Azaperone *(BAN, USAN, rINN)*

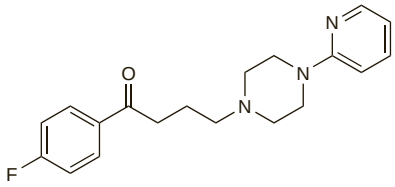
Atsaperoni; Azaperon; Azaperona; Azapérone; Azaperonum; R-1929. 4′-Fluoro-4-[4-(2-pyridyl)piperazin-1-yl]butyrophenone.

Азаперон

$C_{19}H_{22}FN_3O$ = 327.4.

CAS — 1649-18-9.

ATC Vet — QN01AX91; QN05AD90.



Pharmacopoeias. In *Eur.* (see p.vii) and *US* for veterinary use only.

Ph. Eur. 6.2 (Azaperone for Veterinary Use; Azaperone BP(Vet) 2008). A white or almost white powder. It exhibits polymorphism. Practically insoluble in water; soluble in alcohol; freely soluble in acetone and in dichloromethane. Protect from light.

USP 31 (Azaperone). M.p. 92° to 95°. Protect from light.

Profile

Azaperone is a butyrophenone antipsychotic used as a tranquilliser in veterinary medicine.

Barbital *(BAN, rINN)*

Barbitaali; Barbitál; Barbitalis; Barbitalum; Barbitone; Diemalum; Diethylmalonylurea. 5,5-Diethylbarbituric acid.

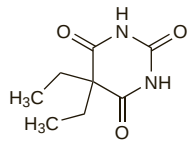
Барбитал

$C_8H_{12}N_2O_3$ = 184.2.

CAS — 57-44-3.

ATC — N05CA04.

ATC Vet — QN05CA04.



Pharmacopoeias. In *Eur.* (see p.vii) and *Jpn.*

Ph. Eur. 6.2 (Barbital). A white or almost white, crystalline powder or colourless crystals. Slightly soluble in water; soluble in boiling water and in alcohol. It forms water-soluble compounds with alkali hydroxides and carbonates and with ammonia.

Barbital Sodium *(BANM, rINN)*

Barbital de sodio; Barbital sódico; Barbital sodique; Barbital sodowy; Barbitalum Natricum; Barbitone Sodium; Diemalnatrium; Soluble Barbitone. Sodium 5,5-diethylbarbiturate.

Барбитал Натрий

$C_8H_{11}N_2NaO_3$ = 206.2.

CAS — 144-02-5.

ATC — N05CA04.

ATC Vet — QN05CA04.

Profile

Barbital is a barbiturate with general properties similar to those of amobarbital (p.961). It was formerly used for its hypnotic and sedative properties but barbiturates are no longer considered appropriate for such purposes.

Benperidol *(BAN, USAN, rINN)*

Benpéridol; Benperidoli; Benperidolis; Benperidolum; Benzperidol; CB-8089; McN-JR-4584; R-4584. 1-{1-[3-(4-Fluorobenzoyl)propyl]-4-piperidyl}benzimidazolin-2-one.

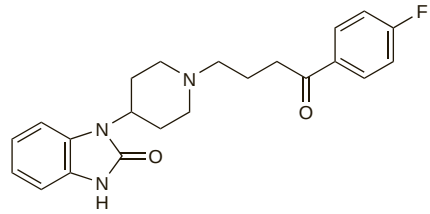
Бенперидол

$C_{22}H_{24}FN_3O_2$ = 381.4.

CAS — 2062-84-2.

ATC — N05AD07.

ATC Vet — QN05AD07.



Pharmacopoeias. In *Eur.* (see p.vii).

Ph. Eur. 6.2 (Benperidol). A white or almost white powder. It exhibits polymorphism. Practically insoluble in water; slightly soluble in alcohol; soluble in dichloromethane; freely soluble in dimethylformamide. Protect from light.

Profile

Benperidol is a butyrophenone with general properties similar to those of haloperidol (p.1000). Doses of 0.25 to 1.5 mg daily in divided doses are given orally in the management of deviant sexual behaviour. Elderly or debilitated patients may require reduced doses and half the usual dose may be sufficient.

In some countries benperidol is given by mouth or parenterally for the treatment of psychotic conditions (p.954).

Deviant sexual behaviour. Results of a double-blind placebo-controlled crossover study found no difference between the effect of benperidol 1.25 mg daily, chlorpromazine 125 mg daily, or placebo on sexual drive and arousal in 12 paedophilic sexual offenders, except for a lower frequency of sexual thoughts with benperidol.[1] The effects of benperidol are unlikely to be sufficient to control severe forms of antisocial sexually deviant behaviour. The management of deviant sexual behaviour is discussed under Disturbed Behaviour on p.954.

1. Tennent G, *et al*. The control of deviant sexual behaviour by drugs: a double-blind controlled study of benperidol, chlorpromazine, and placebo. *Arch Sex Behav* 1974; **3:** 261–71.

Preparations

Proprietary Preparations (details are given in Part 3)
Belg.: Frenactil; ***Ger.:*** Glianimon; ***Gr.:*** Glianimon; ***Irl.:*** Anquil†; ***Neth.:*** Frenactil; ***UK:*** Anquil; Benquil†.

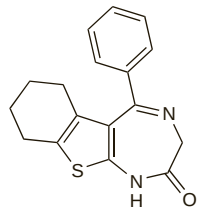
Bentazepam *(USAN, rINN)*

Bentazépam; Bentazepamum; CI-718; QM-6008. 1,3,6,7,8,9-Hexahydro-5-phenyl-2*H*-[1]benzothieno[2,3-e]-1,4-diazepin-2-one.

Бентазепам

$C_{17}H_{16}N_2OS$ = 296.4.

CAS — 29462-18-8.



Profile

Bentazepam is a benzodiazepine with general properties similar to those of diazepam (p.986). It has been given, in usual oral doses of 25 mg every 8 hours, in the short-term treatment of anxiety disorders; it has also been used in insomnia.

Effects on the liver. Severe chronic active hepatitis has been reported in a 65-year-old man who had received long-term treatment with bentazepam.[1]

1. Andrade RJ, *et al*. Bentazepam-associated chronic liver disease. *Lancet* 1994; **343:** 860.

Preparations

Proprietary Preparations (details are given in Part 3)
Spain: Tiadipona.

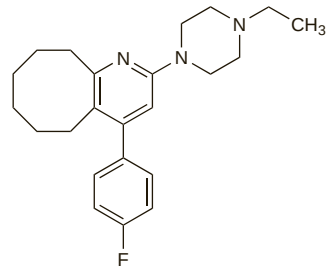
Blonanserin *(rINN)*

AD-5423; Blonanserina; Blonansérine; Blonanserinum. 2-(4-Ethyl-1-piperazinyl)-4-(*p*-fluorophenyl)-5,6,7,8,9,10-hexahydrocyclo-octa[*b*]pyridine.

Блонансерин

$C_{23}H_{30}FN_3$ = 367.5.

CAS — 132810-10-7.



Profile

Blonanserin is an antipsychotic reported to be an antagonist at dopamine D_2 and serotonin ($5\text{-}HT_2$) receptors. It is given orally for the treatment of schizophrenia in an initial dose of 4 mg twice daily, increased gradually according to response thereafter. The usual maintenance dose is 8 to 16 mg daily; the maximum daily dose is 24 mg.

Preparations

Proprietary Preparations (details are given in Part 3)
Jpn: Lonasen.

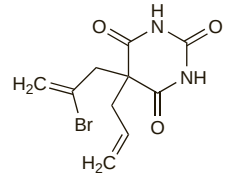
Brallobarbital *(rINN)*

Brallobarbitaali; Brallobarbitalum; Bralobarbital; UCB-5033. 5-Allyl-5-(2-bromoallyl)barbituric acid.

Браллобарбитал

$C_{10}H_{11}BrN_2O_3$ = 287.1.

CAS — 561-86-4.



Profile

Brallobarbital is a barbiturate with general properties similar to those of amobarbital (p.961). It has been used in preparations for the management of insomnia but barbiturates are no longer considered appropriate for such purposes. Brallobarbital calcium has been used similarly.

Preparations

Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Port.:*** Vesparax†.

Bromazepam *(BAN, USAN, rINN)*

Bromatsepaami; Brómazepám; Bromazépam; Bromazepamas; Bromazepamum; Ro-5-3350. 7-Bromo-1,3-dihydro-5-(2-pyridyl)-1,4-benzodiazepin-2-one.

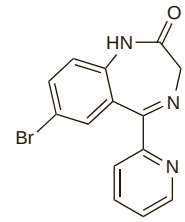
Бромазепам

$C_{14}H_{10}BrN_3O$ = 316.2.

CAS — 1812-30-2.

ATC — N05BA08.

ATC Vet — QN05BA08.



Pharmacopoeias. In *Eur.* (see p.vii) and *Jpn.*

Ph. Eur. 6.2 (Bromazepam). A white or yellowish crystalline powder. Practically insoluble in water; slightly soluble or sparingly soluble in alcohol and in dichloromethane. Protect from light.

Profile

Bromazepam is a benzodiazepine with general properties similar to those of diazepam (p.992). It has been used in the short-term treatment of anxiety disorders (p.952) occurring alone or associated with insomnia. A usual initial oral dose for anxiety is 6 to 18 mg daily in divided doses. Higher doses up to 60 mg daily

have occasionally been given. Initial doses for elderly and debilitated patients should not exceed 3 mg daily in divided doses.

◊ References.

1. Kaplan SA, *et al.* Biopharmaceutical and clinical pharmacokinetic profile of bromazepam. *J Pharmacokinet Biopharm* 1976; **4:** 1–16.
2. Ochs HR, *et al.* Bromazepam pharmacokinetics: influence of age, gender, oral contraceptives, cimetidine, and propranolol. *Clin Pharmacol Ther* 1987; **41:** 562–70.
3. Erb T, *et al.* Preoperative anxiolysis with minimal sedation in elderly patients: bromazepam or clorazepate-dipotassium? *Acta Anaesthesiol Scand* 1998; **42:** 97–101.

Preparations

Proprietary Preparations (details are given in Part 3)
Arg.: Angular†; Atemperator; Benedorm; Bromatanil; Butecam; Creosedin; Equisedin; Estomina; Fabozepam; Finaten; Gasmol; Lexotanil; Moliva l†; Neurozepam; Nulastres; Octanyl; Sedatus†; Sipcar; Tritopan; ***Austral.:*** Lexotan; ***Austria:*** Lexotanil; ***Belg.:*** Bromatop; Bromidem; Docbromaze; Kelalexan; Lexotan; ***Braz.:*** Bromazepan†; Bromoxon; Brozepax†; Deptran†; Lexotan; Lezepan; Nervium; Neurilan; Novazepam†; Relaxil; Somalium; Uni Bromazepax; ***Canad.:*** Lectopam; ***Chile:*** Lexotanil; Totasedan; ***Cz.:*** Lexaurin; ***Denm.:*** Bromam; Lexotan; ***Fr.:*** Anxyrex†; Lexomil; Quietiline; ***Ger.:*** BromaLich†; Bromaz†; Bromazanil; Bromazep; durazanil; Gityl; Lexostad; Lexotanil; neo OPT; Normoc; ***Gr.:*** Anconevron†; Evagelin; Lexotanil; Libronil-R; Notorium; Pascalium; ***Hong Kong:*** Akamon; Lexilium; Lexotan; ***Indon.:*** Lexotan; ***Irl.:*** Lexotan; ***Israel:*** Lenitin; ***Ital.:*** Brixopan; Compendium; Lexotan; ***Malaysia:*** Akamon; Lexotan; ***Mex.:*** Bropamil†; Lexotan; Otedram; ***Neth.:*** Lexotanil; ***Philipp.:*** Lexotan; ***Pol.:*** Lexotan; Sedam; ***Port.:*** Bromalex; Lexotan; Ultramidol; ***S.Afr.:*** Brazepam; Bromaze; Lexotan; ***Singapore:*** Lexotan; ***Spain:*** Lexatin; ***Switz.:*** Lexotanil; ***Thai.:*** Lexotan; ***Venez.:*** Lexotanil; Nervan.

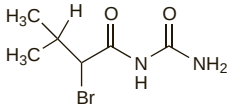
Multi-ingredient: ***Arg.:*** Biorgan B; Colixane B; Debridat B; Eudon; Eumotil-T; Faradil Novo; Fenatrop-A; Miopropan-T; Somasedan; Vegestabil Digest; Veralipral T; ***Braz.:*** Bromopirin; Sulpan; ***Ital.:*** Lexil.

Bromisoval *(rINN)*

Bromisovaali; Bromisovalerylurea; Bromisovalum; Bromsoval; Bromvalerylurea; Bromvaletone; Bromylum. *N*-(2-Bromo-3-methylbutyryl)urea.

Бромизовал

$C_6H_{11}BrN_2O_2$ = 223.1.
CAS — 496-67-3.
ATC — N05CM03.
ATC Vet — QN05CM03.



Pharmacopoeias. In *Jpn.*

Profile

Bromisoval has actions and uses similar to those of carbromal (p.967) but the use of bromides is generally deprecated.

Preparations

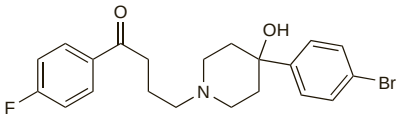
Proprietary Preparations (details are given in Part 3)
Multi-ingredient: ***Pol.:*** Milocardin.

Bromperidol *(BAN, USAN, rINN)*

Bromiperidoli; Brómperidol; Brompéridol; Bromperidoli; Bromperidolis; Bromperidolum; R-11333. 4-[4-(*p*-Bromophenyl)-4-hydroxypiperidino]-4′-fluorobutyrophenone.

Бромперидол

$C_{21}H_{23}BrFNO_2$ = 420.3.
CAS — 10457-90-6.
ATC — N05AD06.
ATC Vet — QN05AD06.



Pharmacopoeias. In *Eur.* (see p.vii).
Ph. Eur. 6.2 (Bromperidol). A white or almost white powder. Practically insoluble in water; slightly soluble in alcohol; sparingly soluble in dichloromethane and in methyl alcohol. Protect from light.

Bromperidol Decanoate *(BANM, USAN, rINNM)*

Brompéridol, décanoate de; Bromperidoldekanoat; Brómperidol-dekanoát; Bromperidol-dekanoát; Bromperidoli decanoas; Bromperidolidekanoaatti; Bromperidolio dekanoatas; Decanoato de bromperidol; R-46541.

Бромперидола Деканоат

$C_{31}H_{41}BrFNO_3$ = 574.6.
CAS — 75067-66-2.

Pharmacopoeias. In *Eur.* (see p.vii).
Ph. Eur. 6.2 (Bromperidol Decanoate). A white or almost white powder. Practically insoluble in water; soluble in alcohol; very soluble in dichloromethane. It melts at about 60°. Store at a temperature below 25°. Protect from light.

Profile

Bromperidol is a butyrophenone with general properties similar to those of haloperidol (p.1000). It is given in the treatment of schizophrenia (p.955) and other psychoses. Some bromperidol preparations are prepared with the aid of lactic acid and may be stated to contain bromperidol lactate. However, doses are expressed in terms of the equivalent amount of bromperidol. A usual oral dose is 1 to 15 mg daily, although up to 50 mg daily has been given. Elderly patients may require reduced doses of bromperidol. Bromperidol has also been given by intramuscular or intravenous injection.

The long-acting decanoate ester may be used for patients requiring long-term therapy with bromperidol. Doses are expressed in terms of the base; bromperidol decanoate 68.4 mg is equivalent to about 50 mg of bromperidol. Doses equivalent to up to 300 mg of bromperidol every 4 weeks have been given by deep intramuscular injection.

◊ References.

1. Benfield P, *et al.* Bromperidol: a preliminary review of its pharmacodynamic and pharmacokinetic properties, and therapeutic efficacy in psychoses. *Drugs* 1988; **35:** 670–84.

Schizophrenia. A systematic review[1] suggested that depot bromperidol had some benefits in schizophrenia but was less effective than depot haloperidol or fluphenazine.

1. Wong D, *et al.* Depot bromperidol decanoate for schizophrenia. Available in The Cochrane Database of Systematic Reviews; Issue 3. Chichester: John Wiley; 2004 (accessed 14/04/05).

Preparations

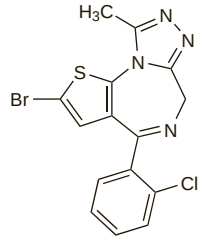
Proprietary Preparations (details are given in Part 3)
Arg.: Bromodol; Erodium; ***Belg.:*** Impromen; ***Ger.:*** Impromen; Tesoprel; ***Ital.:*** Impromen; ***Neth.:*** Impromen; ***Port.:*** Impromen†; ***Thai.:*** Brofed; Impromen†.

Brotizolam *(BAN, USAN, rINN)*

Brotitsolaami; Brotizolamum; Brotyzolam; We-941; We-941-BS. 2-Bromo-4-(2-chlorophenyl)-9-methyl-6*H*-thieno[3,2-*f*][1,2,4]triazolo[4,3-*a*][1,4]diazepine.

Бротизолам

$C_{15}H_{10}BrClN_4S$ = 393.7.
CAS — 57801-81-7.
ATC — N05CD09.
ATC Vet — QN05CD09.



Pharmacopoeias. In *Eur.* (see p.vii).
Ph. Eur. 6.2 (Brotizolam). A white or yellowish powder. Practically insoluble in water; slightly soluble in alcohol; sparingly soluble or slightly soluble in methyl alcohol.

Profile

Brotizolam is a short-acting benzodiazepine with general properties similar to those of diazepam (p.986). It is given for the short-term (up to 2 weeks) management of insomnia (p.957) in usual oral doses of 250 micrograms at night. The suggested dose for elderly and debilitated patients is 125 micrograms.

Abuse. Reference to abuse of brotizolam in Germany and Hong Kong.[1]

1. WHO. WHO expert committee on drug dependence: twenty-ninth report. *WHO Tech Rep Ser 856* 1995.

Pharmacokinetics. References.

1. Bechtel WD. Pharmacokinetics and metabolism of brotizolam in humans. *Br J Clin Pharmacol* 1983; **16:** 279S–283S.
2. Jochemsen R, *et al.* Pharmacokinetics of brotizolam in healthy subjects following intravenous and oral administration. *Br J Clin Pharmacol* 1983; **16:** 285S–290S.
3. Tokairin T, *et al.* Inhibition of the metabolism of brotizolam by erythromycin in humans: in vivo evidence for the involvement of CYP3A4 in brotizolam metabolism. *Br J Clin Pharmacol* 2005; **60:** 172–5.

Preparations

Proprietary Preparations (details are given in Part 3)
Austria: Lendorm; ***Belg.:*** Lendormin; ***Chile:*** Dormex; Noctilan; ***Denm.:*** Lendorm†; ***Ger.:*** Lendormin; ***Hung.:*** Lendormin; ***Israel:*** Bondormin; ***Ital.:*** Lendormin; Nimbisan; ***Jpn:*** Lendormin; ***Mex.:*** Lindormin; ***Neth.:*** Lendormin; ***Port.:*** Lendormin; ***S.Afr.:*** Lendormin; ***Spain:*** Sintonal; ***Switz.:*** Lendormine†; ***Venez.:*** Lendormin.

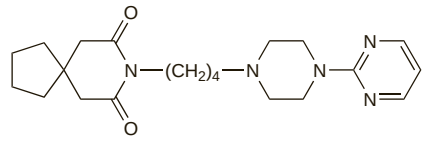
Buspirone Hydrochloride

(BANM, USAN, rINNM)

Buspiron Hidroklorür; Buspirone, chlorhydrate de; Buspironhydrochlorid; Buspironhydroklorid; Buspironi hydrochloridum; Buspironihydrokloridi; Buspironu chlorowodorek; Hidrocloruro de buspirona; MJ-9022-1. 8-[4-(4-Pyrimidin-2-ylpiperazin-1-yl)-butyl]-8-azaspiro[4.5]decane-7,9-dione hydrochloride.

Буспирона Гидрохлорид

$C_{21}H_{31}N_5O_2$,HCl = 422.0.
CAS — 36505-84-7 (buspirone); 33386-08-2 (buspirone hydrochloride).
ATC — N05BE01.
ATC Vet — QN05BE01.



(buspirone)

Pharmacopoeias. In *Eur.* (see p.vii) and *US.*
Ph. Eur. 6.2 (Buspirone Hydrochloride). A white or almost white, crystalline powder. It exhibits polymorphism. Freely soluble in water and in methyl alcohol; practically insoluble in acetone. Protect from light.
USP 31 (Buspirone Hydrochloride). A white crystalline powder. Very soluble in water; sparingly soluble in alcohol and in acetonitrile; freely soluble in dichloromethane and in methyl alcohol; very slightly soluble in ethyl acetate; practically insoluble in hexanes. Store in airtight containers at a temperature between 15° and 30°. Protect from light.

Dependence and Adverse Effects

Dizziness, nausea, headache, nervousness, light-headedness, excitement, paraesthesias, sleep disturbances, chest pain, tinnitus, sore throat, and nasal congestion are amongst the most frequent adverse effects reported after the use of buspirone hydrochloride. Other adverse effects have included tachycardia, palpitations, drowsiness, confusion, seizures, dry mouth, fatigue, and sweating. A syndrome of restlessness appearing shortly after the start of treatment has been reported in a small number of patients given buspirone. Buspirone is reported to produce less sedation, and to have a lower potential for dependence, than the benzodiazepines.

Effects on the nervous system. Mild acute hypertension and panic were reported on two occasions after the addition of single 10-mg doses of buspirone to therapy with tricyclic antidepressants in a 40-year-old man with panic disorder. Adrenergic or serotonin dysfunction were postulated as possible mechanisms for the reaction.[1,2] Psychotic reactions associated with buspirone treatment have also been reported in a few patients.[3] There have also been isolated reports of mania,[4] and seizures have been reported, primarily in overdosage.[5]

1. Chignon JM, Lepine JP. Panic and hypertension associated with single dose of buspirone. *Lancet* 1989; **ii:** 46–7.
2. Norman TR, Judd FK. Panic attacks, buspirone, and serotonin function. *Lancet* 1989; **ii:** 615.
3. Friedman R. Possible induction of psychosis by buspirone. *Am J Psychiatry* 1991; **148:** 1606.
4. Price WA, Bielefeld M. Buspirone-induced mania. *J Clin Psychopharmacol* 1989; **9:** 150–1.
5. Catalano G, *et al.* Seizures associated with buspirone overdose: case report and literature review. *Clin Neuropharmacol* 1998; **21:** 347–50.

EXTRAPYRAMIDAL DISORDERS. There have been isolated reports of exacerbation or precipitation of movement disorders[1-4] associated with the use of buspirone. However, buspirone has also been reported to have been of benefit in some patients with tardive dyskinesia (see Extrapyramidal Disorders under Uses and Administration, below).

1. Hammerstad JP, *et al.* Buspirone in Parkinson's disease. *Clin Neuropharmacol* 1986; **9:** 556–60.