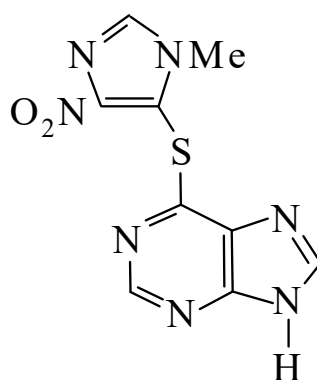




>>Entry Name: Azathioprine, BAN, INN, JAN, USAN

Synonym(s): 6-[(1-Methyl-4-nitro-1*H*-imidazol-5-yl)thio]-1*H*-purine, 9Cl. Azamune. Azanin. Azapress. Immunoprin. Imuran. Imurek. Oprisine. Thioprine. Zytrim. BW 57-322. NSC 39084. Many other names



CAS Registry Number: 446-86-6

Related CAS Registry Numbers(s): 55774-33-9

Molecular Formula: C₉H₇N₇O₂S

Molecular Weight: 277.266

Accurate Mass: 277.038193

Percentage Composition: C 38.99%; H 2.54%; N 35.36%; O 11.54%; S 11.57%

Biological Use/Importance: Immunosuppressant. Used in organ transplantation, and to treat rheumatoid arthritis

Physical Description: Pale yellow cryst. (Me₂CO aq.)

Melting Point: Mp 243-244 dec.°

Calculated Log P Data: Log P 0.37 (calc)

Other Data: Also used as Na salt (Azathioprine sodium, USAN)

Hazard & Toxicity: Human and exp. carcinogen. Adverse effects when used therapeutically incl. dose-related bone marrow depression and hepatic disorders. LD₅₀ (rat, orl) 535 mg/kg. Exp. reprod. and teratogenic effects

Sigma: A4638

References:

- Yeowell, H.N. *et al.*, *J. Het. Chem.*, 1973, **10**, 1017, (*synth*)
Wolski, T., *Pol. J. Pharmacol. Pharm.*, 1978, **30**, 593, (*synth*)
Ding, T.L. *et al.*, *Drug Metab. Dispos.*, 1979, **7**, 373, (*metab*)
Wilson, W.P. *et al.*, *Anal. Profiles Drug Subst.*, 1981, **10**, 29, (*rev*)
IARC Monog., 1981, **26**, 47; *Suppl.* 6, 86; *Suppl.* 7, 119, (*rev, tox*)
Pento, J.T., *Drugs of Today (Barcelona)*, 1982, **18**, 258, (*rev*)
Acharya, K.R., *Proc. Indian Acad. Sci., Chem. Sci.*, 1984, **93**, 183, (*cryst struct*)
Van Scoik, K.G. *et al.*, *Drug Metab. Rev.*, 1985, **16**, 157, (*rev*)
Negwer, M., *Organic-Chemical Drugs and their Synonyms*, 7th edn., *Akademie-Verlag*, 1994, 1319, (*synonyms*)
Kerstens, P.J.S.M. *et al.*, *Clin. Exp. Rheumatol.*, 1995, **13**, 107, (*pharmacol, rev*)
Martindale, The Extra Pharmacopoeia, 32nd edn., *Pharmaceutical Press*, 1999, 505
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., *Van Nostrand Reinhold*, 1992, ASB250