Naftalofos *(BAN, USAN, rINN)*

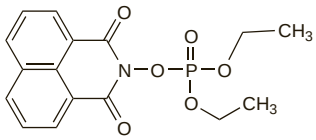
Bay-9002; E-9002; ENT-25567; Naftalofós; Naftalofosum; Naphthalophos; Phthalophos; S-940. Diethyl naphthalimido-oxyphosphonate.

Нафталофос

$C_{16}H_{16}NO_6P$ = 349.3.

CAS — 1491-41-4.

ATC Vet — QP52AB06.



Profile
Naftalofos is an organophosphorus compound (see Organophosphorus Insecticides, p.2047) used as an anthelmintic in veterinary medicine.

Netobimin *(BAN, USAN, rINN)*

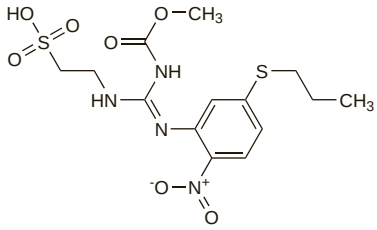
Netobimina; Nétobimine; Netobiminum; Sch-32481. 2-{3-Methoxycarbonyl-2-[2-nitro-5-(propylthio)phenyl]guanidino}ethanesulphonic acid.

Нетобимин

$C_{14}H_{20}N_4O_7S_2$ = 420.5.

CAS — 88255-01-0.

ATC Vet — QP52AC06.



Profile
Netobimin is an anthelmintic used in veterinary medicine.

Niclosamide *(BAN, USAN, rINN)*

Anhydrous Niclosamide; Bay-2353; Niclosamida; Niclosamida Anidra; Niclosamide anhydre; Niclosamidum; Niclosamidum anhydricum; Niklosamid; Niklosamid, vattenfri; Niklosamidi; Niklosamidi, vedetön; Niklozamid; Niklozamid bezwodny; Niklozamidas, bevandenis; Phenasale; Vízmentes niklozamid. 2′,5-Dichloro-4′-nitrosalicylanilide; 5-Chloro-*N*-(2-chloro-4-nitrophenyl)-2-hydroxybenzamide.

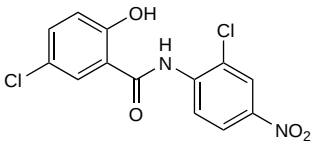
Никлозамид

$C_{13}H_8Cl_2N_2O_4$ = 327.1.

CAS — 50-65-7.

ATC — P02DA01.

ATC Vet — QP52AG03.



Pharmacopoeias. In *Chin.* and *Eur.* (see p.vii).
Int. permits the anhydrous substance or the monohydrate under the title Niclosamide.
Ph. Eur. 6.2 (Niclosamide, Anhydrous). Yellowish-white to yellowish, fine crystals. Practically insoluble in water; slightly soluble in dehydrated alcohol; sparingly soluble in acetone. Store in airtight containers. Protect from light.

Niclosamide Monohydrate *(BANM)*

Niclosamida Mono-hidratada; Niclosamida monohidrato; Niclosamide monohydraté; Niclosamidum monohydricum; Niklosamid monohydrát; Niklosamidimonohydraatti; Niklosamid-monohydrat; Niklozamidas monohidratas; Niklozamid-monohidrát.

Никлозамид Моногидрат

$C_{13}H_8Cl_2N_2O_4,H_2O$ = 345.1.

ATC — P02DA01.

Pharmacopoeias. In *Eur.* (see p.vii).
Int. permits the monohydrate or the anhydrous substance under the title Niclosamide.
Ph. Eur. 6.2 (Niclosamide Monohydrate). Yellowish, fine crystals. Practically insoluble in water; slightly soluble in dehydrated alcohol; sparingly soluble in acetone. Protect from light.

Adverse Effects
Gastrointestinal disturbances may occur occasionally with niclosamide. Lightheadedness and pruritus have been reported less frequently.

Pharmacokinetics
Niclosamide is not significantly absorbed from the gastrointestinal tract.

Uses and Administration
Niclosamide is an anthelmintic which is active against most tapeworms, including the beef tapeworm (*Taenia saginata*), the pork tapeworm (*T. solium*), the fish tapeworm (*Diphyllobothrium latum*) and the dog tapeworm (*Dipylidium caninum*); it has also been given for infections with the dwarf tapeworm, *Hymenolepis nana*. For discussions of the treatment of tapeworm infections, see Diphyllobothriasis, p.136, Hymenolepiasis, p.136, and Taeniasis, p.139. The activity of niclosamide against these worms appears to be due to inhibition of mitochondrial oxidative phosphorylation; anaerobic ATP production is also affected.

Niclosamide is given as tablets, which must be chewed thoroughly before swallowing and washed down with water.

For infections with pork tapeworm a single 2-g dose is given after a light breakfast. Niclosamide is not active against the larval form (cysticerci) and, although the risk of inducing cysticercosis appears to be theoretical, a laxative is given about 2 hours after the dose to expel the killed worms and minimise the possibility of the migration of ova of *T. solium* into the stomach; an antiemetic may also be given before treatment.

For infections with beef or fish tapeworms the 2-g dose of niclosamide may be divided, with 1 g taken after breakfast and 1 g an hour later.

In dwarf-tapeworm infections an initial dose of 2 g has been given on the first day followed by 1 g daily for 6 days.

Children aged 2 to 6 years are given half the above doses and those under 2 years of age are given one-quarter the above doses.

Unless expulsion of the worm is aided by a laxative, portions are voided in a partially digested form after treatment with niclosamide; the scolex is rarely identifiable.

In schistosomiasis (p.138), niclosamide is used as a molluscicide in water-treatment control programmes.

Preparations
BP 2008: Niclosamide Tablets.

Proprietary Preparations (details are given in Part 3)
Belg.: Yomesan; ***Braz.:*** Atenase†; ***Cz.:*** Yomesan†; ***Denm.:*** Yomesan†; ***Fin.:*** Kontal; ***Fr.:*** Tredemine; ***Ger.:*** Yomesan; ***Gr.:*** Tredemine; Yomesan; ***India:*** Niclosan; ***Israel:*** Yomesan; ***Ital.:*** Yomesan; ***Mex.:*** Overoid; ***Neth.:*** Yomesan; ***S.Afr.:*** Yomesan; ***Swed.:*** Yomesan; ***Thai.:*** Manozide; Niclosan†; Telmitin; Unicide; Yomesan; ***Turk.:*** Yomesan; ***UK:*** Yomesan.

Multi-ingredient: ***Thai.:*** Zenda†.

Nitroscanate *(BAN, USAN, rINN)*

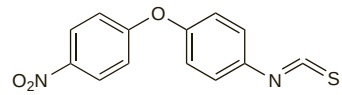
CGA-23654; Nitroscanato; Nitroscanatum; Nitroskanaatti; Nitroskanat. 4-(4-Nitrophenoxy)phenyl isothiocyanate.

Нитросканат

$C_{13}H_8N_2O_3S$ = 272.3.

CAS — 19881-18-6.

ATC Vet — QP52AX01.



Profile
Nitroscanate is an isothiocyanate anthelmintic used in veterinary medicine.

Nitroxinil *(BAN, rINN)*

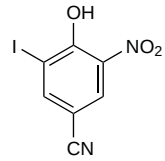
Nitroxinilo; Nitroxinilum; Nitroxynil. 4-Hydroxy-3-iodo-5-nitrobenzonitrile.

Нитроксинил

$C_7H_3IN_2O_3$ = 290.0.

CAS — 1689-89-0 (nitroxinil); 27917-82-4 (nitroxinil eglumine).

ATC Vet — QP52AG08.



Pharmacopoeias. In *BP(Vet).* Also in *Fr.* for veterinary use only.
BP(Vet) 2008 (Nitroxinil). A yellow to yellowish brown powder. Practically insoluble in water; slightly soluble in alcohol; sparingly soluble in ether; it dissolves in solutions of alkali hydroxides. Protect from light.

Profile
Nitroxinil is an anthelmintic used in veterinary medicine for the treatment of fascioliasis and some gastrointestinal roundworms in cattle and sheep.

Oxamniquine *(BAN, USAN, rINN)*

Oxamniquina; Oxamniquinum; UK-4271. 1,2,3,4-Tetrahydro-2-isopropylaminomethyl-7-nitro-6-quinolylmethanol.

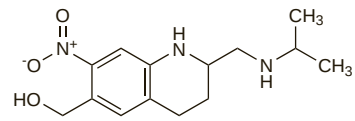
Оксамнихин

$C_{14}H_{21}N_3O_3$ = 279.3.

CAS — 21738-42-1.

ATC — P02BA02.

ATC Vet — QP52AA02.



Pharmacopoeias. In *Fr.* and *Int.*

Adverse Effects
Oxamniquine causes severe pain at the injection site when given intramuscularly and is no longer given by this route.

It is generally well tolerated after oral doses, although dizziness with or without drowsiness occurs in at least a third of patients, beginning up to 3 hours after a dose and usually lasting for up to 6 hours. Headache and gastrointestinal effects such as nausea, vomiting, and diarrhoea are also common.

Allergic-type reactions including urticaria, pruritic skin rashes, and fever may occur. Liver enzyme values have been raised transiently in some patients. Epileptiform convulsions have been reported, especially in patients with a history of convulsive disorders. Hallucinations and excitement have occurred rarely.

A reddish discoloration of urine, probably due to a metabolite of oxamniquine, has been reported.

Effects on body temperature. A review[1] in 1987 noted that although a modest post-treatment rise in temperature had been reported occasionally, fever was not a common adverse effect of oxamniquine, except in Egypt where it appeared to be characteristic. The cause was not known. Increased immune complexes and excretion of antigens occurred in only half the cases, there