidase inhibitor. Used in treatment of chronic gout and related diseases. Inhibitor of ATP synthesis from guanine and of RNA biosynthesis. Also shows antithrombotic and antiparasitic activities
Physical Description: Cryst. (H_2O)
Melting Point: Mp 383-384°
Other Data: Component of numerous preparations
Hazard & Toxicity: Human systemic effects (e.g. skin rashes) when used therapeutically. Exp. teratogen. LD_{50} (rat, ipr) 900 mg/kg

Aldrich: H5660-6
Sigma: A8003

>>**Derivative:** 1-Me

Molecular Formula: $C_6H_6N_4O$
Molecular Weight: 150.14
Accurate Mass: 150.054161
Percentage Composition: C 48.00%; H 4.03%; N 37.32%; O 10.66%
Physical Description: Needles (H_2O)
Melting Point: Mp 300°

>>**Derivative:** 1,5-Di-Me

Molecular Formula: $C_7H_8N_4O$
Molecular Weight: 164.166
Accurate Mass: 164.069811
Percentage Composition: C 51.21%; H 4.91%; N 34.13%; O 9.75%
Physical Description: Needles (MeOH)
Melting Point: Mp 193-195°

>>**Derivative:** 1-β-D-Ribofuranosyl
Synonym(s): Allopurinol riboside
CAS Registry Number: 16220-07-8
Molecular Formula: $C_{10}H_{12}N_4O_5$
Molecular Weight: 268.229
Accurate Mass: 268.080771
Percentage Composition: C 44.78%; H 4.51%; N 20.89%; O 29.82%
Biological Use/Importance: Exhibits antiparasitic and antiviral activity
Physical Description: Cryst. (MeOH)
Melting Point: Mp 205-206° (172-174°)
Optical Rotation: $[\alpha]_D^{25}$ –70.2 (c, 0.53 in MeOH)

References: