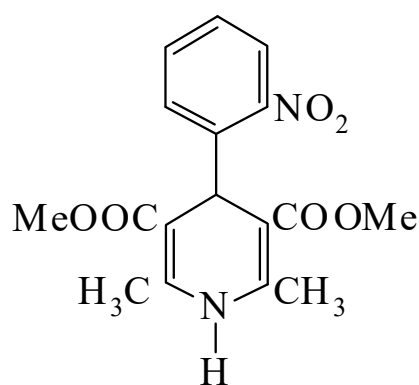




>> **Entry Name:** Nifedipine, BAN, INN, JAN, USAN

Synonym(s): Dimethyl 1,4-dihydro-2,6-dimethyl-4-(2-nitrophenyl)-3,5-pyridinedicarboxylate, 9Cl, 8Cl. Adalat. Adipine. Angiopine. Calanif. Calcilat. Cardilate. Coracten. Coroday. Fenihidine. Fortipine. Glopir. Hypolar Retard. Nifecor. Nifedikor. Nifedipress. Nifelat. Nifedotard. Nifelat. Nifensar XL. Nimodrel. Nivaten. Procardia. Slofedipine. Tensipine. Bay 1040. Many other names



CAS Registry Number: 21829-25-4

Molecular Formula: C₁₇H₁₈N₂O₆

Molecular Weight: 346.339

Accurate Mass: 346.116488

Percentage Composition: C 58.96%; H 5.24%; N 8.09%; O 27.72%

Biological Use/Importance: Calcium channel blocker, coronary vasodilator, antihypertensive agent

Physical Description: Yellow cryst.

Development Status: Marketed drug. Worldwide 41st best selling prescription drug (as Adalat) (\$1.07 bn) (Bayer) and 161st best selling prescription drug (as Procardia XL) (\$0.31 bn) (Pfizer) (2000, Pharma Business)

Melting Point: Mp 172-174°

Solubility: Sol. Me₂CO, CHCl₃

Calculated Log P Data: Log P 2.35 (uncertain value) (calc)

Other Data: Soln. v. light sensitive

Hazard & Toxicity: LD₅₀ (rat, orl) 1022 mg/kg. Exp. reprod. and teratogenic effects

Sigma: N7634

References:

- Vater, W. *et al.*, *Arzneim.-Forsch.*, 1972, **22**, 1; 15; 330, (*pharmacol*)
Loev, B. *et al.*, *J. Med. Chem.*, 1974, **17**, 956, (*synth*)
Bossert, F. *et al.*, *Angew. Chem., Int. Ed.*, 1981, **20**, 762, (*rev*)
Pine, R.M. *et al.*, *Clin. Ther.*, 1984, **6**, 245, (*rev*)
Kurfurst, A. *et al.*, *Coll. Czech. Chem. Comm.*, 1984, **49**, 2393, (*pmr, cmr*)
Hugenholz, P.G., *Handb. Exp. Pharmacol.*, 1985, **76**, 459, (*rev*)
Swanson, T.H. *et al.*, *Gen. Pharmacol.*, 1986, **17**, 255, (*rev*)
Krebs, R., *Treat. Cardiovasc. Dis. Adalat, (Nifedipine)*, (Ed.), Schatteur, Stuttgart, 1986, (*book*)
Ali, S.K., *Anal. Profiles Drug Subst.*, 1989, **18**, 221, (*rev*)
Singh, H. *et al.*, *Tetrahedron*, 1989, **45**, 3967, (*synth*)
Soons, P.A. *et al.*, *J. Pharm. Biomed. Anal.*, 1991, **9**, 475, (*hplc, rev*)
Lévai, L. *et al.*, *Synth. Commun.*, 1992, **22**, 47, (*synth*)
Otero, M.L. *et al.*, *Drugs, Suppl. 1*, 1994, **48**, (*pharmacol, rev*)
Negwer, M., *Organic-Chemical Drugs and their Synonyms*, 7th edn., Akademie-Verlag, 1994, 5767, (*synonyms*)
Martindale, *The Extra Pharmacopoeia*, 32nd edn., Pharmaceutical Press, 1999, 916
Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, AEC750